



Contra Costa County Housing Element Update

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# 2023-2031 HOUSING ELEMENT

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# DRAFT ENVIRONMENTAL IMPACT REPORT

February 2023





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2023-2031  
HOUSING ELEMENT  
DRAFT ENVIRONMENTAL  
IMPACT REPORT

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February 2023



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## Abbreviations and Acronyms

### ABBREVIATIONS AND ACRONYMS

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
amsl	above mean sea level
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEMA	California Emergency Management Agency
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program

## Abbreviations and Acronyms

CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO <sub>2</sub> e	carbon dioxide equivalent
Corps	US Army Corps of Engineers
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dba	A-weighted decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
IPCC	Intergovernmental Panel on Climate Change
L <sub>dn</sub>	day-night noise level
L <sub>eq</sub>	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LOS	level of service
LST	localized significance thresholds
M <sub>w</sub>	moment magnitude
MCL	maximum contaminant level
MEP	maximum extent practicable

## Abbreviations and Acronyms

mgd	million gallons per day
MMT	million metric tons
MPO	metropolitan planning organization
MT	metric ton
MWD	Metropolitan Water District of Southern California
NAHC	Native American Heritage Commission
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
O <sub>3</sub>	ozone
OES	California Office of Emergency Services
PM	particulate matter
POTW	publicly owned treatment works
ppm	parts per million
PPV	peak particle velocity
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	state implementation plan
SLM	sound level meter
SoCAB	South Coast Air Basin
SO <sub>x</sub>	sulfur oxides
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

## Abbreviations and Acronyms

TAC	toxic air contaminants
TNM	transportation noise model
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WQMP	water quality management plan
WSA	water supply assessment

# 1. Executive Summary

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## 1.1 INTRODUCTION

This draft environmental impact report (DEIR) addresses the environmental effects associated with the implementation of the proposed Contra Costa County Housing Element Update project. The California Environmental Quality Act (CEQA) requires that local government agencies consider the environmental impacts before acting on projects over which they have discretionary approval authority. An environmental impact report (EIR) analyzes potential environmental impacts in order to inform the public and support informed decisions by local and state governmental agency decision makers.

This DEIR has been prepared pursuant to the requirements of CEQA and Contra Costa County's CEQA procedures. Contra Costa County, as the lead agency, has reviewed and revised all submitted drafts, technical studies, and reports as necessary to reflect its own independent judgment, including reliance on County technical personnel from other departments and review of all technical subconsultant reports.

Data for this DEIR derive from onsite field observations, discussions with affected agencies, analysis of adopted plans and policies, review of available studies, reports, data and similar literature, and specialized environmental assessments (aesthetics, agricultural resources, air quality, biological resources, cultural resources, geological resources, hazards and hazardous materials, hydrology and water quality, land use, mineral resources, noise, population and housing, public services, recreation, transportation, and utilities and service systems). Note that transportation-related impacts are based on trip generation and vehicle miles traveled data generated for the County's General Plan Update.

## 1.2 ENVIRONMENTAL PROCEDURES

This DEIR has been prepared pursuant to CEQA to assess the environmental impacts associated with implementation of the proposed project, as well as anticipated future discretionary actions and approvals. CEQA establishes six main objectives for an EIR:

1. Disclose to decision makers and the public the significant environmental effects of proposed activities.
2. Identify ways to avoid or reduce environmental damage.
3. Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures.
4. Disclose to the public reasons for agency approval of projects with significant environmental effects.
5. Foster interagency coordination in the review of projects.
6. Enhance public participation in the planning process.

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An EIR is the most comprehensive form of environmental documentation in CEQA and the CEQA Guidelines; it is intended to provide an objective, factually supported analysis and full disclosure of the environmental impacts of a proposed project with the potential to result in significant, adverse environmental impacts.

An EIR is one of various decision-making tools used by a lead agency to consider the merits and disadvantages of a project that is subject to its discretionary authority. Before approving a proposed project, the lead agency must consider the information in the EIR; determine whether the EIR was prepared in accordance with CEQA and the CEQA Guidelines; determine that it reflects the independent judgment of the lead agency; adopt findings concerning the project's significant environmental impacts and alternatives; and adopt a statement of overriding considerations if significant impacts cannot be avoided.

### 1.2.1 EIR Format

**Chapter 1. Executive Summary:** Summarizes the background and description of the proposed project, the format of this EIR, project alternatives, any critical issues remaining to be resolved, and the potential environmental impacts and mitigation measures identified for the project.

**Chapter 2. Introduction:** Describes the purpose of this EIR, background on the project, the notice of preparation, the use of incorporation by reference, and Final EIR certification.

**Chapter 3. Project Description:** A detailed description of the project, including its objectives, its area and location, approvals anticipated to be required as part of the project, necessary environmental clearances, and the intended uses of this EIR.

**Chapter 4. Environmental Setting:** A description of the physical environmental conditions in the vicinity of the project as they existed at the time the notice of preparation was published, from local and regional perspectives. These provide the baseline physical conditions from which the lead agency determines the significance of the project's environmental impacts.

**Chapter 5. Environmental Analysis:** Each environmental topic is analyzed in a separate section that discusses: the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; the level of significance after mitigation is incorporated; and the potential cumulative impacts of the proposed project and other existing, approved, and proposed development in the area.

**Chapter 6. Unavoidable Impacts, Irreversible Changes, and Growth-Inducing Impacts:** Describes the significant unavoidable adverse impacts of the proposed project, irreversible environmental changes associated with the project, and ways in which the proposed project would cause increases in population that could result in new physical or environmental impacts.

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**Chapter 7. Alternatives to the Proposed Project:** Describes the alternatives and compares their impacts to the impacts of the proposed project. Alternatives include the No Project Alternative and a Reduced Intensity Alternative.

**Chapter 8. Organizations and Persons Consulted and Qualifications of Persons Preparing EIR:** Lists the people and organizations that were contacted during the preparation of this EIR, and lists the people who prepared this EIR for the proposed project.

**Appendices:** The appendices for this document comprise these supporting documents:

- Appendix 2-1: NOP and NOP Comments
- Appendix 3-1: Draft Housing Element
- Appendix 5.3-1: Air Quality and Greenhouse Gas Emissions Data
- Appendix 5.13-1: Noise Appendix

### 1.2.2 Type and Purpose of This DEIR

This DEIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as for a Project EIR, Program EIRs are typically more conceptual than Project EIRs, with a more general discussion of impacts, alternatives, and mitigation measures. According to Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that can be characterized as one large project. Use of a Program EIR gives the lead agency an opportunity to consider broad policy alternatives and program wide mitigation measures, as well as greater flexibility to address project-specific and cumulative environmental impacts on a comprehensive scale.

Agencies prepare Program EIRs for programs or a series of related actions that are linked geographically; logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program; or individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine whether an additional CEQA document is necessary. However, if the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities may be within the Program EIR's scope, and additional environmental documents may not be required (Guidelines § 15168[c]). When a lead agency relies on a Program EIR for a subsequent activity, it must incorporate feasible mitigation measures and alternatives from the Program EIR into the subsequent activities (Guidelines § 15168[c][3]). If a subsequent activity would have effects outside the scope of the Program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or an EIR. Even in this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. The CEQA Guidelines encourage the use of Program EIRs, citing five advantages:

- Provide a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR;

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- Focus on cumulative impacts that might be slighted in a case-by-case analysis;
- Avoid continual reconsideration of recurring policy issues;
- Consider broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them;
- Reduce paperwork by encouraging the reuse of data (through tiering). (Guidelines § 15168[h])

### 1.3 PROJECT LOCATION

Contra Costa County (County) covers 716 square miles, making it the eighth smallest county in California by land area. It borders Alameda County to the south and San Joaquin County to east. It is also adjacent to Solano County to the north, separated by the San Pablo Bay, Carquinez Strait and Suisun Bay. The San Francisco Bay borders the County to the west, which is followed by Marin County and San Francisco Counties to the west (see Figure 3-1, *Regional Location*). Regional connectivity to the County is provided by Interstate 580 (I-580) via the Richmond-San Rafael Bridge, Interstate 80 (I-80), Interstate 680 (I-680), State Route 4 (SR-4) and State Route 24 (SR-24).

### 1.4 PROJECT SUMMARY

The Housing Element is one of the required elements of the General Plan and is unique among General Plan elements in that it is the only element of the plan that requires State certification. The draft Housing Element is included as Appendix 3-1, *Housing Element*, to this Draft EIR. As a policy document, the Housing Element does not result in physical changes to the environment but encourages the provision of affordable housing within the land use designations shown in the Land Use Element of the General Plan. For this project, the EIR will evaluate the changes between the existing condition and the future land use designations as drafted in the pending General Plan Update; the pending General Plan Update will be adopted after the adoption of the Housing Element Update (proposed project).

The Housing Element identifies policy direction to meet the housing needs of the County by preserving existing homes and clarifying priorities for housing creation. The proposed Housing Element will include an overview of housing policies and programs and identify locations that can accommodate future housing.

One of the programs in the proposed Housing Element will require that the County redesignate and rezone approximately 1,324 acres of land to meet the Regional Housing Needs Allocation (RHNA). The parcels that may be redesignated and rezoned to meet the RHNA are shown in Table 3-3, *Residential Sites with Increasing Allowable Density*; Table 3-4, *Non-Residential Sites Proposed to Allow Residential Units*; and Table 3-5, *Suitably Zoned/ Designated Sites* in Chapter 3, *Project Description*. The location of these parcels is shown on Figure 3-3a, *Housing Sites Inventory – Alamo*; Figure 3-3b, *Housing Sites Inventory – Byron*; Figure 3-3c, *Housing Sites Inventory – Saranap/Parkmead*; Figure 3-3d, *Housing Sites Inventory – Discovery Bay*; Figure 3-3e, *Housing Sites Inventory – Reliez Valley*; Figure 3-3f, *Housing Sites Inventory – Contra Costa Centre*; Figure 3-3g, *Housing Sites Inventory – North Richmond*; Figure 3-3h, *Housing Sites Inventory – East Richmond Heights*; Figure 3-3i, *Housing Sites Inventory – El Sobrante*; Figure 3-3j, *Housing Sites Inventory – El Sobrante/Tara Hills (South)*; Figure 3-3k, *Housing Sites Inventory – Pleasant Hill (Unincorporated)*; Figure 3-3l, *Housing Sites Inventory – Pacheco*; Figure 3-3m, *Housing Sites Inventory – Bayview/Tara Hills*; Figure 3-3n, *Housing Sites Inventory – Vine Hill*; Figure 3-3o, *Housing Sites Inventory – Clyde*;



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Figure 3-3p, *Housing Sites Inventory – Bay Point (West)*; Figure 3-3q, *Housing Sites Inventory – Bay Point (East)*; Figure 3-3r, *Housing Sites Inventory – Rodeo*; Figure 3-3s, *Housing Sites Inventory – Crockett* in Chapter 3. This project will not change the land use designations or zoning of any of the parcels in Tables 3-3, 3-4, and 3-5 as this action will occur with the larger General Plan Update that is already in progress and will have its own EIR; the General Plan Update will be adopted after the adoption of the Housing Element Update (proposed project). However, this EIR will evaluate the sites using the proposed General Plan land use designations as currently under consideration. An objective of this project is to publicly review the list of sites to determine if there are significant environmental impacts that would affect any future change in designation or density.

Development under the Housing Element Update would comply with the Urban Limit Line standards (65/35 standard) which limits urban development to no more than 35 percent of the land area of the County, and the remaining 65 percent must be preserved for agriculture, open space, wetlands, parks, and other non-urban uses.

### 1.5 SUMMARY OF PROJECT ALTERNATIVES

The CEQA Guidelines (§ 15126.6[a]) state that an EIR must address “a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluated the comparative merits of the alternatives.” The alternatives in this DEIR were based, in part, on their potential ability to reduce or eliminate the impacts determined to be significant and unavoidable for implementation of the proposed project. Project alternatives are assessed in further detail in Chapter 7, Alternatives to the Proposed Project.

#### 1.5.1 No-Project/Existing General Plan Alternative

The No Project/Existing Housing Element Alternative assumes that the proposed project would not be adopted, and the development intensity assumed in the existing Housing Element would be followed. Although the Planning Area would be the same under the proposed project and existing Housing Element, the footprint-related impacts (e.g., biological resources, cultural resources) of the No Project Alternative would be the less than the proposed project as development intensity would be less. The proposed project would result in an increase in population and housing units, and therefore, this Alternative would result in a reduction in intensity-related impacts. For example, this Alternative would generate fewer auto trips, traffic noise would be less, and impacts on services and utilities would be less. While this Alternative would reduce overall impacts compared to the proposed project, it would not likely reduce any of the identified significant impacts to a less than significant level. This Alternative would not meet any of the proposed project’s objectives.

#### 1.5.2 Removal of Sites in a Fire Hazard Severity Zone Alternative

The “removal of sites in a fire hazard severity zone” alternative would remove four sites in the Housing Element Sites Inventory that border a Very High Fire Hazard Severity Zone (VHFHSZ), as designated by the Department of Forestry and Fire Protection (CAL FIRE), near the El Sobrante Ridge and Pinole Valley Park.

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These sites include APN's 430012022, 433460007, 435080005, and 430161020 in the El Sobrante community. This alternative would ensure that no sites included in the Housing Element's site inventory are within a fire hazard severity zone, reducing impacts to Wildfire and Hazards and Hazardous Materials. This alternative would result in the loss of approximately 58 maximum developable units from the Housing Element's sites inventory. However, this alternative would not reduce the number of units available in the sites inventory to meet the County's RHNA to below the 7,610 allocated units. Therefore, this alternative meets all project objectives by allowing the County to adopt its 6<sup>th</sup> Cycle Housing Element Update, provide a list of potential housing sites that meet the County's RHNA, and determine significant environmental issues that would preclude future decisions to consider land use changes to the housing sites.

### 1.6 ISSUES TO BE RESOLVED

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. With regard to the proposed project, the major issues to be resolved include decisions by the lead agency as to:

1. Whether this DEIR adequately describes the environmental impacts of the project.
2. Whether the benefits of the project override those environmental impacts which cannot be feasibly avoided or mitigated to a level of insignificance.
3. Whether the proposed land use changes are compatible with the character of the existing area.
4. Whether the identified goals, policies, or mitigation measures should be adopted or modified.
5. Whether there are other mitigation measures that should be applied to the project besides the Mitigation Measures identified in the DEIR.
6. Whether there are any alternatives to the project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic project objectives.

### 1.7 AREAS OF CONTROVERSY

In accordance with Section 15123(b)(2) of the CEQA Guidelines, the EIR summary must identify areas of controversy known to the lead agency, including issues raised by agencies and the public. The County has no knowledge of expressed opposition to the project.

### 1.8 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1-1, *Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance After Mitigation*, summarizes the conclusions of the environmental analysis contained in this EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented.

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.1 AESTHETICS</b>			
Impact 5.1-1: Development in accordance with the proposed project would not substantially alter or damage scenic vistas or substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Less than Significant	No mitigation measures are required.	Less than Significant
Impact 5.1-2: Buildout in accordance with the proposed project would alter visual appearance in the County, but would not substantially degrade its existing visual character or quality.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.1-3: The proposed project would not generate substantial light and glare.	Less Than Significant	No mitigation measures are required	Less Than Significant
<b>5.2 AGRICULTURE AND FORESTRY RESOURCES</b>			
Impact 5.2-1: The proposed project would convert approximately 22.86 acres of California Resource Agency designated Prime Farmland and Farmland of Local Importance to residential land use.	No impact	No mitigation measures are required	No impact
Impact 5.2-2: The proposed project could potentially require a zone change/general plan amendment from agriculture designation to residential use and/or conflict with an existing Williamson contract.	No impact	No mitigation measures are required	No impact
Impact 5.2-3: The proposed project could potentially result in other agricultural impact not related to above. e.g., diminish available water quality and supply for agricultural uses.	Less Than Significant	No mitigation measures are required	Less Than Significant
<b>5.3 AIR QUALITY</b>			
Impact 5.3-1: Implementation of the proposed project would not conflict with or obstruct implementation of the BAAQMD Clean Air Plan.	Less Than Significant	No mitigation measures are required	Less Than Significant

# 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>Impact 5.3-2: Short-term construction activities associated with the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.</p>	<p>Potentially Significant</p>	<p>AQ-1 Prior to discretionary approval by the unincorporated County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the County Department of Conservation and Development for review and approval. The evaluation shall be prepared in conformance with the Bay Area Air Quality Management District (BAAQMD) methodology for assessing air quality impacts identified in their <i>CEQA Air Quality Guidelines</i>. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the Department of Conservation and Development shall require feasible mitigation measures to reduce air quality emissions. Potential measures may include:</p> <ul style="list-style-type: none"> <li>▪ Require implementation of the BAAQMD Best Management Practices for fugitive dust control, such as:                             <ul style="list-style-type: none"> <li>○ Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.</li> <li>○ Apply water twice daily or as often as necessary to control dust or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.</li> <li>○ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).</li> <li>○ Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.</li> <li>○ Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas.</li> <li>○ Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (e.g., dirt, sand).</li> <li>○ Limit vehicle traffic speeds on unpaved roads to 15 mph.</li> <li>○ Replant vegetation in disturbed areas as quickly as possible.</li> <li>○ Install sandbags or other erosion control measures to prevent silt runoff from public roadways.</li> </ul> </li> </ul>	<p>Significant and Unavoidable</p>

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>▪ Emissions control measures such as:                             <ul style="list-style-type: none"> <li>○ Using construction equipment rated by the United States Environmental Protection Agency as having Tier 4 interim or higher exhaust emission limits.</li> <li>○ Ensuring construction equipment is properly serviced and <b>maintained to the manufacturer's standards.</b></li> <li>○ Limiting nonessential idling of construction equipment to no more than five consecutive minutes.</li> <li>○ Using zero- or low-VOC paints for coating of architectural surfaces whenever possible.</li> <li>○ Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) submitted to the County and shall be verified by the Department of Conservation and Development.</li> </ul> </li> </ul>	
<p>Impact 5.3-3: Buildout of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.</p>	<p>Potentially Significant</p>	<p>AQ-2 Prior to discretionary approval by the County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operation-phase-related air quality impacts to the Department of Conservation and Development for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology in assessing air quality impacts identified in their <i>CEQA Air Quality Guidelines</i>. If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the Department of Conservation and Development shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>▪ For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.</li> <li>▪ Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.</li> </ul>	<p>Significant and Unavoidable</p>

# 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>▪ Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 sec. 2485).</li> <li>▪ Provide changing/shower facilities as specified in the Nonresidential Voluntary Measures of CALGreen.</li> <li>▪ Provide bicycle parking facilities per the Nonresidential Voluntary Measures and Residential Voluntary Measures of CALGreen.</li> <li>▪ Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles per the Nonresidential Voluntary Measures of CALGreen.</li> <li>▪ Provide facilities to support electric charging stations per the Nonresidential Voluntary Measures and Residential Voluntary Measures of CALGreen.</li> <li>▪ Applicant-provided appliances shall be Energy Star-certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star-certified or equivalent appliances shall be verified by the County during plan check.</li> </ul>	
<p>Impact 5.3-4: Construction activities associated with the proposed project could expose sensitive receptors to substantial pollutant concentrations.</p>	<p>Potentially Significant</p>	<p>AQ-3 Applicants for construction within 1,000 feet of residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in the unincorporated County, as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the County Department of Conservation and Development prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment (OEHHA) and the BAAQMD. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM<sub>2.5</sub> concentrations exceed 0.3 µg/m<sup>3</sup>, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>▪ Use of construction equipment rated as US EPA Tier 4 Interim for equipment of 50 horsepower or more.</li> </ul>	<p>Less Than Significant</p>

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>▪ Use of construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more.</li> <li>▪ Measures identified in the HRA shall be included in the environmental document and/or incorporated into the site development plan as a component of the proposed project. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the Department of Conservation and Development clearly show incorporation of all applicable mitigation measures.</li> </ul>	
Impact 5.3-5: Operational-phase emissions associated with the proposed project would not expose sensitive receptors to substantial pollutant concentrations	Less Than Significant	No mitigation measures are required	Less Than Significant
Impact 5.3-6: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant	No mitigation measures are required	Less Than Significant
<b>5.4 BIOLOGICAL RESOURCES</b>			
Impact 5.4-1: Development of the proposed project could impact sensitive species in the County.	Potentially Significant	BIO-1 Prior to the issuance of a building permit, any project that involves the removal of habitat must consider if any special status species (e.g., Threatened or Endangered species, CNPS List 1B and 2 plants, or species protected under Section 15380 of CEQA) are potentially present on the project site and nearby vicinity, and if the project impacts could be considered significant by the County. If potential habitat is present in an area, focused surveys shall be conducted prior to construction activities in order to document the presence or absence of a species on the project site and nearby vicinity. Botanical surveys shall be conducted during the appropriate blooming period for a species. If no special status species are found on the project site or nearby vicinity, no additional action is warranted, with the exception of projects subject to the East Contra Costa County HCP/NCCP where subsequent actions are required even if no special status species are found onsite. If special status species are found, appropriate mitigation would be required in coordination with the County, consistent with its performance criteria of mitigating lost habitat at a ratio no less than one to one (one acre restored for every acre impacted), or as required by the ECCC HCP/NCCP or the wildlife agencies. Projects shall be required to implement the mitigation plan through a Mitigation Monitoring and Reporting Program.	Significant and Unavoidable

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>BIO-2 Prior to issuance of the first action and/or permit which would allow for site disturbance (e.g., grading permit), a detailed mitigation plan shall be prepared, and take permits shall be obtained, by a qualified biologist for approval by the County, the USFWS, and CDFW shall include: (1) the responsibilities and qualifications of personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements. Projects shall be required to implement the mitigation plan as outlined within the Plan.</p> <p>Any permanent impacts to sensitive natural communities shall be mitigated for at a 3:1 ratio by acreage and temporary impacts shall be restored on-site at a 1:1 ratio by acreage. If on-site mitigation is infeasible, habitat shall be compensated by the permanent protection of habitat at the same ratio through a conservation easement and through the preparation and funding of a long-term management plan. Oak trees shall be replaced at the following ratios:</p> <ul style="list-style-type: none"> <li>▪ 3:1 replacement for trees 5 to 8 inches diameter at breast height (DBH)</li> <li>▪ 5:1 replacement for trees greater than 8 inches to 16 inches DBH</li> <li>▪ 10:1 replacement for trees greater than 16-inch DBH, which are considered old-growth oaks</li> </ul> <p>Habitat compensation shall also be required for wetland and stream impacts. The project shall obtain permits from the Regional Water Quality Control Board and Army Corps of Engineers pursuant to the Clean Water Act, and the California Department of Fish and Wildlife pursuant to Section 1602 of the Fish and Game Code.</p>	



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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<p>Impact 5.4-2: Development of the proposed project could impact sensitive natural communities, including wetland and riparian habitats.</p>	<p>Potentially Significant</p>	<p>Implement Mitigation Measures BIO-1 and BIO-2</p> <p>BIO-3 Prior to the issuance of a building permit, the County shall require a habitat connectivity/wildlife corridor evaluation for future development that may impact existing connectivity areas and wildlife linkages. This evaluation shall be conducted by a qualified biologist. The results of the evaluation shall be <b>incorporated into the project's biological report required in Mitigation Measure BIO-1</b>. The evaluation shall also identify project design features that would reduce potential impacts and maintain habitat and wildlife movement. To this end, the county shall incorporate the following measures, to the extent practicable, for projects impacting wildlife movement corridors:</p> <ul style="list-style-type: none"> <li>▪ Adhere to low density zoning standards</li> <li>▪ Encourage clustering of development</li> <li>▪ Avoid known sensitive biological resources and sensitive natural communities</li> <li>▪ Provide shielded lighting adjacent to sensitive habitat areas</li> <li>▪ Encourage development plans that maximize wildlife movement</li> <li>▪ Provide buffers between development and wetland/riparian areas</li> <li>▪ Protect wetland/riparian areas through regulatory agency permitting process</li> <li>▪ Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries.</li> <li>▪ Encourage preservation of native habitat on the underground remainder of developed parcels</li> <li>▪ Minimize road/roadway development to help prevent loss of habitat due to roadkill and habitat loss</li> <li>▪ Use native, drought-resistant plant species in landscape design</li> <li>▪ Encourage participation in local/regional recreational trail design efforts</li> </ul>	<p>Less Than Significant</p>
<p>Impact 5.4-3: Development pursuant to the proposed project could adversely impact wildlife movement in and surrounding the County.</p>	<p>Potentially Significant</p>	<p>Implement Mitigation BIO-3</p> <p>BIO-4 Construction activities involving vegetation removal shall be conducted between September 16 and March 14. If construction occurs inside the peak nesting season (between March 15 and September 15), a preconstruction survey (or possibly multiple surveys) by a qualified biologist is required prior to construction activities to identify any active nesting locations. If the biologist does not find any active nests within the project site, the construction work shall be allowed to proceed. If the biologist finds an active nest within the project site and determined that the nest may be impacted, the biologist shall</p>	<p>Less Than Significant</p>

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		delineate an appropriate buffer zone around the nest, and the size of the buffer zone shall depend on the affected species and the type of construction activity. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if any) that have been approved by a biological monitor shall take place within the buffer zone until the nest is vacated. The biologist shall serve as a construction monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the preconstruction survey and any subsequent monitoring shall be provided to the California Department of Fish and Wildlife and the County.	
Impact 5.4-4: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
5.5 CULTURAL RESOURCES			
Impact 5.5-1: Development of the project could impact an identified historic resource.	Potentially Significant	CUL-1 Prior to construction activities, the future project applicant shall retain a qualified historian to perform a historic resources analysis of the structures onsite. If the structures are found to be historically significant, the historian shall document the structures using the Historic American Building Survey (HABS) Level III standards as a guideline for recording the buildings through a compilation of photographs, drawings, and written description to record the historic resource: <ul style="list-style-type: none"> <li>▪ Written Data: The history or the property and description of the historic resource shall be prepared.</li> <li>▪ Drawings: A sketch plan of the interior floorplan of the building shall be prepared.</li> <li>▪ Photographs: Large-format photographs and negatives shall be produced to capture interior and exterior views of the structure. At least <b>two large format pictures shall be taken to show the building's setting in context</b> and in relationship to its location. The photographs and negatives must be created using archival stable paper and processing procedures.</li> <li>▪ Document: The HABS Level III document must be produced on archival-quality paper, and all large format photographs and negatives labeled to HABS standards. A digital version of the HABS document shall be</li> </ul>	Significant and Unavoidable

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		prepared with the hard copy. The final HABS LEVEL III document shall be donated to the Contra Costa County Historical Society and/or other responsible repository within the region.	
Impact 5.5-2: Development of the project could impact archaeological resources.	Potentially Significant	CUL-2 Prior to construction activities, the future project applicant shall retain a qualified archaeologist to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. If cultural resources are discovered during ground disturbing activities, all ground disturbance activities within 50 feet of the find shall be halted until a meeting is convened between the developer, archaeologist, tribal representatives, and the Director of the Conservation and Development Department. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representatives, developer, and archaeologist, a decision shall be made, with the concurrence of the Director of the Conservation and Development Department, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.	Less Than Significant
Impact 5.5-3: Grading activities could potentially disturb human remains	Potentially Significant	<p>CUL-3 It is understood by all parties that unless otherwise required by law, the site of any burial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254(r), and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).</p> <p>CUL-4 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to the origin. Further, pursuant to Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the County Coroner determined the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American <b>Heritage Commission shall identify the "most likely descendant."</b> The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.</p>	Less Than Significant

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.5-4: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1	Potentially Significant	TCR-1 Prior to the issuance of grading permits for projects on previously undisturbed sites or as directed by the County, future project applicants are required to enter into a cultural <b>resources' treatment agreement with the culturally affiliated</b> tribe. This agreement will address the treatment and disposition of cultural resources and human remains that may be impacted as a result of the development of a project on a Housing Element site, as well as provisions for tribal monitors. The applicant must provide a copy of the cultural resources treatment agreement to the County prior to issuance of a grading permit. If cultural resources are discovered during the project construction, all work in the area shall cease and a qualified archaeologist and representatives of the culturally affiliated tribe shall be retained by the project sponsor to investigate the find and make recommendations as to treatment and mitigation.  TCR-2 A qualified archaeological monitor will be present project sites that require ground disturbance of previously undisturbed land or as required by the County and will have the authority to stop and redirect grading activities, in consultation with the culturally affiliated tribe and their designated monitors, to evaluate the significance of any archaeological resources discovered on the property.  TCR-3 Tribal monitors from the culturally affiliated tribe shall be allowed to monitor all grading, excavation, and groundbreaking activities, including archaeological surveys, testing, and studies, for applicable projects, including projects on previously undisturbed sites or as directed by the County. All monitoring activities are to be compensated by the project applicant.  TCR-4 The landowner agrees to relinquish ownership of all cultural resources, including all archaeological artifacts that are found on the project site and project vicinity, to the culturally affiliated tribe for proper treatment and disposition.	
5.6 ENERGY			
Impact 5.6-1: Implementation of the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Less Than Significant	No mitigation measures are required.	Less Than Significant

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.6-2: Implementation of the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.7 GEOLOGY AND SOILS</b>			
Impact 5.7-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides, mudslides, or other similar hazards.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.7-2: Development under the proposed project would not result in substantial soil erosion or the loss of topsoil.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.7-3: Development under the proposed project would not subject people or structures to hazards from unstable soil conditions.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.7-4: Development under the proposed project would connect to existing sewer lines or comply with state and local regulations for on-site septic tanks.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.7-5: Development under the proposed project could directly or indirectly destroy a unique paleontological resource or unique geologic feature.	Potentially Significant	GEO-1 Prior to issuance of a grading permit for any future project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed geologic deposits, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to: 1) a paleontological records search,	Less Than Significant

# 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<p>2) geologic map review, and                      3) peer-reviewed scientific literature review.</p> <p>If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to:</p> <p>1) preconstruction worker awareness training,                      2) paleontological resource monitoring, and                      3) salvage of significant paleontological resources.</p> <p>GEO-2 In the event of any fossil discovery, regardless of depth or geologic formation, ground disturbing activities shall halt within a 50-foot radius of the find until its significance can be determined by a qualified paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology. The repository shall be identified, and a curatorial arrangement shall be signed prior to collection of the fossils.</p>	

**5.8 GREENHOUSE GAS EMISSIONS**

<p>Impact 5.8-1: Implementation of the proposed project is projected to result in emissions that <b>would exceed the unincorporated County's</b> GHG reduction target established under Executive Order S-03-05 or progress toward <b>the State's</b> carbon neutrality goal.</p>	<p>Potentially Significant</p>	<p>GHG-1 The County shall prepare a Climate Action Plan (CAP) to achieve the GHG reduction targets of Senate Bill 32 for year 2030. The CAP shall be completed within 18 months of certification of the Housing Element EIR. The CAP shall be <b>updated every five years to ensure the County is monitoring the plan's progress toward achieving the County's greenhouse gas (GHG) reduction target</b> and to require amendment if the plan is not achieving specified level. The update shall consider a trajectory consistent with the GHG emissions reduction goal established under Executive Order (EO) S-03-05 for year 2050 and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CAP update (e.g., Senate Bill 32 for year 2030). The CAP update shall include the following:</p> <ul style="list-style-type: none"> <li>▪ GHG inventories of existing and forecast year GHG levels for the unincorporated community.</li> <li>▪ Tools and strategies for reducing GHG emissions to achieve the GHG reduction goals of Senate Bill 32 for year 2030.</li> <li>▪ Tools and strategies for reducing GHG emissions to ensure a trajectory</li> </ul>	<p>Significant and Unavoidable</p>
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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		with the long-term GHG reduction goal of Executive Order S-03-05. <ul style="list-style-type: none"> <li>▪ Plan implementation guidance that includes, at minimum, the following components consistent with the proposed CAP:                             <ul style="list-style-type: none"> <li>○ Administration and Staffing</li> <li>○ Finance and Budgeting</li> <li>○ Timelines for Measure Implementation</li> <li>○ Community Outreach and Education</li> <li>○ Monitoring, Reporting, and Adaptive Management</li> <li>○ Tracking Tools.</li> </ul> </li> </ul>	
Impact 5.8-2: Implementation of the proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.9 HAZARDS AND HAZARDOUS MATERIALS</b>			
Impact 5.9-1: Implementation of the proposed project, including construction and operation activities, could involve the transport, use, and/or disposal of hazardous materials; however, compliance with existing local, state, and federal regulations would ensure impacts are minimized.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.9-2: Implementation of the proposed project could facilitate residential development of a site that is on a list of hazardous materials sites.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.9-3: The HEU includes sites located in the vicinity of an airport or within the jurisdiction of an airport land use plan.	Less Than Significant	No mitigation measures are required	Less Than Significant
Impact 5.9-4: Development under the proposed project could affect the implementation of an emergency responder or evacuation plan.	Potentially Significant.	Implement Mitigation Measure WILD-1	Less Than Significant

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Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.9-5: Development on sites located in designated Very High Fire Hazard Severity Zones could expose structures and/or residences to fire danger.	Potentially Significant	No feasible mitigation measures.	Potentially Significant
<b>5.10 HYDROLOGY AND WATER QUALITY</b>			
Impact 5.10-1: Potential development associated with the proposed project could result in erosion and water quality impacts to downstream surface water. Compliance with <b>the requirements of the SWRCB's Construction General Permit</b> and implementation of BMPs during construction and compliance with the MS4 permit and implementation of stormwater control measures during operations would minimize the potential for water quality impacts.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.10-2: Development associated with proposed project would increase impervious surfaces which would reduce the amount of stormwater available for recharge but would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.10-3: Development associated with the proposed project would not alter the course of a stream or river but would increase the amount of impervious surfaces, which could impact stormwater runoff rates and volumes. However, this would not result in: i) substantial erosion or siltation on- or off-site; ii) increased runoff that would result in flooding on- or off-site; iii) increased runoff that would exceed the capacity of existing or planned storm drain systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows.	Less Than Significant	No mitigation measures are required.	Less Than Significant



1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.10-4: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.11 LAND USE AND PLANNING</b>			
Impact 5.11-1: Project implementation would not divide an established community.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.11-2: Project Implementation would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.12 MINERAL RESOURCES</b>			
Impact 5.12-1: Implementation of the proposed project could result in the loss of availability of a known mineral resource	Potentially Significant	MIN-1 Pursuant to the Public Resources Code, the Surface Mining and Reclamation Act, Chapter 9, Article 4, Section 2762(e), prior to the issuance of grading permit on lands classified by the State Geologist as MRZ-3 or MRZ-2, the County Geologist shall make a <b>site-specific determination as to the site's</b> potential to contain or yield important or significant mineral resources of value to the region and the residents of the State of California. <ul style="list-style-type: none"> <li>▪ If it is determined by the County Geologist that lands classified as MRZ-3 have the potential to yield significant mineral resources which may be of <b>“regional or statewide significance” and the proposed use is considered “incompatible”</b> (as defined by Section 3675 of Title 14, Article 6, of the California Code of Regulations) and could threaten the potential to extract said minerals, the project applicant(s) shall prepare an evaluation of the area in order to ascertain the significance of the mineral deposit located therein. These site-specific mineral resources study shall be performed <b>to, at a minimum, document the site's known or inferred geological conditions; describe the existing levels of development on or near the site which might preclude mining as a viable adjacent use; and analyze the state standards for designating land as having “regional or statewide significant” under the Surface Mining and Reclamation Act. The results of such evaluation shall be transmitted to the State Geologist and the State Mining and Geological Board (SMGB).</b></li> <li>▪ Should significant mineral resources be identified, the project applicant(s) shall either avoid said resource or shall incorporate appropriate findings subject to a site-specific discretionary review and CEQA process.</li> </ul>	Less Than Significant

# 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.13 NOISE			
Impact 5.13-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project.	Potentially Significant	N-1 The construction contractors shall implement the following measures for construction activities conducted in the County of Contra Costa. Construction plans submitted to the County shall identify these measures on demolition, grading, and construction plans submitted to the County and the County's Planning and Building Department(s) shall verify that submitted grading, demolition, and/or construction plans include these notations prior to issuance of demolition, grading, and/or building permits: <ul style="list-style-type: none"> <li>▪ Construction activity is limited to the daytime hours of 7:00 a.m. to 7:00 p.m.</li> <li>▪ During the entire active construction period, equipment and trucks used for project construction shall use the best-available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) available.</li> <li>▪ Impact tools (e.g., jack hammers and hoe rams) shall be hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.</li> <li>▪ Stationary equipment, such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.</li> <li>▪ Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.</li> <li>▪ Construction traffic shall be limited, to the extent feasible, to approved haul routes established by the County Planning and Building Department(s).</li> <li>▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the County's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they shall investigate, take appropriate corrective action, and report the action to the County.</li> <li>▪ Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.</li> </ul>	Significant and Unavoidable

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		<ul style="list-style-type: none"> <li>▪ During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.</li> <li>▪ Erect temporary noise barriers (at least as high as the exhaust of equipment and breaking line-of-sight between noise sources and sensitive receptors), as necessary and feasible, to maintain construction noise levels at or below the performance standard of 80 dBA L<sub>eq</sub>. Barriers shall be constructed with a solid material that has a density of at least 4 pounds per square foot with no gaps from the ground to the top of the barrier.</li> </ul>	
Impact 5.13-2: Project implementation would generate a substantial traffic noise increase on local roadways and could locate sensitive receptors near rail in areas that exceed established noise standards.	Potentially Significant	No feasible mitigation measures.	Significant and Unavoidable
Impact 5.13-3: Individual construction developments for future housing may expose sensitive uses to excessive levels of groundborne vibration	Potentially Significant	N-2 Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures, such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); or a vibratory roller within 25 feet of any structure, the future project applicant shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed Federal Transit Administration (FTA) architectural damage thresholds (e.g., 0.12 inches per second [in/sec] peak particle velocity [PPV] for fragile or historical resources, 0.2 in/sec PPV for nonengineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving and static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure vibration thresholds are not exceeded.	Less Than Significant

# 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		N-3 New residential projects (or other noise-sensitive uses) located within 200 feet of existing railroad lines shall be required to conduct a groundborne vibration and noise evaluation consistent with Federal Transit Administration (FTA)-approved methodologies.  N-4 During the project-level California Environmental Quality Act (CEQA) process for industrial developments under the General Plan Update or other projects that could generate substantial vibration levels near sensitive uses, such as residential uses, a noise and vibration analysis shall be conducted to assess and mitigate potential noise and vibration impacts related to the operations of that individual development. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer and shall follow the latest CEQA guidelines, practices, and precedents.	
Impact 5.13-4: Implementation of the proposed project could expose future residents to excessive levels of airport-related noise	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.14 POPULATION AND HOUSING</b>			
Impact 5.14-1: The proposed project would directly result in population growth in the Plan Area.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.14-2: The proposed project would not result in the displacement of people and/or housing.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.15 PUBLIC SERVICES AND RECREATION</b>			
<i>FIRE PROTECTION AND EMERGENCY SERVICES</i>			
Impact 5.15-1: The proposed project could introduce new structures and residents into the CCCFPD, RHFPD, SRVFD, and the Crockett-Carquinez Fire <b>Protection District's</b> service boundaries, thereby increasing the requirement for fire protection facilities and personnel.	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<i>POLICE PROTECTION</i>			
Impact 5.15-2: The proposed project could introduce new structures and residents into the Contra Costa Office of the Sheriff's service boundaries, thereby potentially increasing the requirement for police protection facilities and personnel.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<i>SCHOOL SERVICES</i>			
Impact 5.15-3: Buildout of the proposed project could generate new students who would impact the school enrollment capacities of area schools and result in the need for new and/or expanded school facilities, the construction of which could result in environmental impacts.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<i>LIBRARY SERVICES</i>			
Impact 5.15-4: Buildout of the proposed project could generate new residents in the County and result in the need for new and/or expanded library facilities, the construction of which could result in environmental impacts	Less Than Significant	No mitigation measures are required.	Less Than Significant
<i>PARKS</i>			
Impact 5.15-5: The proposed project could generate additional residents that would increase the use of existing park and recreational facilities but would not require the immediate provision of new and/or expanded recreational facilities.	Less Than Significant	No mitigation measures are required.	Less Than Significant
<b>5.16 TRANSPORTATION</b>			
Impact 5.16-1: Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less Than Significant	No mitigation measures are required.	Less Than Significant

# 1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 5.16-2: Implementation of the proposed project would/not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).	Less than Significant	No mitigation measures are required.	Less than Significant.
Impact 5.16-3: Implementation of the proposed would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.16-4: Development associated with the proposed project could temporarily result in inadequate emergency access.	Potentially Significant	Implement Mitigation Measure WILD-1	Less Than Significant
<b>5.17 UTILITIES AND SERVICE SYSTEMS</b>			
Impact 5.17-1: Sewer and wastewater treatment systems are adequate to meet project requirements.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.17-2: Water supply and delivery systems are/are not adequate to meet project requirements	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.17-3: Existing and/or proposed storm drainage systems are/are not adequate to meet project requirements.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.17-4: Existing and/or proposed facilities would be able to accommodate project-generated solid waste.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.17-5: The proposed project would comply with federal, state, and local statutes and regulations related to solid waste.	Less Than Significant	No mitigation measures are required.	Less Than Significant

1. Executive Summary

Table 1-1 Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
<b>5.18 WILDFIRE</b>			
Impact 5.18-1: Buildout of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	Potentially Significant	WILD-1 Project applicants for development in a Very High Fire Hazard Severity Zone or WUI area shall prepare a Traffic Control Plan to ensure that construction equipment or activities do not block roadways during the construction period. The Traffic Control Plan shall be submitted to the applicable Contra Costa County Fire Protection District for review and approval prior to issuance of building permits.	Less Than Significant
Impact 5.18-2: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, future projects, due to slope, prevailing winds, and other factors, could exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.	Potentially Significant	No feasible mitigation measures.	Significant and Unavoidable
Impact 5.18-3: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, future projects could require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	Less Than Significant	No mitigation measures are required.	Less Than Significant
Impact 5.18-4: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	Less Than Significant	No mitigation measures are required.	Less Than Significant

## 1. Executive Summary

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## 2. Introduction

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### 2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act (CEQA) requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. This draft environmental impact report (DEIR) has been prepared to satisfy CEQA and the CEQA Guidelines. The environmental impact report (EIR) is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present, and reasonably foreseeable future projects.

The lead agency means “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment” (CEQA § 21067). Contra Costa County has the principal responsibility for approval of the proposed project. For this reason, Contra Costa County is the CEQA lead agency for this project.

The intent of the DEIR is to provide sufficient information on the potential environmental impacts of the proposed project to allow Contra Costa County to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the County are described in Section 3.4, *Intended Uses of the EIR*.

This DEIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code, §§ 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (CEQA Guidelines), as amended (California Code of Regulations, §§ 15000 et seq.)

The overall purpose of this DEIR is to inform the lead agency, responsible agencies, decision makers, and the general public about the environmental effects of the development and operation of the proposed project. This DEIR addresses effects that may be significant and adverse; evaluates alternatives to the project; and identifies mitigation measures to reduce or avoid adverse effects.

## 2. Introduction

### 2.2 NOTICE OF PREPARATION

Contra Costa County determined that an EIR would be required for this project and issued a Notice of Preparation (NOP) (see Appendix 2-1). The NOP process helps determine the scope of the environmental issues to be addressed in the DEIR. Comments were received during the first NOP public review period from Wednesday, July 27, 2022 through Friday August 26, 2022. Significant updates to the project occurred after the release of the first NOP, requiring the release of a second NOP on December 19, 2022. Comments for the second NOP public review period were received from Monday, December 19, 2022, through Wednesday, January 19, 2023. All comments received during both public review periods are included in Appendix 2-1 and summarized in Table 2-1, *NOP Comment Letters and Scoping Meeting Summary*.

A total of eight agencies/interested parties responded to the NOP/made comments at the scoping meeting; CEQA does not require a formal response to the comments.

Table 2-1 NOP Comment Letters and Scoping Meeting Summary

Agency/Organization/Individual	Date	Summary of Comments	Section of EIR Comment is Addressed
Comments Received During the First NOP Public Review Period			
Native American Heritage Commission	07/28/2022	<ul style="list-style-type: none"> <li>▪ Recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic region of proposed project.</li> <li>▪ Outlines steps to comply with laws AB 52 and SB 18.</li> <li>▪ Recommends a variety of actions for cultural resource assessments including the preparation of an archaeological inventory survey and provides resources to assist the process.</li> </ul>	Section 5.5, <i>Cultural and Tribal Resources</i>
Contra Costa County Flood Control and Water Conservation District (FC District)	08/15/2022	<ul style="list-style-type: none"> <li>▪ Requests that EIR provide map of watersheds in Housing Element areas.</li> <li>▪ Recommends that EIR include a plan for funding the flood control channels and detention basins for the Wildcat Creek, San Pablo Creek, Rodeo Creek, Pacheco Creek, Grayson Creek, Walnut Creek, Las Trampas Creek, and San Ramon Creek.</li> <li>▪ Recommends that EIR address how changes in proposed density will correspond to increases in impervious surfaces and effect storm drain systems.</li> <li>▪ Recommends evaluating impacts to Drainage Area facilities.</li> <li>▪ Recommends drafting Drainage Area Master Plans for areas without formed DA's.</li> <li>▪ Recommends that the EIR discuss the payment of drainage area fees as mitigation.</li> <li>▪ Recommends that the EIR stipulate that future developments should design and construct storm drain facilities to adequately collect and convey stormwater runoff.</li> <li>▪ Recommends that the EIR discuss compliance with current, newly updated NPDES permits.</li> <li>▪ Requests to review all drainage facilities that have a region-wide benefit.</li> </ul>	Section 5.10, <i>Hydrology and Water Quality</i>

2. Introduction

Table 2-1 NOP Comment Letters and Scoping Meeting Summary

Agency/Organization/Individual	Date	Summary of Comments	Section of EIR Comment is Addressed
Bay Area Rapid Transit District (BART)	08/15/2022	<ul style="list-style-type: none"> <li>▪ Requests that a webmap showing the parcels included in the Housing Element is published.</li> <li>▪ Recommends reviewing BART's Transit-Oriented Guidelines to make sure that parcels are zoned appropriately for access to a regionally significant station.</li> <li>▪ Encourages the EIR to set standards for transportation analysis that prioritize the safety and mobility of sustainable forms of transportation.</li> <li>▪ Recommends changes to the residential density changes and names of designations to provide more clarity and accuracy.</li> </ul>	Section 5.16, <i>Transportation</i> Not applicable
East Bay for Everyone	8/26/2022	<ul style="list-style-type: none"> <li>▪ Summarizes the housing needs of each unincorporated community of Contra Costa County.</li> <li>▪ Predicts the Department of Housing and Community Development (HCD) will ask Contra Costa County to revise zoning maps to include housing sites in wealthier areas with more White residents.</li> <li>▪ Requests Contra Costa County to consider Alternatives under the EIR listed below:                             <ul style="list-style-type: none"> <li>○ Rezone single family homes in SB 1000 disadvantaged communities into wealthier neighborhoods (Diablo, Alamo, parts of Walnut Creek, Kensington).</li> <li>○ Add housing into "Racially Concentrated Areas of Affluence" per capita basis or by the percentage increase in zoned capacity.</li> <li>○ Increase zone capacity in Kensington and East Richmond Heights, based on the amount of residential land outside of fire hazard zones.</li> <li>○ Ensure Mixed Use densities in the above-AMI areas (Saranap, Alamo, and Kensington) be the same as Mixed Use densities in SB 1000 disadvantaged communities (North Richmond, Vine Hill, Bay Point).</li> </ul> </li> <li>▪ Recommends, if feasible, exclude housing sites in areas that are in fire zones or within 500 feet of a freeway.</li> </ul>	Section 5.14, <i>Population and Housing</i> Chapter 7, <i>Alternatives to the Proposed Project</i>
Comments Received During the Second NOP Public Review Period			
Native American Heritage Commission	12/29/2022	<ul style="list-style-type: none"> <li>▪ Recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic region of proposed project</li> </ul>	Section 5.5, <i>Cultural and Tribal Resources</i>
California Department of Fish and Wildlife (CDFW)	1/10/2023	<ul style="list-style-type: none"> <li>▪ Explains CDFW's role as a trustee agency for the project.</li> <li>▪ Quotes the project description in the NOP and recommends that the project description within the EIR include land use changes resulting from rezones, footprints of permanent project features and temporarily impacted areas, area and plans for proposed buildings/structures, operational features of the project, and construction details.</li> <li>▪ Recommends the creation of a checklist or procedure for evaluating subsequent project impacts on biological resources.</li> <li>▪ States the requirement that the project must obtain an incidental take permit if it would result in the take of plants</li> </ul>	Section 5.4, <i>Biological Resources</i>

## 2. Introduction

Table 2-1 NOP Comment Letters and Scoping Meeting Summary

Agency/Organization/Individual	Date	Summary of Comments	Section of EIR Comment is Addressed
		<p>or animals listed in the California Endangered Species Act.</p> <ul style="list-style-type: none"> <li>▪ States the requirement for a Lake and Streambed Alteration Agreement for project activities that affect lakes or streams.</li> <li>▪ Recommends that the EIR provide baseline habitat assessments for special-status plant, fish and wildlife species located and potentially located within the Project area and surrounding lands.</li> <li>▪ Recommends that surveys be conducted for special-status species with potential to occur, prior to project implementation.</li> <li>▪ Recommends that maps be included that show habitat types with an overlay of the Project footprint.</li> <li>▪ Recommends that the EIR include mitigation for fully protected species</li> </ul>	
<p>Central Valley Regional Water Quality Control Board (CVRWQCB)</p>	<p>1/18/2023</p>	<ul style="list-style-type: none"> <li>▪ Summarizes the requirement for CVRWQCB to adopt a Basin Plan for the Central Valley region.</li> <li>▪ States that all wastewater discharges must comply with the State Water Board's Antidegradation Policy and that the EIR should evaluate potential impacts to both surface and groundwater quality.</li> <li>▪ Summarizes the requirements of the State Water General Permit, the Clean Water Act Section 404 Permit and 401 Permit, the Waste Discharge Requirement, Dewatering Permits, Limited Threat General NPDES Permits, and NPDES Permits.</li> </ul>	<p>Section 5.10, <i>Hydrology and Water Quality</i></p>
<p>Gary Farber for 350 Contra Costa Action</p>	<p>1/18/2023</p>	<ul style="list-style-type: none"> <li>▪ States that the EIR should consider air pollution, transportation and noise impacts that would be expected to occur under the project for sites without access to urban resources.</li> </ul>	<p>Section 5.3, <i>Air Quality</i>                      Section 5.16, <i>Transportation</i>                      Section 5.13, <i>Noise</i></p>
<p>Andy Byde</p>	<p>1/18/2023</p>	<ul style="list-style-type: none"> <li>▪ States that the sites on APN's 166-0300-01 and- 02 are incorrectly listed as increasing in allowable residential density.</li> <li>▪ States that these sites will not be increasing in allowable density and that the project's tables should be updated to reflect this.</li> </ul>	<p>Chapter 3, <i>Project Description</i></p>
<p>Bay Area Rapid Transit (BART)</p>	<p>1/19/2023</p>	<ul style="list-style-type: none"> <li>▪ States BART's Transit Oriented Development (TOD) Guidelines apply to developments within a half-mile of BART stations and identify a minimum density of 75 dwelling units per acre.</li> <li>▪ States that the Housing Element includes sites that are within a half-mile of two BART stations, but that some of these parcels will not meet the TOD guideline's minimum density.</li> <li>▪ Recommends that the project reconsider redesignating these parcels to meet or exceed the 75 dwelling units per acre density.</li> <li>▪ States that APN 709501024 appears in the Housing Element Inventory maps but is not listed within the tables.</li> </ul>	<p>Chapter 3, <i>Project Description</i></p>

2. Introduction

2.3 SCOPE OF THIS DEIR

The County determined the scope for this EIR based on review of the proposed project, agency consultation, the Notice of Preparation (NOP), and comments in response to the NOP. Pursuant to Sections 15126.2 and 15126.4 of the CEQA Guidelines, the EIR should identify any potentially significant adverse impacts to the environment and incorporate mitigation that would reduce or eliminate these impacts to levels of insignificance.

This EIR evaluates potential impacts associated with implementation of the proposed project. The information in Chapter 3, *Project Description*, establishes the basis for analyzing future project-related environmental impacts in this EIR. The Housing Element Update policies and mitigation measures have been identified that either eliminate or reduce potentially significant impacts.

2.3.1 Potentially Significant Adverse Impacts

The County determined that nine environmental factors have potentially significant impacts if the proposed project is implemented.

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Mineral Resources
- Noise
- Transportation
- Wildfire

2.3.2 Unavoidable Significant Adverse Impacts

This DEIR identifies 10 significant and unavoidable adverse impacts, as defined by CEQA, that would result from implementation of the proposed project. Unavoidable adverse impacts may be considered significant on a project-specific basis, cumulatively significant, and/or potentially significant. The County must prepare a “statement of overriding considerations” before it can approve the project, attesting that the decision-making body has balanced the benefits of the proposed project against its unavoidable significant environmental effects and has determined that the benefits outweigh the adverse effects, and therefore the adverse effects are considered acceptable. The impacts that were found in the DEIR to be significant and unavoidable are:

- **Impact 5.3-2** Short-term construction activities associated with the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.
- **Impact 5.3-3** Buildout of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.

## 2. Introduction

- **Impact 5.3-4:** Construction activities associated with the proposed project could expose sensitive receptors to substantial pollutant concentrations.
- **Impact 5.4-1:** The proposed project could impact special-status species.
- **Impact 5.5-1:** The proposed project could impact historic resources.
- **Impact 5.8-1:** Implementation of the proposed project is projected to result in emissions that exceed the unincorporated County's GHG reduction target established under SB 32.
- **Impact 5.9-5:** Implementation of the proposed project could expose structures and/or residences to fire danger.
- **Impact 5.13-1:** Construction activities would result in temporary noise increases in the vicinity of the proposed project.
- **Impact 5.13-2:** Traffic noise increases would be significant along several roadway segments throughout the County.
- **Impact 5.18-2:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, the project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.

## 2.4 INCORPORATION BY REFERENCE

Some documents are incorporated by reference into this DEIR, consistent with Section 15150 of the CEQA Guidelines, and they are available for review at the County.

- Contra Costa County General Plan and EIR (SCH# 1988071904)
- Contra Costa County Municipal Code

## 2.5 FINAL EIR CERTIFICATION

This DEIR is being circulated for public review for 45 days from Friday, February 3, 2023, through Monday, March 20, 2023. Interested agencies and members of the public are invited to provide written comments on the DEIR to the County address shown on the title page of this document. Upon completion of the 45-day review period, the County will review all written comments received and prepare written responses for each. A Final EIR (FEIR) will incorporate the received comments, responses to the comments, and any changes to the DEIR that result from comments. The FEIR will be presented to the County for potential certification as the environmental document for the project. All persons who comment on the DEIR will be notified of the availability of the FEIR and the date of the public hearing before the County.

## 2. Introduction

The DEIR is available to the public for review at the following locations:

- Online: <https://www.contracosta.ca.gov/8525/Housing-Element-Update>
- In-Person: Department of Conservation and Development – 30 Muir Road, Martinez, CA 94553

### 2.6 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code Section 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The Mitigation Monitoring Program for the proposed project will be completed as part of the Final EIR, prior to consideration of the project by the Contra Costa County Board of Supervisors.

## 2. Introduction

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## 3. Project Description

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### 3.1 PROJECT LOCATION

The proposed project encompasses all the unincorporated area of Contra Costa County (see Figure 3-1, *Regional Location*, and Figure 3-2, *Countywide Aerial*); however, the proposed housing element sites are within the urban limit line (ULL). Access varies depending on the location of the site, but generally the County is served by Interstates 80, 580, and 680, along with State Routes 4 and 24. Local arterial and collector roadways connecting to more regional roads provide the final access. The County Administrative Building, and county seat, is at 1025 Escobar Street, Martinez, CA 94553-1229, generally, 38°01'09.24" N, 122°08'01.30" W).

### 3.2 STATEMENT OF OBJECTIVES

Objectives for the project will aid decision makers in their review of the project and associated environmental impacts, and include:

1. Adopt the 6<sup>th</sup> Cycle Housing Element by January 31, 2023.
2. Provide a list of potential housing sites to meet the regional housing needs allocation (RHNA).
3. Determine if there are significant environmental issues that would preclude future decisions to consider land use designation and/or zone changes for sites identified for housing in the 6<sup>th</sup> Cycle Housing Element.

### 3.3 PROJECT CHARACTERISTICS

“Project,” as defined by the CEQA Guidelines, means:

... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1)...enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100–65700. (14 Cal. Code of Reg. § 15378[a])

In this instance the proposed project includes an update to one of the 11 elements of the 1992 General Plan, the Housing Element. The proposed project is unusual because the County has already initiated a comprehensive update of the General Plan that includes updates to all the other general plan elements. However, because there is a state-mandated deadline of January 31, 2023, for the 6<sup>th</sup> Cycle Housing Element and the potential for losing access to important funding by being out of compliance, the County is forced to accelerate consideration and adoption of this element ahead of the rest of the General Plan. As a result, the existing policy and regulatory framework as expressed in

### 3. Project Description

the General Plan and ordinances is being used to evaluate a potential change to land use countywide. As some of the technical analysis for the General Plan Update has been completed, the results will be incorporated into this Draft EIR as appropriate to substantiate the determination of environmental impact.

#### 3.3.1 Project Background

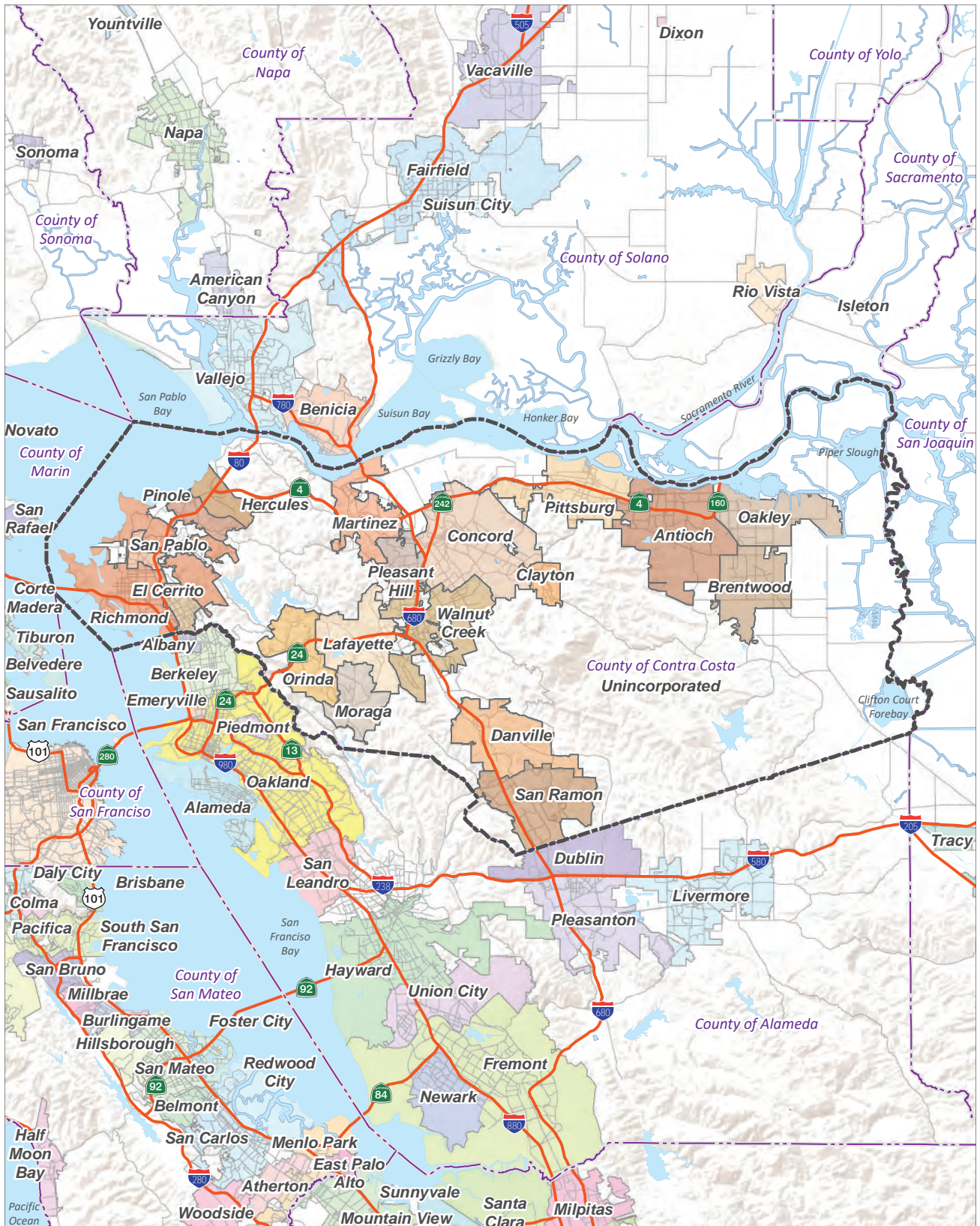
California Government Code Section 65308(c) mandates that each county include a housing element in its general plan. The housing element is required to identify and analyze existing and projected housing needs, and include statements of the county's goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. State law (Government Code Sections 65580-65589) mandates the content of the County's Housing Element and requires an analysis of:

- Population and employment trends;
- The county's fair share of the regional housing needs;
- Household characteristics;
- An inventory of land suitable for residential development;
- Governmental and non-governmental constraints on the improvement, maintenance, and development of housing;
- Special housing needs;
- Opportunities for energy conservation; and
- Publicly assisted housing developments that may convert to non-assisted housing developments.

The purpose of these requirements is to demonstrate adequate housing resources to meet the assigned RHNA for all housing categories, but especially housing for very low-income and low-income housing.

The California Department of Housing and Community Development (HCD) allocates regional housing needs numbers to the Association of Bay Area Governments (ABAG), which in turn allocates to cities and the unincorporated county their "fair share" of the RHNA. The housing needs are assigned based on household income groupings over the planning period for each specific jurisdiction's housing element.

# HOUSING ELEMENT



Source: ESRI, 2022

- Contra Costa County Boundary
- - - County Boundary

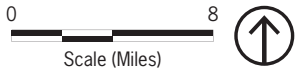
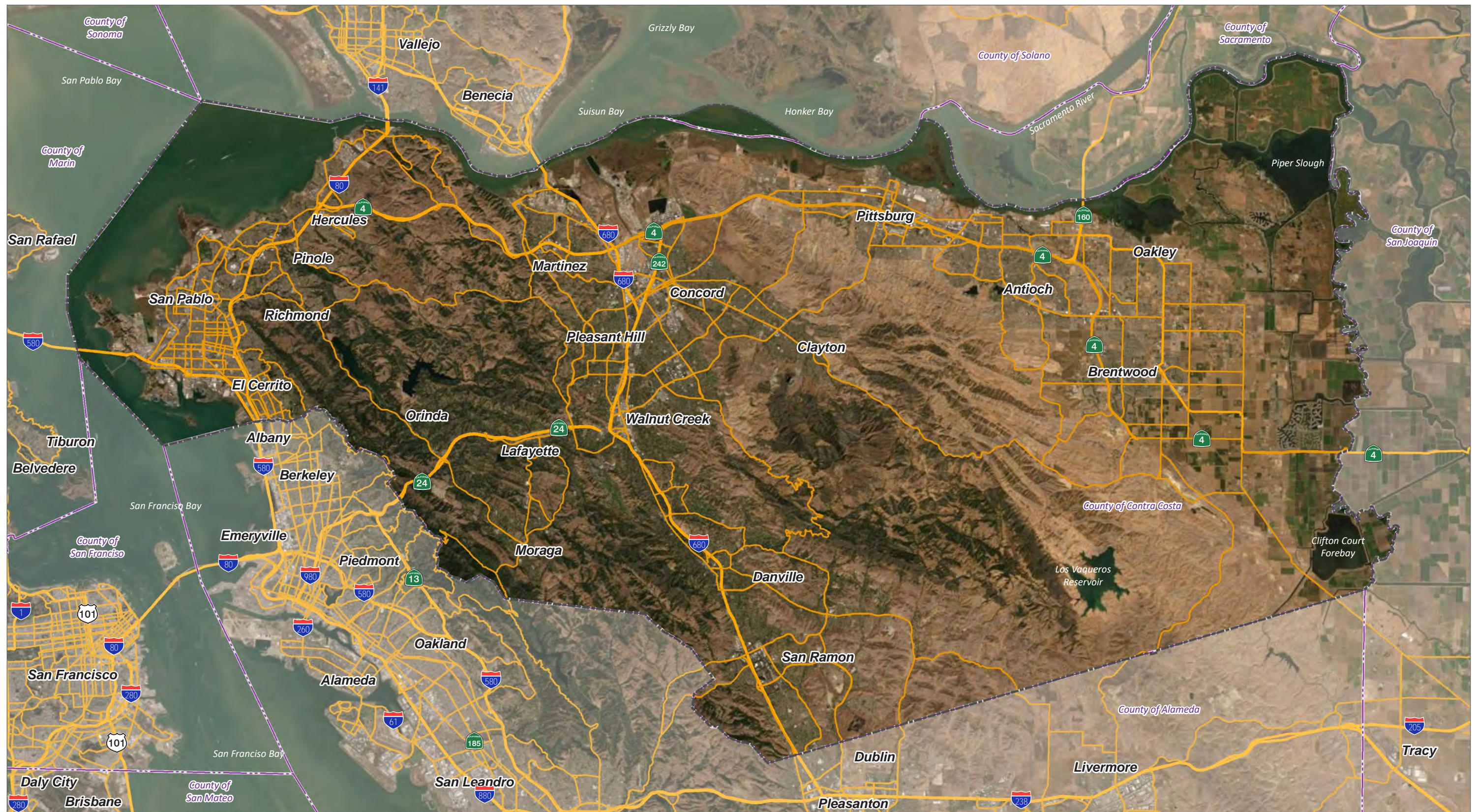


Figure 3-1  
Regional Location

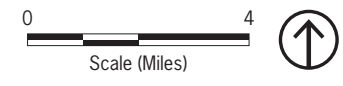
### 3. Project Description

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HOUSING ELEMENT



Source: ESRI, 2022



- Contra Costa County Boundary
- County Boundary

Figure 3-2  
Countywide Aerial

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To demonstrate housing resources for the extremely low-income, very low-income, and low-income housing categories, HCD requires that the County provide enough vacant and underutilized land to accommodate at least 7,610 housing units, as seen in Table 3-1, *2023-2031 Regional Housing Needs Allocation (RHNA)*. The County also intends to comply with No-Net-Loss (Gov. Code Section 65863) through identifying a surplus of sites available to meet its RHNA allocation. In total, the County’s surplus unit capacity is 2,485 units. HCD measures affordability through density, assuming that higher density equates to affordability. Section 65583.2 of the Government Code establishes a minimum density for affordable units for Contra Costa County at 30 housing units to the acre (HCD 2022).

Table 3-1 2023-2031 Regional Housing Needs Allocation (RHNA)

Income Category	Area Median Income Percentage	2023-2031 RHNA
Very Low	<50%	2,072
Low	50-80%	1,194
Moderate	80-120%	1,211
Above Moderate	>120%	3,133
Total		7,610

Source: ABAG 2021

Existing land uses as established in the current Land Use Element of the General Plan consist of a variety of residential, commercial, office, industrial, agricultural, and recreational/open space uses. To meet the RHNA obligations and to further the goals of the overall general plan update, the County is considering changes to land use designations and densities as shown in Table 3-2, *Existing and Proposed General Plan Land Use Designations*, as part of the separate, pending General Plan Update.

Table 3-2 Existing and Proposed General Plan Land Use Designations

Land Use Designation	Density (du/acre)	Floor-Area Ratio (FAR)
<b>EXISTING GENERAL PLAN LAND USE DESIGNATIONS</b>		
Single-Family Residential Very Low (SV)	0.2-0.9 <sup>1</sup>	-
Single-Family Residential Low (SL)	1.0-2.9 <sup>1</sup>	-
Single-Family Residential Medium (SM)	3.0-4.9 <sup>1</sup>	-
Single-Family Residential High (SH)	5.0-7.2 <sup>1</sup>	-
Off-Island Bonus Area (OIBA)	2 <sup>2</sup>	-
Multiple-Family Residential Low (ML)	7.3-11.9 <sup>1</sup>	-
Multiple-Family Residential Medium (MM)	12.0-21.9 <sup>1</sup>	-
Multiple-Family Residential High (MH)	22.0-29.9 <sup>1</sup>	-
Multiple-Family Residential Very High (MV)	30.0-44.9 <sup>1</sup>	-
Multiple-Family Residential Very High-Special (MS)	45.0-99.9 <sup>1</sup>	-
Congregate Care-Senior Housing (CC)	N/A	-
Mobile Home (MO)	1.0-12.0 <sup>1</sup>	-
Regional Commercial (RC)	-	Subject to city plans <sup>3</sup>
Commercial (CO)	-	0.1-1.0 <sup>3</sup>
Airport Commercial (ACO)	-	0.1-1.5 <sup>3</sup>
Office (OF)	-	0.1-1.5 <sup>3</sup>
Business Park (BP)	-	0.25-1.5 <sup>3</sup>

### 3. Project Description

Table 3-2 Existing and Proposed General Plan Land Use Designations

Land Use Designation	Density (du/acre)	Floor-Area Ratio (FAR)
Light Industry (LI)	-	0.25-0.67 <sup>3</sup>
Heavy Industry (HI)	-	0.1-0.4 <sup>3</sup>
Commercial Recreation (CR)	-	0.1-1.0 <sup>3</sup>
Mixed-Use (M-1, M-2, etc.)	-	Varies (see text) <sup>c</sup>
Local Commercial (LC)	-	Varies (see text) <sup>c</sup>
Marina Commercial (MC)	-	Varies (see text) <sup>c</sup>
Parks and Recreation (PR)	-	-
Open Space (OS)	-	-
Agricultural Lands (AL)	-	0.2 <sup>3</sup>
Agricultural Core (AC)	-	0.025 <sup>3</sup>
Delta Recreation and Resources (DR)	-	0.05 <sup>3</sup>
Water (WA)	-	-
Watershed (WS)	-	-
Public and Semi-Public (PS)	-	-
Landfill (LF)	-	-
<b>PROPOSED GENERAL PLAN LAND USE DESIGNATIONS</b>		
Residential Very Low (RVL)	≤1	1.0
Residential Low (RL)	1-3	1.0
Residential Low-Medium (RLM)	3-7	1.0
Residential Medium (RM)	7-17	1.0
Residential Medium-High (RMH)	17-30	1.0
Residential High (RH)	30-70	1.0
Residential Very High (RVH)	70-125	1.0
Commercial and Office (CO)	-	1.0 Commercial 2.5 Office
Light Industry	-	1.5
Heavy Industry	-	0.67 Heavy Industry 1.5 Light Industry
Mixed-Use Low (ML)	0-30	1.0
Mixed-Use Medium (MM)	30-75	2.0
Mixed-Use High (MH)	75-125	4.0
Public/Semi-Public	-	1.5
Agricultural Lands	0.2	-
Agricultural Core	0.025	-
Parks and Recreation	-	0.1
Commercial Recreation	-	0.5
Resource Conservation	-	-

Notes:

- <sup>1</sup> Net acreage includes all land area used exclusively for residential purposes, and excludes streets, highways, and all other public rights-of-way. Net acreage is assumed to constitute 75 percent of gross acreage for all uses, except for the Multiple-Family designations, where it is assumed to comprise 80 percent.
- <sup>2</sup> Density increases available through participation in bonus programs as described in the existing General Plan.
- <sup>3</sup> Floor area ratio is calculated by dividing building square footage by lot size.



## 3. Project Description

### 3.3.2 Description of the Project

The Housing Element is one of the required elements of the General Plan and is unique among the General Plan elements in that it is the only element of the plan that requires state certification. The draft Housing Element is included as Appendix 3-1 to this Draft EIR. As a policy document, the Housing Element does not normally result in physical changes to the environment but rather encourages the provision of affordable housing within the land use designations shown in the Land Use Element of the General Plan. The Housing Element identifies policy direction to meet the housing needs of the County by preserving existing homes and clarifying priorities for housing creation. The proposed Housing Element will include an overview of housing policies and programs and will identify locations that can accommodate future housing. The proposed project will require that the County redesignate land to meet the Regional Housing Needs Allocation (RHNA) of 7,610 total housing units. The County also intends to comply with No-Net-Loss (Gov. Code Section 65863) through identifying a surplus of sites available to meet its RHNA allocation. In total, the County's surplus unit capacity is 2,485 units. In order to meet this requirement, the County must redesignate up to approximately 548 acres of land. These changes include both sites with designations that currently allow residential density in addition to sites with designations that do not currently allow residential density. The Housing Element Update would also include an additional 103 acres of land that does not require a designation or zone change and will also be counted toward the County's RHNA. For the purposes analysis, these sites will be categorized in the following way:

- **Residential Sites with Increasing Allowable Density:** Shown in Table 3-3, *Residential Sites with Increasing Allowable Density*, these sites are currently designated for residential uses and are proposed to be redesignated to accommodate increased residential densities. This category encompasses approximately 470 acres across 328 parcels. Maximum buildout<sup>1</sup> of these sites would result in 15,562 residential units and the realistic buildout<sup>2</sup> would result in 5,961 residential units. The sites in this category correspond to those in Table B in Appendix A of the draft Housing Element Update (see Appendix 3-1 of the Draft EIR).
- **Non-Residential Sites Proposed to Allow Residential Units:** Shown in Table 3-4, *Non-Residential Sites Proposed to Allow Residential Units*, these sites are currently designated for a variety of non-residential uses and are proposed to be redesignated to allow residential uses. This category encompasses approximately 79 acres across 45 parcels. Maximum buildout of these sites under their new designations would result in 4,031 residential units and the realistic buildout would result in 2,382 residential units. The sites in this category correspond to those in Table B in Appendix A of the draft Housing Element Update (see Appendix 3-1 of this Draft EIR).

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<sup>1</sup> The term "maximum buildout" refers to the maximum allowed units under each site's proposed maximum allowable density added together. This is generated by multiplying the proposed maximum allowable density by each site's acreage. Note that this calculation assumes that the entire acreage of every site is developable for residential uses. It is furthermore assumed that all sites will be developed to 100 percent of their maximum allowed density.

<sup>2</sup> The term "realistic buildout" corresponds to the proposed Housing Element Update's assumptions of realistic development capacity discussed in Section 6.4, *Housing Resources*, of the draft Update (see Appendix 3-1 of this Draft EIR). The methodology used to determine the realistic development capacity considers factors specific to each individual site including pending development applications, previous development trends, and the proposed allowable density.

### 3. Project Description

- **Suitably Zoned/Designated Sites:** Shown in Table 3-5, *Suitably Zoned/Designated Sites* are sites in the Housing Element sites inventory that do not require a designation or zone change in order to accommodate residential density. The residential density of these sites would also contribute to the County's RHNA. This category includes 156 parcels that encompass a combined approximate 103 acres. Maximum buildout of these sites is 823 residential units and the realistic buildout, including the proposed units from pending development applications is 915 residential units. The sites in this category correspond to those in Table A in Appendix A of the draft Housing Element Update.

As shown in Tables 3-3, 3-4, and 3-5, each site's "proposed maximum allowable units" assumes that the entire acreage of the site will be developed at its maximum allowable density. This was calculated by multiplying the acreage of the site by its proposed maximum allowable density. This scenario is highly conservative as it is unlikely that 100 percent of the sites would be developed at 100 percent of their allowed capacity. The proposed Housing Element Update (Appendix 3-1) used a different methodology to calculate the unit allocation of each site for the purposes of the County's RHNA. The "realistic unit" scenario used in the proposed Housing Element was based on a variety of assumptions including current and historic development trends in the County and the units contributed by current development applications (see page draft Housing Element, Appendix 3-1 for more details). For purposes of this EIR, full development of the properties at the allowable density is assumed.

The redesignation/rezone of all sites shown in Tables 3-3, 3-4, and 3-5 would result in a total of 20,417 maximum allowable units. Under the "realistic" development scenario assumed under the Housing Element Update, the total number of units under the proposed project would be 9,516 units. The location of these parcels is shown on Figure 3-3a, *Housing Sites Inventory – Alamo*; Figure 3-3b, *Housing Sites Inventory – Byron*; Figure 3-3c, *Housing Sites Inventory – Saranap/Parkmead*; Figure 3-3d, *Housing Sites Inventory – Discovery Bay*; Figure 3-3e, *Housing Sites Inventory – Reliez Valley*; Figure 3-3f, *Housing Sites Inventory – Contra Costa Centre*; Figure 3-3g, *Housing Sites Inventory – North Richmond*; Figure 3-3h, *Housing Sites Inventory – East Richmond Heights*; Figure 3-3i, *Housing Sites Inventory – El Sobrante*; Figure 3-3j, *Housing Sites Inventory – El Sobrante/Tara Hills (South)*; Figure 3-3k, *Housing Sites Inventory – Pleasant Hill (Unincorporated)*; Figure 3-3l, *Housing Sites Inventory – Pacheco*; Figure 3-3m, *Housing Sites Inventory – Bayview/Tara Hills*; Figure 3-3n, *Housing Sites Inventory – Vine Hill*; Figure 3-3o, *Housing Sites Inventory – Clyde*; Figure 3-3p, *Housing Sites Inventory – Bay Point (West)*; Figure 3-3q, *Housing Sites Inventory – Bay Point (East)*; Figure 3-3r, *Housing Sites Inventory – Rodeo*; Figure 3-3s, *Housing Sites Inventory – Crockett*. This project will not change the land use designations or zoning of any of the parcels in Tables 3-3, 3-4, or 3-5 as this action will occur with the larger General Plan Update that is already in progress and will have its own EIR. However, this EIR will evaluate the sites using the proposed general plan land use designations as currently under consideration. An objective of this project is to publicly review the list of sites to determine if there are significant environmental impacts that would affect any future change in designation or density.

Development under the Housing Element Update would comply with the County's Urban Limit Line and the 65/35 Standard, which limit urban development to certain areas and to no more than 35 percent of the land area of the County, with the remaining 65 percent being preserved for agriculture, open space, wetlands, parks, and other non-urban uses.

3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
003120008	4.94	Byron	Single-Family Residential - Medium Density	RMH	30	148
003120009	5.08	Byron	Single-Family Residential - Medium Density	RMH	30	153
011230041	5.07	Discovery Bay	Single Family Residential	RM	17	86
093036010	0.21	Bay Point	Willow Pass Road Mixed Use	MU*	75	16
093036014	0.37	Bay Point	Willow Pass Road Mixed Use	MU*	75	28
093036015	1.23	Bay Point	Willow Pass Road Mixed Use	MU*	75	92
093121001	10.99	Bay Point	Single-Family Residential - High Density	RMH	30	330
093170056	0.56	Bay Point	Multiple-Family Residential - High Density	RH	70	39
093170069	1.41	Bay Point	Bay Point Residential Mixed Use	MU*	125	176
093170071	0.53	Bay Point	Bay Point Residential Mixed Use	MU*	125	66
093170074	0.05	Bay Point	Bay Point Residential Mixed Use	MU*	125	6
093170080	0.27	Bay Point	Bay Point Residential Mixed Use	MU*	125	34
093191025	0.16	Bay Point	Willow Pass Road Mixed Use	MU*	75	12
093192026	0.29	Bay Point	Single-Family Residential - High Density	RM	17	5
093193002	0.14	Bay Point	Single-Family Residential - High Density	RM	17	2
093193035	0.18	Bay Point	Single-Family Residential - High Density	RM	17	3
095021002	0.57	Bay Point	Single-Family Residential - High Density	RMH	30	17
095022025	0.30	Bay Point	Willow Pass Road Mixed Use	MU*	75	23
095022026	0.10	Bay Point	Willow Pass Road Mixed Use	MU*	75	7
095022027	0.07	Bay Point	Willow Pass Road Mixed Use	MU*	75	6
095034002	0.12	Bay Point	Willow Pass Road Mixed Use	MU*	75	9
095071010	0.50	Bay Point	Single-Family Residential - High Density	RM	17	8
095075025	0.21	Bay Point	Single-Family Residential - High Density	RM	17	4
095081020	0.77	Bay Point	Single-Family Residential - High Density	MU*	75	58
095081023	0.71	Bay Point	Willow Pass Road Mixed Use	MU*	75	53
095083023	0.16	Bay Point	Willow Pass Road Mixed Use	MU*	75	12
095084025	0.22	Bay Point	Single-Family Residential - High Density	RM	17	4
095101001	0.42	Bay Point	Single-Family Residential - Medium Density	RM	17	7
095101002	0.42	Bay Point	Single-Family Residential - Medium Density	RM	17	7
095102003	0.66	Bay Point	Single-Family Residential - Medium Density	RM	17	11
095102020	0.44	Bay Point	Single-Family Residential - Medium Density	RM	17	7
095107015	0.40	Bay Point	Single-Family Residential - Medium Density	RM	17	7

### 3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
096012008	0.13	Bay Point	Single-Family Residential - High Density	RMH	30	4
096012009	0.06	Bay Point	Single-Family Residential - High Density	RMH	30	2
096015011	0.22	Bay Point	Single-Family Residential - High Density	RMH	30	7
096015015	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096015016	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016002	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016003	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016005	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016013	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016018	0.20	Bay Point	Single-Family Residential - High Density	RMH	30	6
096017008	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096018007	0.18	Bay Point	Single-Family Residential - High Density	RMH	30	5
096018015	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096019017	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096019025	0.25	Bay Point	Willow Pass Road Mixed Use	MU*	75	19
096020022	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096020039	0.08	Bay Point	Single-Family Residential - High Density	RMH	30	2
096020042	0.09	Bay Point	Single-Family Residential - High Density	RMH	30	3
096020050	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096020062	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096020082	0.17	Bay Point	Willow Pass Road Mixed Use	MU*	75	13
096020093	0.09	Bay Point	Single-Family Residential - High Density	RMH	30	3
096020173	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096031018	0.62	Bay Point	Multiple-Family Residential - Low Density	RH	70	43
096031019	1.02	Bay Point	Multiple-Family Residential - Low Density	RH	70	71
096032011	0.12	Bay Point	Multiple-Family Residential - Low Density	MU*	75	9
096032016	0.12	Bay Point	Multiple-Family Residential - Low Density	MU*	75	9
096032028	0.31	Bay Point	Willow Pass Road Mixed Use	MU*	75	24
096032032	0.92	Bay Point	Multiple-Family Residential - Low Density	MU*	75	69
096033028	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096033035	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096033037	0.15	Bay Point	Single-Family Residential - High Density	MU*	75	11

3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
096033039	0.35	Bay Point	Willow Pass Road Mixed Use	MU*	75	26
096041001	0.33	Bay Point	Single-Family Residential - High Density	RMH	30	10
096041013	0.35	Bay Point	Single-Family Residential - High Density	RMH	30	11
096041026	0.37	Bay Point	Single-Family Residential - High Density	RMH	30	11
096042020	0.41	Bay Point	Single-Family Residential - High Density	RMH	30	12
096043002	0.64	Bay Point	Single-Family Residential - High Density	RMH	30	19
096044001	0.42	Bay Point	Single-Family Residential - High Density	RMH	30	12
096044009	0.33	Bay Point	Single-Family Residential - High Density	RMH	30	10
096044010	0.34	Bay Point	Single Family Residential	RMH	30	10
096050007	1.09	Bay Point	Single Family Residential	RMH	30	33
096044002	0.20	Bay Point	Single-Family Residential - High Density	RMH	30	6
096044003	0.41	Bay Point	Single-Family Residential - High Density	RMH	30	12
096044007	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096050011	0.80	Bay Point	Single-Family Residential - High Density	RMH	30	24
096050012	0.15	Bay Point	Single-Family Residential - High Density	RMH	30	4
096050013	0.15	Bay Point	Single-Family Residential - High Density	RMH	30	4
096050014	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096050016	2.96	Bay Point	Single Family Residential	RMH	30	89
098052053	0.12	Bay Point	Single-Family Residential - High Density	RM	17	2
098180005	1.46	Bay Point	Single-Family Residential - Medium Density	RM	17	25
098180041	0.76	Bay Point	Single-Family Residential - Medium Density	RM	17	13
098180043	0.82	Bay Point	Single-Family Residential - Medium Density	RM	17	14
098230023	0.61	Bay Point	Single-Family Residential - High Density	RM	17	10
098250013	256.18	Bay Point	Multi-Family Residential - Medium Density	RMH	30	7685
125071011	0.23	Pacheco	Multiple-Family Residential - Medium Density	RMH	30	7
125071012	0.27	Pacheco	Multiple-Family Residential - Medium Density	RMH	30	8
148221033	1.81	Walnut Creek	Pleasant Hill BART Mixed Use	MU*	125	226
148350009	0.45	Walnut Creek	Single-Family Residential - Low Density	RH	60	27
148350010	0.48	Walnut Creek	Single-Family Residential - Low Density	RH	60	29
148350011	1.01	Walnut Creek	Single-Family Residential - Low Density	RH	60	61
148350020	1.79	Walnut Creek	Single-Family Residential - Low Density	RH	60	107
172040025	0.30	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	37

### 3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
172040026	0.29	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	37
172040034	0.35	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	44
172040035	0.13	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	16
172080007	17.21	Contra Costa Centre	Single Family Residential	RM	17	293
172120002	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172120003	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172120004	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120005	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120006	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120007	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120008	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120009	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120010	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120011	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172120012	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120013	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120025	0.33	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120027	0.36	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	45
172120028	0.37	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	46
172120051	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120052	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172150012	13.47	Contra Costa Centre	Single Family Residential	RM	17	229
191062022	1.64	Alamo	Single-Family Residential - Low Density	RM	17	28
191080001	1.18	Alamo	Single-Family Residential - Low Density	RM	17	20
197010013	0.23	Alamo	Multiple-Family Residential - Medium Density	RMH	30	7
197010014	0.24	Alamo	Multiple-Family Residential - Medium Density	RMH	30	7
197010016	0.24	Alamo	Multiple-Family Residential - Medium Density	RMH	30	7
197030001	0.61	Alamo	Single-Family Residential - Low Density	RM	17	10
197030026	5.68	Alamo	Single-Family Residential - Low Density	RMH	30	170
197030027	0.61	Alamo	Single-Family Residential - Low Density	RMH	30	18
197040011	0.55	Alamo	Single-Family Residential - Low Density	RM	17	9
197040012	3.64	Alamo	Single-Family Residential - Low Density	RM	17	62

### 3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
354173009	0.12	Crockett	Single-Family Residential - High Density	RMH	30	3
354173010	0.12	Crockett	Single-Family Residential - High Density	RMH	30	3
354177007	0.12	Crockett	Single-Family Residential - High Density	RMH	30	3
357042016	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	11
357052002	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	11
357081003	0.26	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	19
357140010	0.12	Rodeo	Parker Avenue Mixed Use	MU*	75	9
357140016	0.12	Rodeo	Parker Avenue Mixed Use	MU*	75	9
357140045	0.07	Rodeo	Parker Avenue Mixed Use	MU*	75	5
357161001	0.22	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	16
357161002	0.17	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	13
357161006	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	8
357161013	0.90	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	68
357171002	0.10	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	8
357171008	0.23	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	18
357171010	0.42	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	31
357171019	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	8
357171020	0.04	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	3
357194001	0.74	Rodeo	Single-Family Residential - High Density	RM	17	13
357196012	0.15	Rodeo	Multiple-Family Residential - Low Density	RM	17	2
357371013	0.17	Rodeo	Single-Family Residential - High Density	RM	17	3
380120066	0.63	Vine Hill	Single-Family Residential - High Density	RM	17	11
380194010	0.39	Vine Hill	Multiple-Family Residential - High Density	MU*	75	29
380220066	0.75	Vine Hill	Multiple-Family Residential - High Density	MU*	75	57
403030005	12.79	Bay View	Montalvin Manor Mixed Use	MU*	75	959
405203018	0.73	San Pablo	Multiple-Family Residential - High Density	RMH	30	22
408160016	0.16	North Richmond	Single-Family Residential - High Density	RMH	30	5
409011012	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021007	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	3
409021008	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021010	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021027	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2

### 3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409021028	0.09	North Richmond	Single-Family Residential - High Density	RMH	30	3
409021032	0.15	North Richmond	Single-Family Residential - High Density	RMH	30	4
409021034	0.08	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021037	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021040	0.05	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021041	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409031004	0.05	North Richmond	Single-Family Residential - High Density	RMH	30	2
409032013	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409032015	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	4
409032019	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409033001	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409033012	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409033023	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409033025	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409041006	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409042014	0.45	North Richmond	Single-Family Residential - High Density	RMH	30	14
409042021	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409042022	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409051002	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409051008	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409052001	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409052003	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409052009	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409060009	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409060013	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409060018	0.35	North Richmond	Single-Family Residential - High Density	RMH	30	10
409060029	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	4
409060043	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409060044	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409080005	0.05	North Richmond	Single-Family Residential - High Density	RMH	30	2
409100004	0.58	North Richmond	Single-Family Residential - High Density	RMH	30	17
409110007	0.19	North Richmond	Single-Family Residential - High Density	RMH	30	6



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Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409120005	0.18	North Richmond	Single-Family Residential - High Density	RMH	30	5
409120011	0.41	North Richmond	Multiple-Family Residential - Low Density	MU*	75	31
409120012	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409131003	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409131010	0.09	North Richmond	Single-Family Residential - High Density	RMH	30	3
409131014	0.04	North Richmond	Single-Family Residential - High Density	RMH	30	1
409131015	0.04	North Richmond	Single-Family Residential - High Density	RMH	30	1
409132002	0.12	North Richmond	Multiple-Family Residential - Low Density	RMH	30	4
409132007	0.51	North Richmond	Multiple-Family Residential - Low Density	MU*	75	38
409132016	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409141006	0.18	North Richmond	Single-Family Residential - High Density	RMH	30	6
409141012	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	3
409142005	0.49	North Richmond	Single-Family Residential - High Density	RMH	30	15
409142012	0.10	North Richmond	Single-Family Residential - High Density	RMH	30	3
409142014	0.40	North Richmond	Single-Family Residential - High Density	RMH	30	12
409142015	0.10	North Richmond	Single-Family Residential - High Density	RMH	30	3
409142016	0.10	North Richmond	Single-Family Residential - High Density	RMH	30	3
409151005	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409151011	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409152002	0.10	North Richmond	Multiple-Family Residential - Medium Density	MU*	75	7
409152007	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409161001	0.11	North Richmond	Single-Family Residential - High Density	MU*	75	9
409161003	0.17	North Richmond	Multiple-Family Residential - High Density	MU*	75	13
409161008	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409162008	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409162018	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409162024	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409162025	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409171012	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409171015	0.24	North Richmond	Single-Family Residential - High Density	RMH	30	7
409171023	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409171024	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2

### 3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409172017	0.13	North Richmond	Single-Family Residential - High Density	RMH	30	4
409172027	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409172028	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409181008	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	4
409182002	0.26	North Richmond	Single-Family Residential - High Density	MU*	75	20
409182020	0.07	North Richmond	Single-Family Residential - High Density	RMH	30	2
409182023	0.07	North Richmond	Single-Family Residential - High Density	MU*	75	5
409182024	0.06	North Richmond	Single-Family Residential - High Density	MU*	75	4
409191001	0.35	North Richmond	Single-Family Residential - High Density	MU*	75	26
409191009	0.23	North Richmond	Single-Family Residential - High Density	MU*	75	17
409191013	0.17	North Richmond	Single-Family Residential - High Density	MU*	75	13
409192001	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409200009	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409200015	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409200016	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409200024	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409200025	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409210011	0.53	North Richmond	Multiple-Family Residential - Low Density	RMH	30	16
409210020	0.67	North Richmond	Multiple-Family Residential - Low Density	RMH	30	20
409210021	1.37	North Richmond	Multiple-Family Residential - Low Density	RMH	30	41
409210022	2.16	North Richmond	Multiple-Family Residential - Low Density	RMH	30	65
409210023	3.03	North Richmond	Multiple-Family Residential - Low Density	RMH	30	91
409210024	1.28	North Richmond	Multiple-Family Residential - Low Density	RMH	30	38
409210025	0.70	North Richmond	Multiple-Family Residential - Low Density	RMH	30	21
409210026	1.60	North Richmond	Multiple-Family Residential - Low Density	RMH	30	48
409220006	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409220007	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409220008	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409230015	0.07	North Richmond	Single-Family Residential - High Density	MU*	75	6
409240017	0.15	North Richmond	Single-Family Residential - High Density	MU*	75	11
409240019	0.08	North Richmond	Single-Family Residential - High Density	MU*	75	6
409240029	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2

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Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409240030	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409251019	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409251020	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409251021	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409251022	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409252008	0.19	North Richmond	Single-Family Residential - High Density	RMH	30	6
409261009	0.06	North Richmond	Single-Family Residential - High Density	MU*	75	4
409261012	0.06	North Richmond	Single-Family Residential - High Density	MU*	75	4
409261013	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409261015	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409261016	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409271005	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409271007	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409271011	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409271021	0.09	North Richmond	Single-Family Residential - High Density	RMH	30	3
409271025	0.07	North Richmond	Single-Family Residential - High Density	RMH	30	2
409272007	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409272009	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409272010	0.04	North Richmond	Single-Family Residential - High Density	RMH	30	1
409281001	0.40	North Richmond	Single-Family Residential - High Density	RMH	30	12
409281011	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409281014	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409282005	0.34	North Richmond	Single-Family Residential - High Density	RMH	30	10
409282006	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409282019	0.17	North Richmond	Single-Family Residential - High Density	MU*	75	13
409291008	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409291009	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409292001	0.61	North Richmond	Single-Family Residential - High Density	RMH	30	18
420090029	3.07	El Sobrante	Single-Family Residential - High Density	RM	17	52
420150030	0.45	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	13
420150033	0.93	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	28
420184015	2.78	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	83

### 3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
420192018	0.39	EI Sobrante	Single-Family Residential - High Density	RLM	7	3
420192037	0.76	EI Sobrante	San Pablo Dam Road Mixed Use	MU*	30	23
420192042	0.19	EI Sobrante	San Pablo Dam Road Mixed Use	MU*	30	6
420192043	0.47	EI Sobrante	San Pablo Dam Road Mixed Use	MU*	30	14
425023011	2.94	EI Sobrante	Single-Family Residential - High Density	RM	17	50
425040016	3.64	EI Sobrante	Single-Family Residential - High Density	RM	17	62
425040024	2.33	EI Sobrante	Single-Family Residential - High Density	RM	17	40
425061012	4.57	EI Sobrante	Single-Family Residential - High Density	RM	17	78
425061032	0.20	EI Sobrante	Single-Family Residential - High Density	RM	17	3
425061033	0.19	EI Sobrante	Single-Family Residential - High Density	RM	17	3
425061034	0.17	EI Sobrante	Single-Family Residential - High Density	RM	17	3
425072024	0.49	EI Sobrante	Single-Family Residential - High Density	RM	17	8
425100054	0.30	EI Sobrante	Appian Way General Mixed Use	MU*	30	9
425100056	0.56	EI Sobrante	Appian Way General Mixed Use	MU*	30	17
425142015	0.41	EI Sobrante	Single-Family Residential - High Density	RM	17	7
425200006	3.12	EI Sobrante	Multiple-Family Residential - Low Density	MU*	30	94
425210037	0.90	EI Sobrante	Appian Way General Mixed Use	MU*	30	27
425210039	0.91	EI Sobrante	Appian Way General Mixed Use	MU*	30	27
425210042	0.91	EI Sobrante	Appian Way General Mixed Use	MU*	30	27
425210044	0.33	EI Sobrante	Multiple-Family Residential - Low Density	MU*	30	10
425210045	1.30	EI Sobrante	Multiple-Family Residential - Low Density	MU*	30	39
425230017	0.89	EI Sobrante	Appian Way General Mixed Use	MU*	30	27
425230035	1.94	EI Sobrante	Appian Way General Mixed Use	MU*	30	58
425230036	0.47	EI Sobrante	Appian Way General Mixed Use	MU*	30	14
425230037	0.45	EI Sobrante	Appian Way General Mixed Use	MU*	30	14
425230038	0.91	EI Sobrante	Appian Way General Mixed Use	MU*	30	27
425240041	1.68	EI Sobrante	Appian Way General Mixed Use	MU*	30	50
425252045	0.30	EI Sobrante	Triangle Area Mixed Use	MU*	30	9
425252048	0.12	EI Sobrante	Triangle Area Mixed Use	MU*	30	4
425252064	1.33	EI Sobrante	Triangle Area Mixed Use	MU*	30	40
426261060	0.87	EI Sobrante	Triangle Area Mixed Use	MU*	30	26
430012022	3.21	EI Sobrante	Single-Family Residential - Medium Density	RLM	7	23

3. Project Description

Table 3-3 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
430152062	0.16	El Sobrante	Triangle Area Mixed Use	MU*	30	5
431010010	0.79	El Sobrante	Single-Family Residential - High Density	RMH	30	24
431010011	0.26	El Sobrante	Single-Family Residential - High Density	RMH	30	8
431020017	0.45	El Sobrante	Multiple-Family Residential - Low Density	RMH	30	13
433060014	1.55	El Sobrante	Multiple-Family Residential - Low Density	MU*	30	46
435070008	0.16	El Sobrante	Multiple-Family Residential - Low Density	RMH	30	5
435080005	0.99	El Sobrante	Multiple-Family Residential - Low Density	RMH	30	30
435171006	0.45	El Sobrante	Single-Family Residential - Medium Density	RLM	7	3
<b>TOTAL</b>	<b>470</b>					<b>15,562</b>

<sup>1</sup> Dwelling units per net acre unless otherwise indicated

<sup>2</sup> The maximum allowed density multiplied by the site's acreage

RMH = Residential Medium High Density  
 RM = Residential Medium Density  
 MU = Mixed Use  
 RH = Residential High Density  
 RL = Residential Low Density  
 RVH = Residential Very High Density

Note that bolded values are sites that have been added to the inventory since the release of the previous NOP

### 3. Project Description

Table 3-4 Non-Residential Sites Proposed to Allow Residential Units

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
004182006	6.00	Discovery Bay	Commercial	MU*	75	450
008010039	4.60	Discovery Bay	Commercial	MU	75	345
011220039	6.42	Discovery Bay	Office	RMH	30	193
093170018	0.12	Bay Point	Commercial	MU*	125	16
093170021	0.13	Bay Point	Commercial	MU*	125	16
093170022	0.13	Bay Point	Commercial	MU*	125	16
093170076	0.06	Bay Point	Commercial	MU*	125	8
093170078	0.19	Bay Point	Commercial	MU*	125	23
095010010	6.97	Bay Point	Commercial	MU*	125	871
125130018	0.79	Pacheco	Public and Semi-Public	MU*	75	59
125130020	0.19	Pacheco	Commercial	MU*	75	14
125140005	0.47	Pacheco	Office	MU*	75	35
125155021	0.21	Pacheco	Office	MU*	75	15
159210004	0.26	Vine Hill	Commercial	MU	75	20
159210039	1.05	Vine Hill	Commercial	MU	75	79
159210042	4.33	Vine Hill	Commercial	MU	75	325
159210043	0.87	Vine Hill	Commercial	MU	75	65
159240005	10.00	Vine Hill	Light Industry	RVL	1	10
191093043	1.50	Alamo	Commercial	MU*	75	113
191093044	0.65	Alamo	Commercial	MU*	75	49
354072003	0.16	Crockett	Commercial	MU*	30	5
354094009	0.09	Crockett	Commercial	MU*	30	3
357101002	0.13	Rodeo	Commercial	MU*	75	10
357111010	0.16	Rodeo	Commercial	MU*	75	12
357120002	0.65	Rodeo	Commercial	MU*	75	49
357120003	0.79	Rodeo	Commercial	MU*	75	59
403020009	2.77	Bay View	Public and Semi-Public	RMH	30	83
403020013	0.59	Bay View	Public and Semi-Public	RMH	30	18
403211024	1.69	Montalvin Manor	Commercial	MU*	75	127
403211026	1.14	Montalvin Manor	Commercial	MU*	75	86
403211027	3.63	Montalvin Manor	Commercial	MU*	75	272
403482043	4.55	Bay View	Public and Semi-Public	RMH	30	137
420010001	0.39	El Sobrante	Commercial	MU*	30	12

3. Project Description

Table 3-4 Non-Residential Sites Proposed to Allow Residential Units

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
420010002	1.19	El Sobrante	Commercial	MU*	30	36
420140003	2.12	El Sobrante	Commercial	MU*	30	64
425160015	0.40	El Sobrante	Open Space	MU*	30	12
425170030	0.77	El Sobrante	Commercial	MU*	30	23
425251006	0.09	El Sobrante	Commercial	MU*	30	3
426070020	2.98	Tara Hills	Public and Semi-Public	RLM	7	21
431070027	0.19	El Sobrante	Open Space	RLM	7	1
520032002	1.09	East Richmond	Public and Semi-Public	MU*	30	33
520042013	0.96	East Richmond	Public and Semi-Public	MU*	30	29
520050001	3.42	East Richmond	Public and Semi-Public	MU*	30	103
520062001	1.59	East Richmond	Public and Semi-Public	MU*	30	48
520070004	2.10	East Richmond	Public and Semi-Public	MU*	30	63
<b>TOTAL</b>	<b>78.6</b>					<b>4,031</b>

<sup>1</sup> Dwelling units per net acre unless otherwise indicated.

<sup>2</sup> The maximum allowed density multiplied by the site's acreage

RMH = Residential Medium High Density  
 RM = Residential Medium Density  
 MU = Mixed Use  
 RH = Residential High Density  
 RL = Residential Low Density  
 RVL = Residential Very Low Density  
 PS = Public/Semi Public  
 RLM = Residential Low Medium Density

Note that bolded values are sites that have been added to the inventory since the release of the previous NOP

### 3. Project Description

Table 3-5 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
093081027*	0.52	Bay Point	Willow Pass Road Commercial Mixed Use	29.9	15
093081028*	0.52	Bay Point	Willow Pass Road Commercial Mixed Use	29.9	15
093081029*	0.77	Bay Point	Willow Pass Road Commercial Mixed Use	29.9	23
093160005	0.24	Bay Point	Multiple-Family Residential - High Density	29.9	7
093160006	0.27	Bay Point	Multiple-Family Residential - High Density	29.9	8
094012021*	0.13	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012022*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012023*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012024*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012025*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012026*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012027*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012030*	0.10	Bay Point	Bay Point Residential Mixed Use	29.9	3
094012031*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012032*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012033*	0.13	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012038*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012039*	0.15	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012040*	0.13	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013001*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013002*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013003*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013004*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013005*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013006*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013012*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013013*	0.18	Bay Point	Bay Point Residential Mixed Use	29.9	5
094013014*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013015*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013016*	0.10	Bay Point	Bay Point Residential Mixed Use	29.9	3
094014001*	0.20	Bay Point	Bay Point Residential Mixed Use	29.9	6
094014010*	0.19	Bay Point	Bay Point Residential Mixed Use	29.9	6
094014011*	0.20	Bay Point	Bay Point Residential Mixed Use	29.9	6
094014012*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094014013*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094014014*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094015006*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094015010*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4



### 3. Project Description

Table 3-5 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
094015011*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015012*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015013*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015014*	0.15	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015027*	0.30	Bay Point	Bay Point Residential Mixed Use	29.9	9
094015028*	0.21	Bay Point	Bay Point Residential Mixed Use	29.9	6
094016002*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094026001*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	3
094026002*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	3
094026007*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094026008	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
095120041	0.13	Bay Point	Single-Family Residential - High Density	7.2	1
098052006	0.13	Bay Point	Single-Family Residential - High Density	7.2	1
100303008	0.14	Clyde	Single-Family Residential - High Density	7.2	1
154210027	0.58	Pacheco	Single-Family Residential - Low Density	2.9	2
159180028	0.23	Vine Hill	Single-Family Residential - High Density	7.2	2
159190043	2.39	Vine Hill	Single-Family Residential - High Density	7.2	17
159230007	9.75	Vine Hill	Single-Family Residential - High Density	7.2	70
161262010	0.59	Vine Hill	Multiple-Family Residential - Low Density	6	4
161262013	0.69	Vine Hill	Multiple-Family Residential - Low Density	6	4
169231011	0.29	Reliez Valley	Single-Family Residential - Medium Density	12	3
184342008	0.21	Saranap	Single-Family Residential - High Density	7.2	2
197050025	9.89	Alamo	Single-Family Residential - Very Low Density	1	10
197050026	2.50	Alamo	Single-Family Residential - Very Low Density	1	3
354030013	2.39	Crockett	Single-Family Residential - High Density	7.2	17
354041016	0.16	Crockett	Single-Family Residential - High Density	7.2	1
354042029	0.11	Crockett	Single-Family Residential - High Density	7.2	1
354054006	0.22	Crockett	Single-Family Residential - High Density	7.2	2
354064025	0.24	Crockett	Multiple-Family Residential - Low Density	6	1
354072020	0.08	Crockett	Single-Family Residential - High Density	7.2	1
354072027	0.12	Crockett	Multiple-Family Residential - Low Density	6	1
354094014	0.04	Crockett	Multiple-Family Residential - Low Density	6	0
354095024	0.15	Crockett	Single-Family Residential - High Density	7.2	1
354155004	0.11	Crockett	Multiple-Family Residential - Low Density	6	1
354155007	0.12	Crockett	Single-Family Residential - High Density	7.2	1
354231028	0.18	Crockett	Single-Family Residential - High Density	7.2	1
357061010	0.14	Rodeo	Single-Family Residential - High Density	7.2	1
357224013	0.13	Rodeo	Single-Family Residential - High Density	7.2	1

### 3. Project Description

Table 3-5 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
357260071	0.24	Rodeo	Single-Family Residential - High Density	7.2	2
357281005	0.31	Rodeo	Single-Family Residential - High Density	7.2	2
380070035	0.18	Vine Hill	Single-Family Residential - High Density	7.2	1
380070036	0.15	Vine Hill	Single-Family Residential - High Density	7.2	1
380070037	0.14	Vine Hill	Single-Family Residential - High Density	7.2	1
380070038	0.15	Vine Hill	Single-Family Residential - High Density	7.2	1
380070039	0.14	Vine Hill	Single-Family Residential - High Density	7.2	1
380070040	0.14	Vine Hill	Single-Family Residential - High Density	7.2	1
380070041	0.22	Vine Hill	Single-Family Residential - High Density	7.2	2
380070042	0.16	Vine Hill	Single-Family Residential - High Density	7.2	1
380070043	0.23	Vine Hill	Single-Family Residential - High Density	7.2	2
380070044	0.34	Vine Hill	Single-Family Residential - High Density	7.2	2
380080030	0.18	Vine Hill	Single-Family Residential - High Density	7.2	1
380080031	0.20	Vine Hill	Single-Family Residential - High Density	7.2	1
380080058	0.42	Vine Hill	Single-Family Residential - High Density	7.2	3
380120060	0.30	Vine Hill	Single-Family Residential - High Density	7.2	2
380120061	0.30	Vine Hill	Single-Family Residential - High Density	7.2	2
380120087	0.17	Vine Hill	Single-Family Residential - High Density	7.2	1
380120088	0.28	Vine Hill	Single-Family Residential - High Density	7.2	2
403152020	0.51	Tara Hills	Single-Family Residential - High Density	7.2	4
403461003	0.16	Bay View	Single-Family Residential - High Density	7.2	1
409100009	0.04	North Richmond	Multiple-Family Residential - Low Density	6	0
409262012	0.06	North Richmond	Multiple-Family Residential - High Density	29.9	2
409262013	0.06	North Richmond	Multiple-Family Residential - High Density	29.9	2
409262015	0.06	North Richmond	Multiple-Family Residential - High Density	29.9	2
420071012	0.20	El Sobrante	Single-Family Residential - High Density	7.2	1
420071014	0.28	El Sobrante	Single-Family Residential - High Density	7.2	2
420071020	0.23	El Sobrante	Single-Family Residential - High Density	7.2	2
420071021	0.30	El Sobrante	Single-Family Residential - High Density	7.2	2
420172019	0.20	El Sobrante	Single-Family Residential - High Density	7.2	1
420172021	0.25	El Sobrante	Single-Family Residential - High Density	7.2	2
425110025	0.18	El Sobrante	Single-Family Residential - High Density	7.2	1
425130002	0.19	El Sobrante	Single-Family Residential - High Density	7.2	1
425130010	6.06	El Sobrante	Single-Family Residential - High Density	7.2	44
425141005	0.44	El Sobrante	Single-Family Residential - High Density	7.2	3
425150046	0.20	El Sobrante	Single-Family Residential - High Density	7.2	1
425180018	0.19	El Sobrante	Single-Family Residential - High Density	7.2	1
425180021	0.87	El Sobrante	Single-Family Residential - High Density	7.2	6

3. Project Description

Table 3-5 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
425180041	0.92	El Sobrante	Single-Family Residential - High Density	7.2	7
425190019	0.16	El Sobrante	Single-Family Residential - High Density	7.2	1
425190028	0.22	El Sobrante	Single-Family Residential - High Density	7.2	2
425210003	0.60	El Sobrante	Single-Family Residential - High Density	7.2	4
425220014	0.42	El Sobrante	Single-Family Residential - High Density	7.2	3
425220029	0.99	El Sobrante	Single-Family Residential - High Density	7.2	7
426030070	0.97	El Sobrante	Single-Family Residential - High Density	7.2	7
426030071	5.46	El Sobrante	Single-Family Residential - High Density	7.2	39
426163052	0.35	El Sobrante	Single-Family Residential - High Density	7.2	3
426182001	3.90	El Sobrante	Single-Family Residential - High Density	7.2	28
426182017	1.23	El Sobrante	Single-Family Residential - High Density	7.2	9
426192005	1.55	El Sobrante	Single-Family Residential - High Density	7.2	11
426192007	0.26	El Sobrante	Single-Family Residential - High Density	7.2	2
426192008	1.81	El Sobrante	Single-Family Residential - High Density	7.2	13
426200008	1.11	El Sobrante	Single-Family Residential - High Density	7.2	8
426200010	2.43	El Sobrante	Single-Family Residential - High Density	7.2	18
426210007	1.31	El Sobrante	Single-Family Residential - High Density	7.2	9
426210022	1.83	El Sobrante	Single-Family Residential - High Density	7.2	13
426221049	0.29	El Sobrante	Single-Family Residential - High Density	7.2	2
426243005	1.83	El Sobrante	Single-Family Residential - High Density	7.2	13
426243019	0.57	El Sobrante	Single-Family Residential - High Density	7.2	4
426243039	0.49	El Sobrante	Single-Family Residential - High Density	7.2	4
426243045	0.55	El Sobrante	Single-Family Residential - High Density	7.2	4
426270013	3.06	El Sobrante	Single-Family Residential - High Density	7.2	22
430132002	0.19	El Sobrante	Single-Family Residential - High Density	7.2	1
430161004	0.44	El Sobrante	Single-Family Residential - High Density	7.2	3
430161020	0.37	El Sobrante	Single-Family Residential - High Density	7.2	3
430184021	0.24	El Sobrante	Single-Family Residential - Low Density	2.9	1
431070026	0.27	El Sobrante	Single-Family Residential - High Density	7.2	2
431070028	0.20	El Sobrante	Single-Family Residential - High Density	7.2	1
431070035	0.20	El Sobrante	Single-Family Residential - High Density	7.2	1
433190041	0.22	El Sobrante	Single-Family Residential - High Density	7.2	2
433190043	0.23	El Sobrante	Single-Family Residential - High Density	7.2	2
433190060	0.93	El Sobrante	Single-Family Residential - High Density	7.2	7
433241057	0.45	El Sobrante	Single-Family Residential - High Density	7.2	3
433241065	0.23	El Sobrante	Single-Family Residential - High Density	7.2	2
433460007	0.35	El Sobrante	Single-Family Residential - High Density	7.2	3
435120070	0.16	El Sobrante	Single-Family Residential - High Density	7.2	1

### 3. Project Description

Table 3-5 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
435130015	0.23	El Sobrante	Single-Family Residential - High Density	7.2	2
193070021	7.74	Alamo	Public and Semi-Public	2.9	22
166030001	1.00	Pleasant Hill	Single-Family Residential - Low Density	2.9	3
166030002	2.12	Pleasant Hill	Single-Family Residential - Low Density	2.9	6
<b>TOTAL</b>	<b>103.28</b>				<b>823</b>

<sup>1</sup> Dwelling units per net acre unless otherwise indicated.

<sup>2</sup> **The maximum allowed density multiplied by the site's acreage**

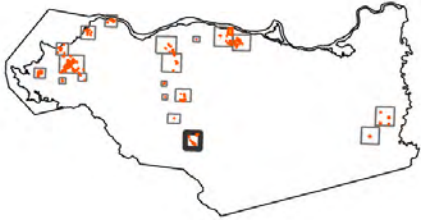
Note that sites with asterisks (\*) are sites that include pending development projects which may have undergone land use changes that are being evaluated outside of the proposed project.

Note that bolded values are sites that have been added to the inventory since the release of the previous NOP.

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3a  
Housing Sites Inventory - Alamo

PROJECT DESCRIPTION



- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3b  
Housing Sites Inventory - Byron

PROJECT DESCRIPTION

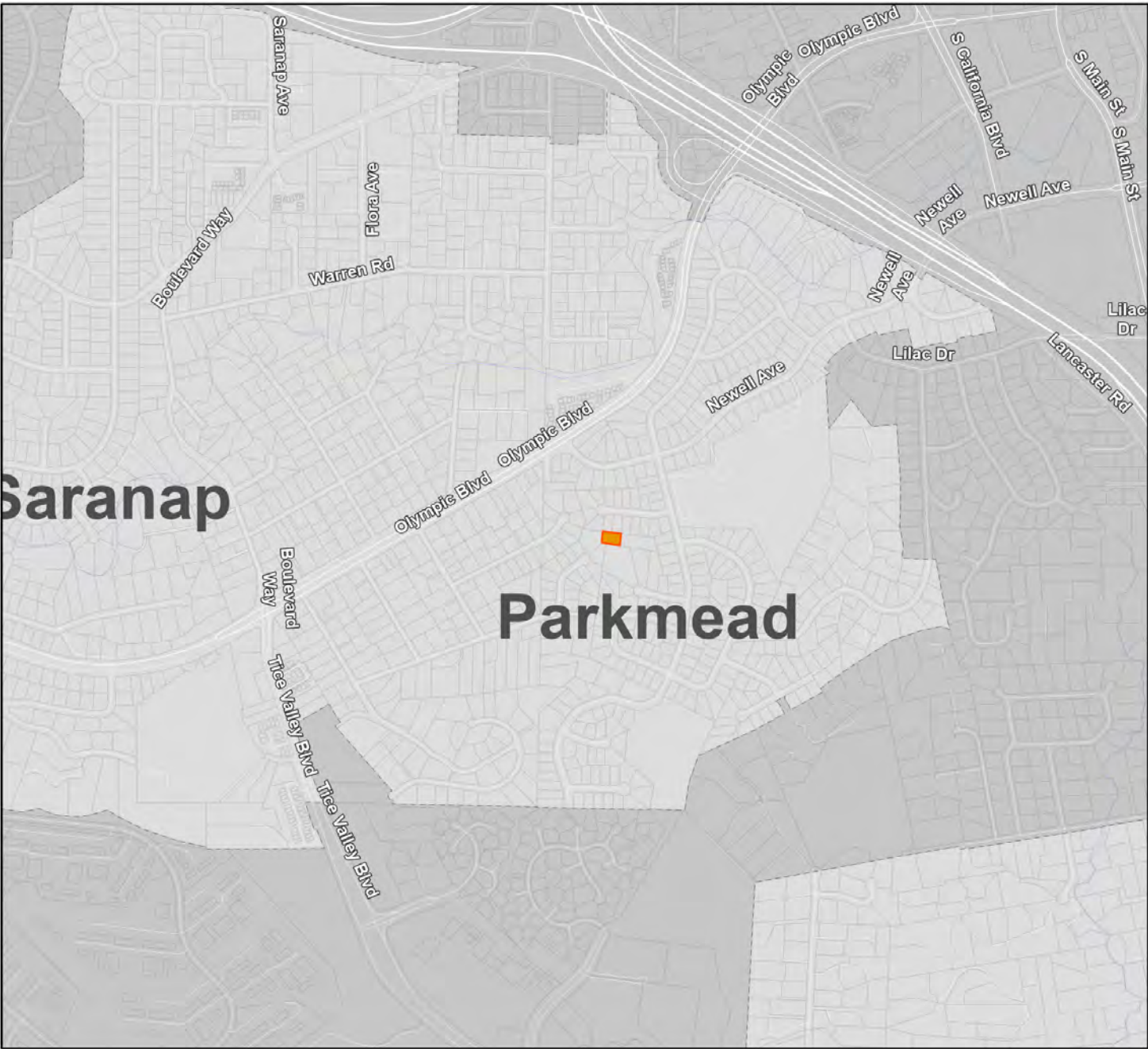
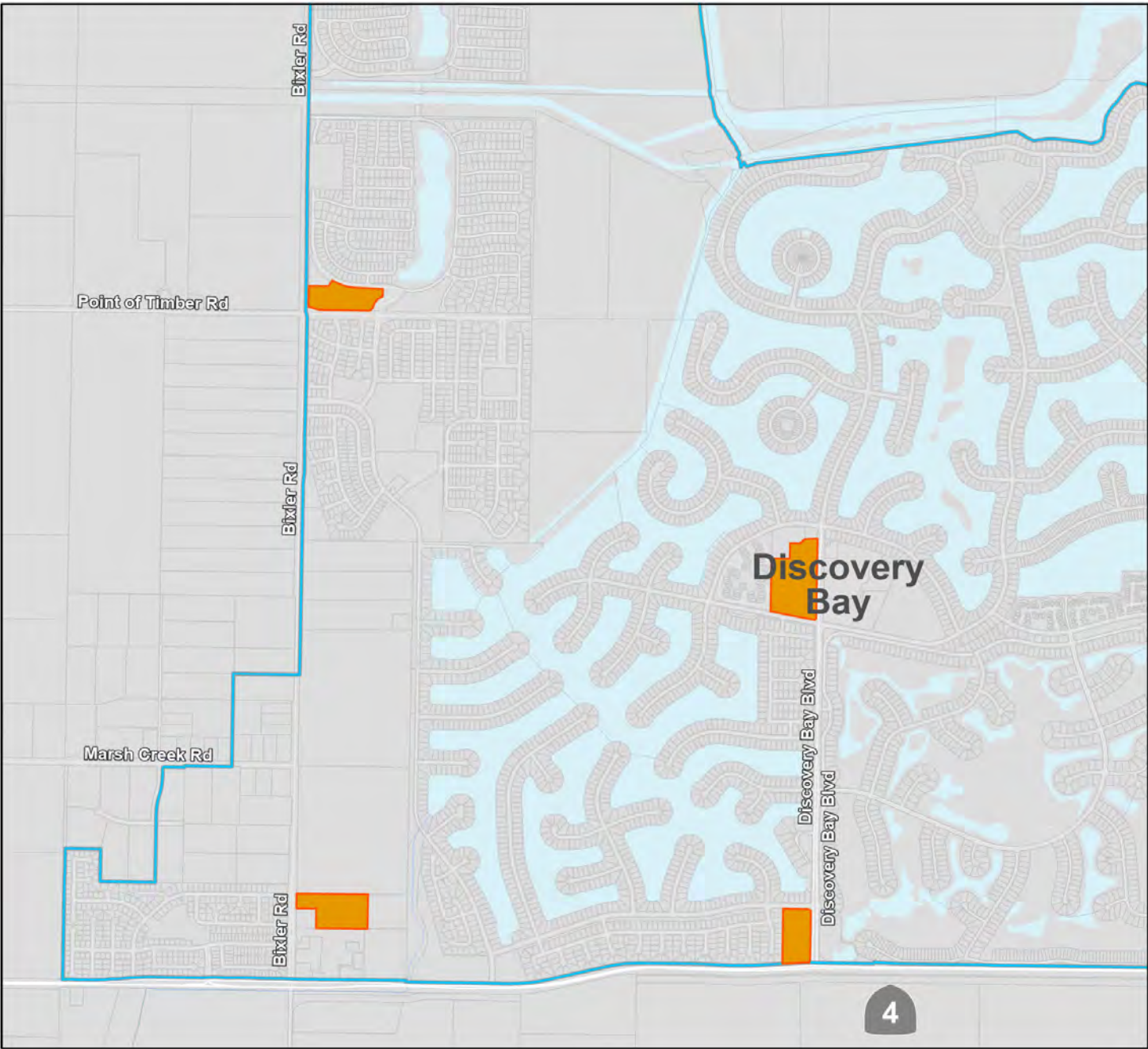


Figure 3-3c  
Housing Sites Inventory - Saranap /Parkmead

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated

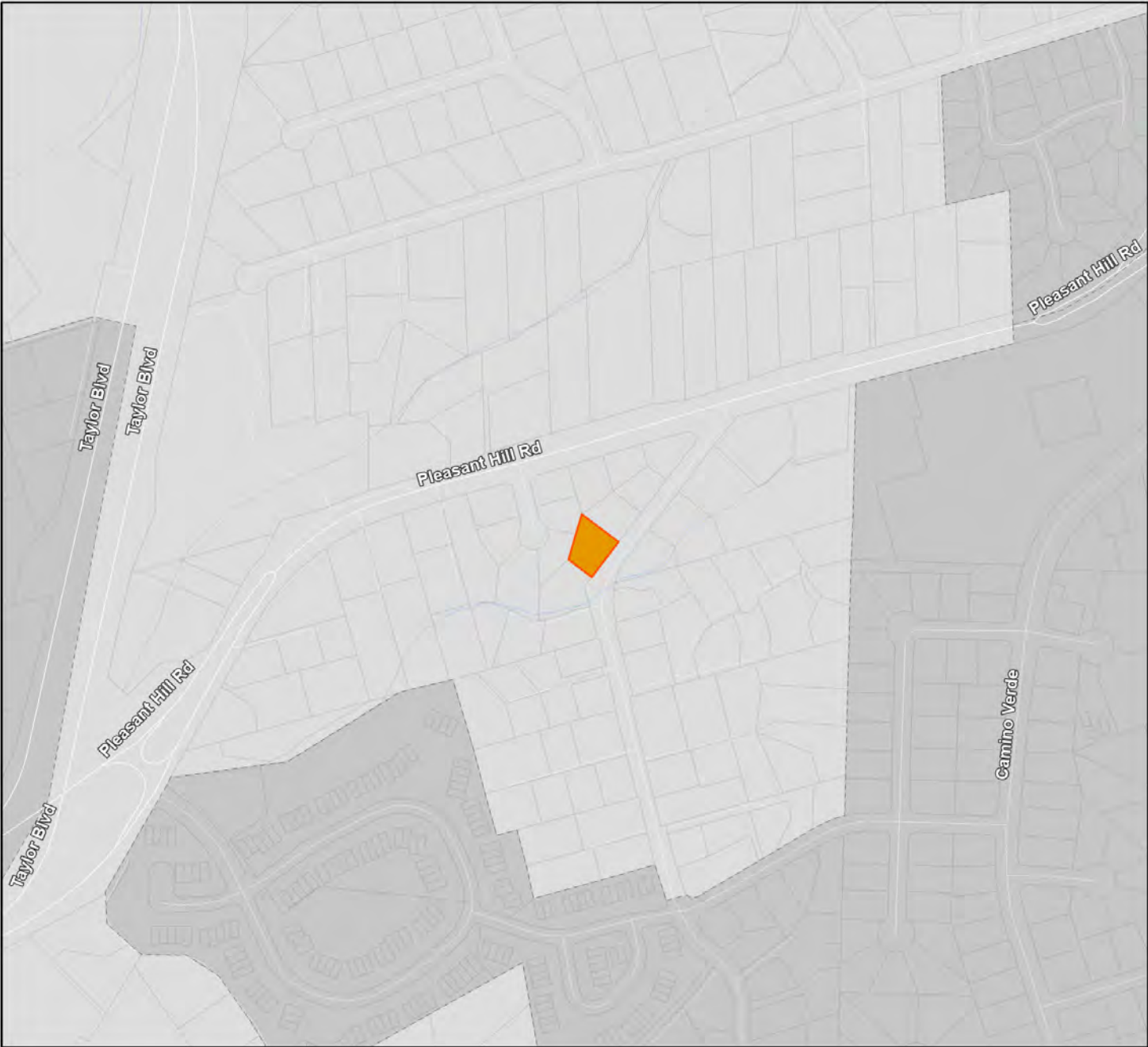


0 0.25 0.5 1 Miles

Figure 3-3d  
Housing Sites Inventory - Discovery Bay



PROJECT DESCRIPTION



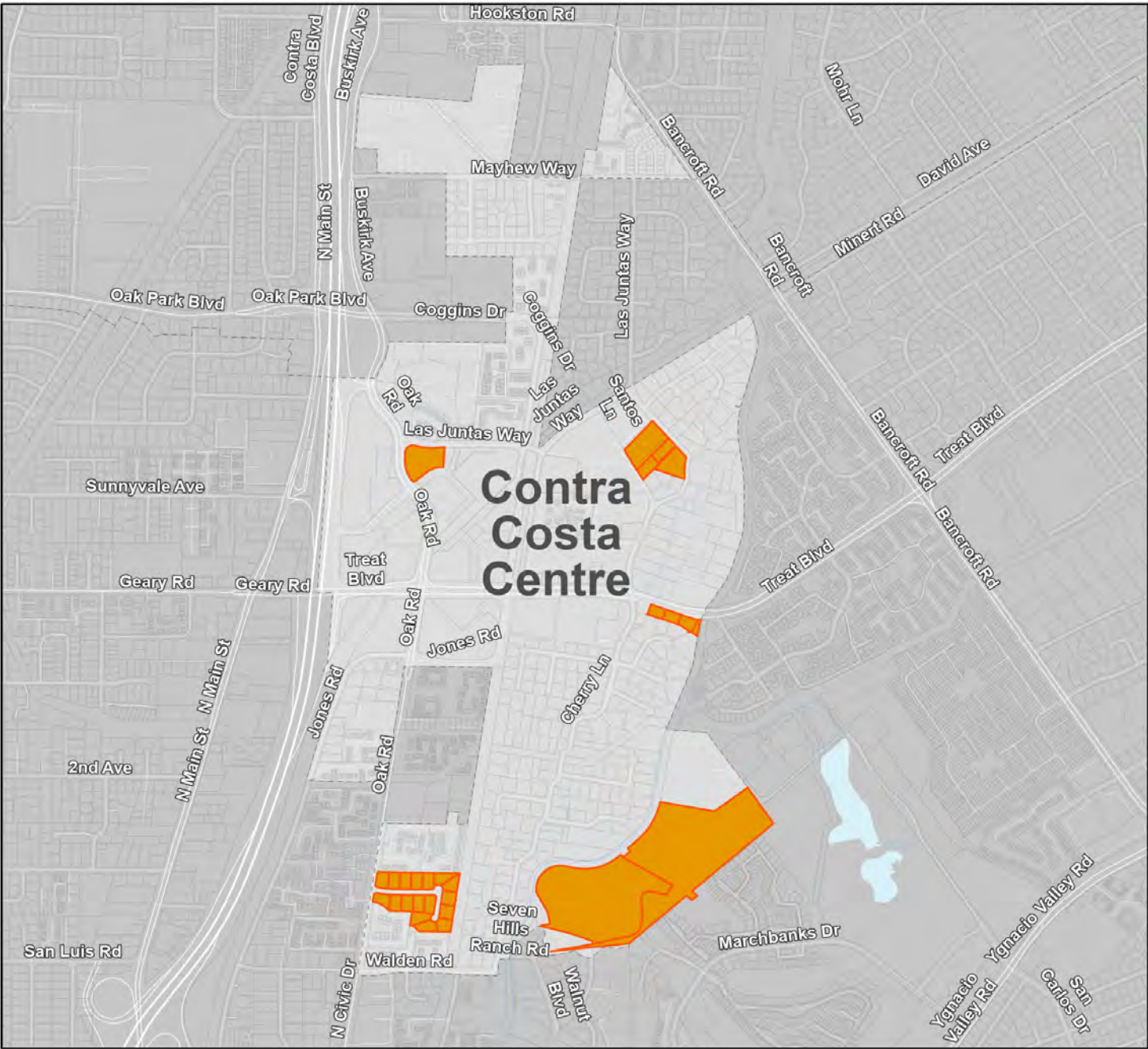
- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3e  
Housing Sites Inventory - Reliez Valley

PROJECT DESCRIPTION



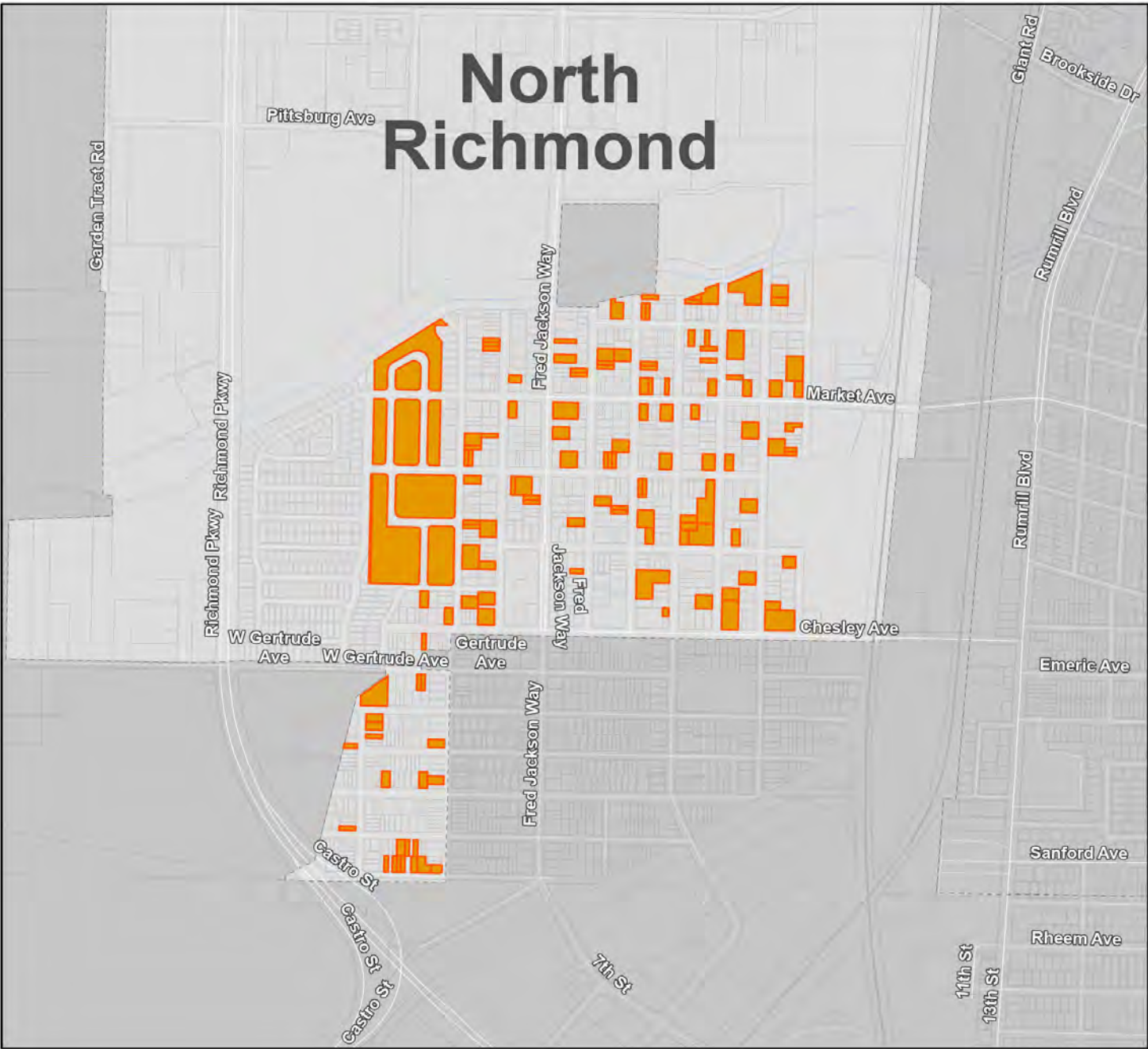
- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3f  
Housing Sites Inventory - Contra Costa Centre

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3g  
Housing Sites Inventory - North Richmond

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



Figure 3-3h  
Housing Sites Inventory - East Richmond Heights

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



Figure 3-3i  
Housing Sites Inventory - El Sobrante

PROJECT DESCRIPTION

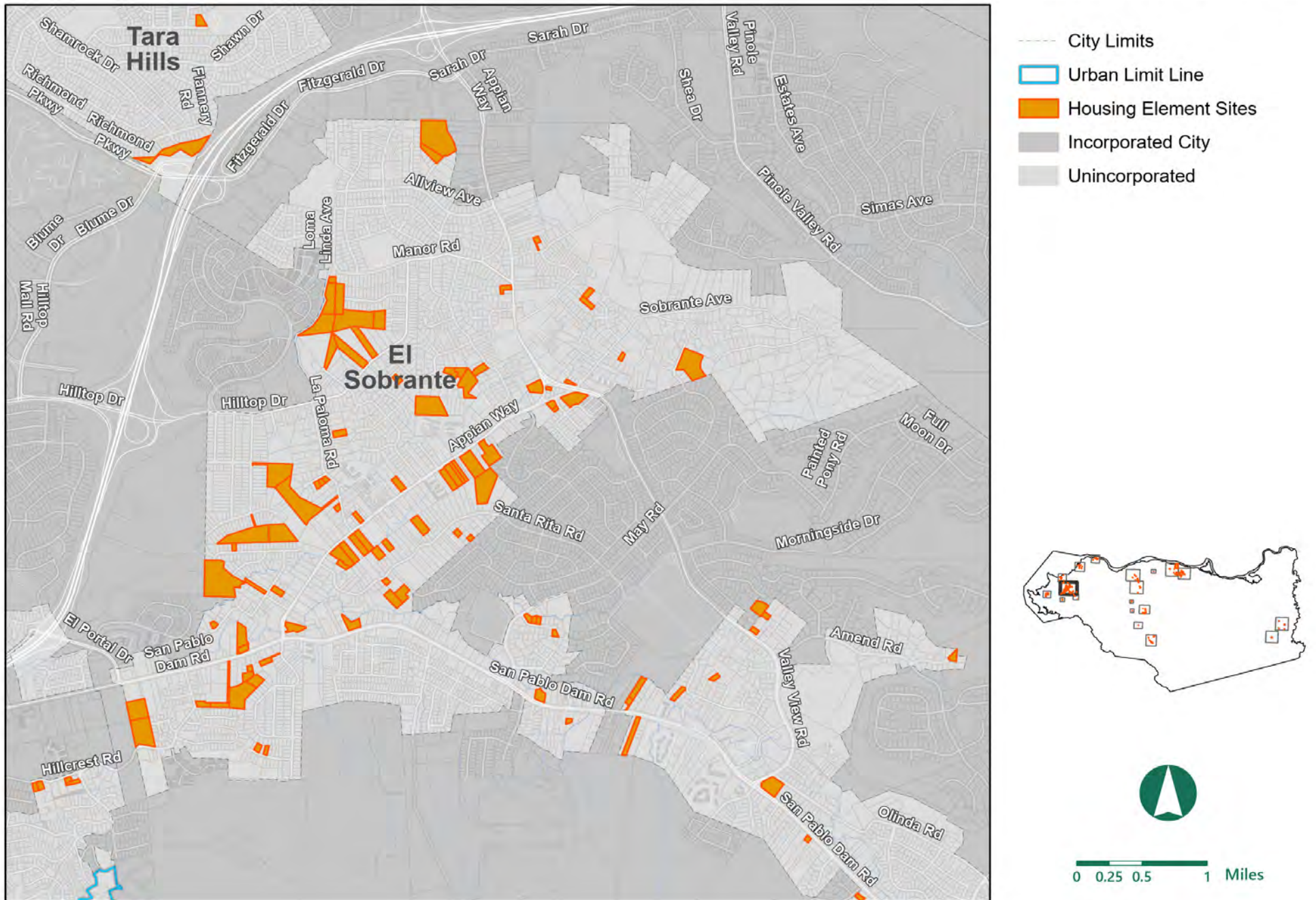
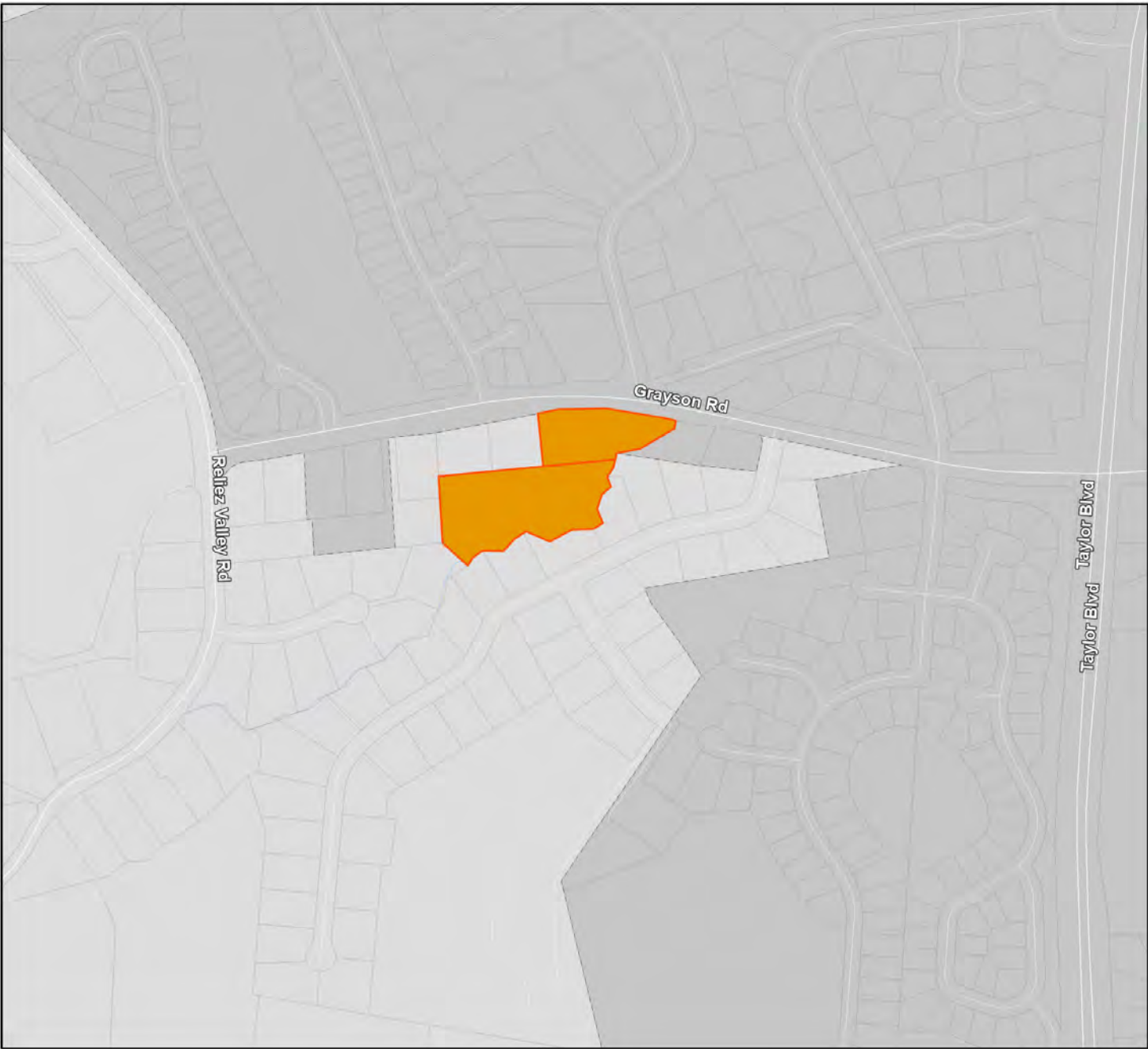


Figure 3-3j

Housing Sites Inventory - El Sobrante/Tara Hills South

PROJECT DESCRIPTION



- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated

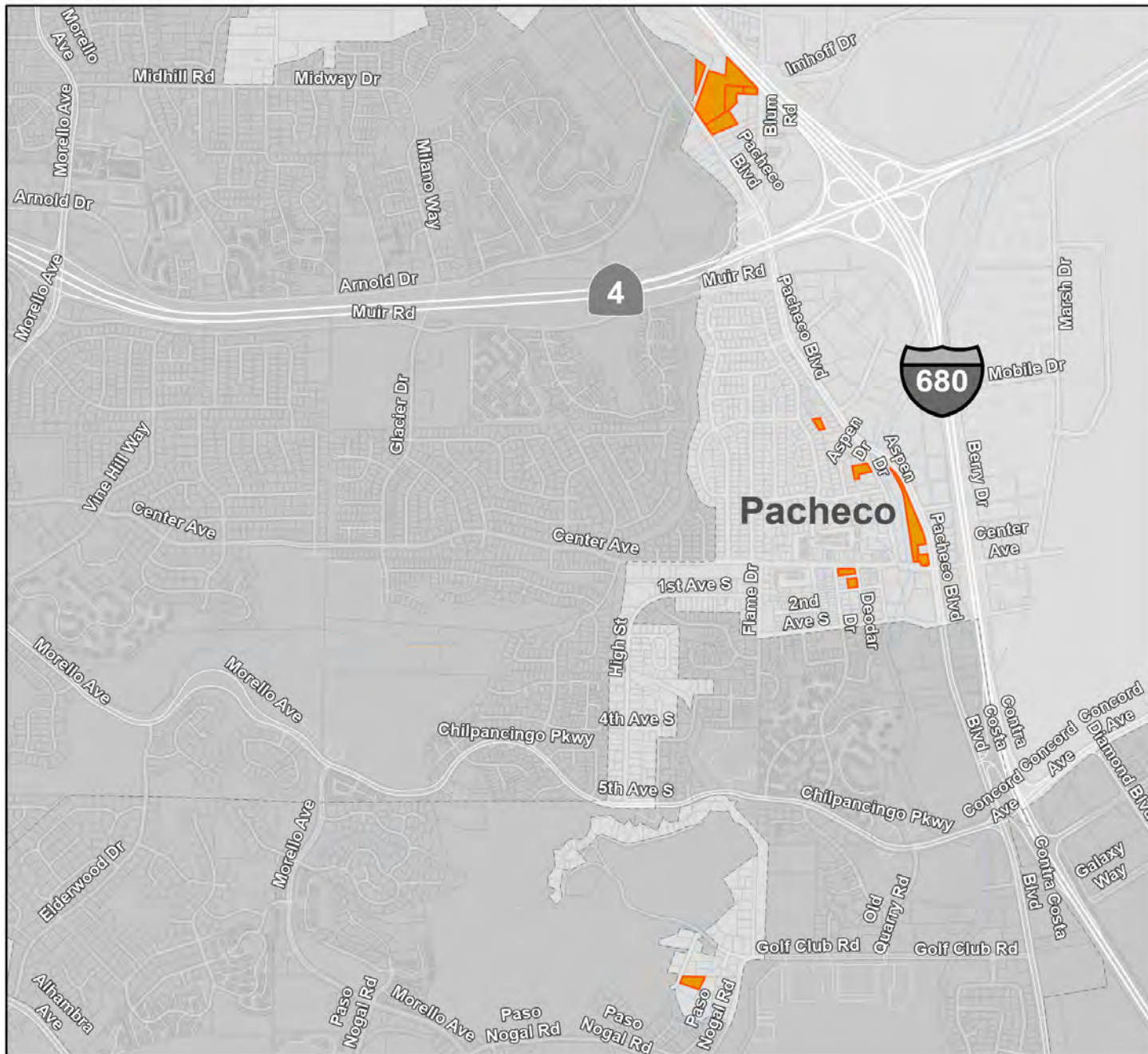


0 0.25 0.5 1 Miles

Figure 3-3k

Housing Sites Inventory - Pleasant Hill (Unincorporated)

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated

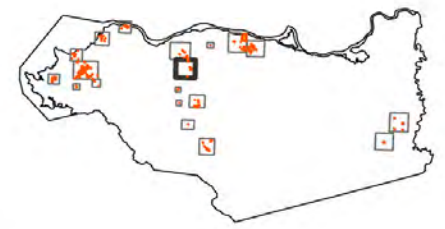
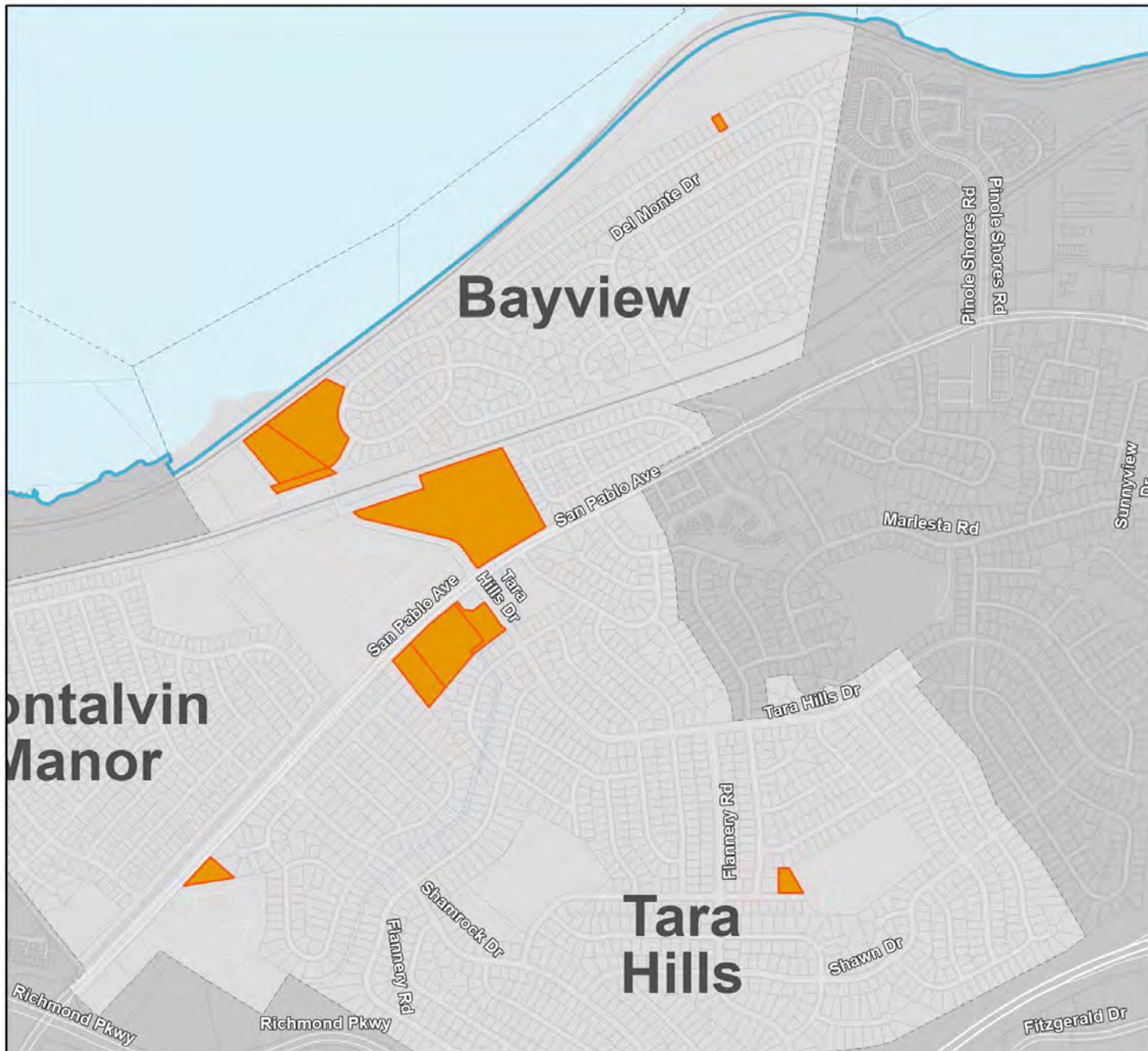


Figure 3-31  
Housing Sites Inventory - Pacheco



PROJECT DESCRIPTION



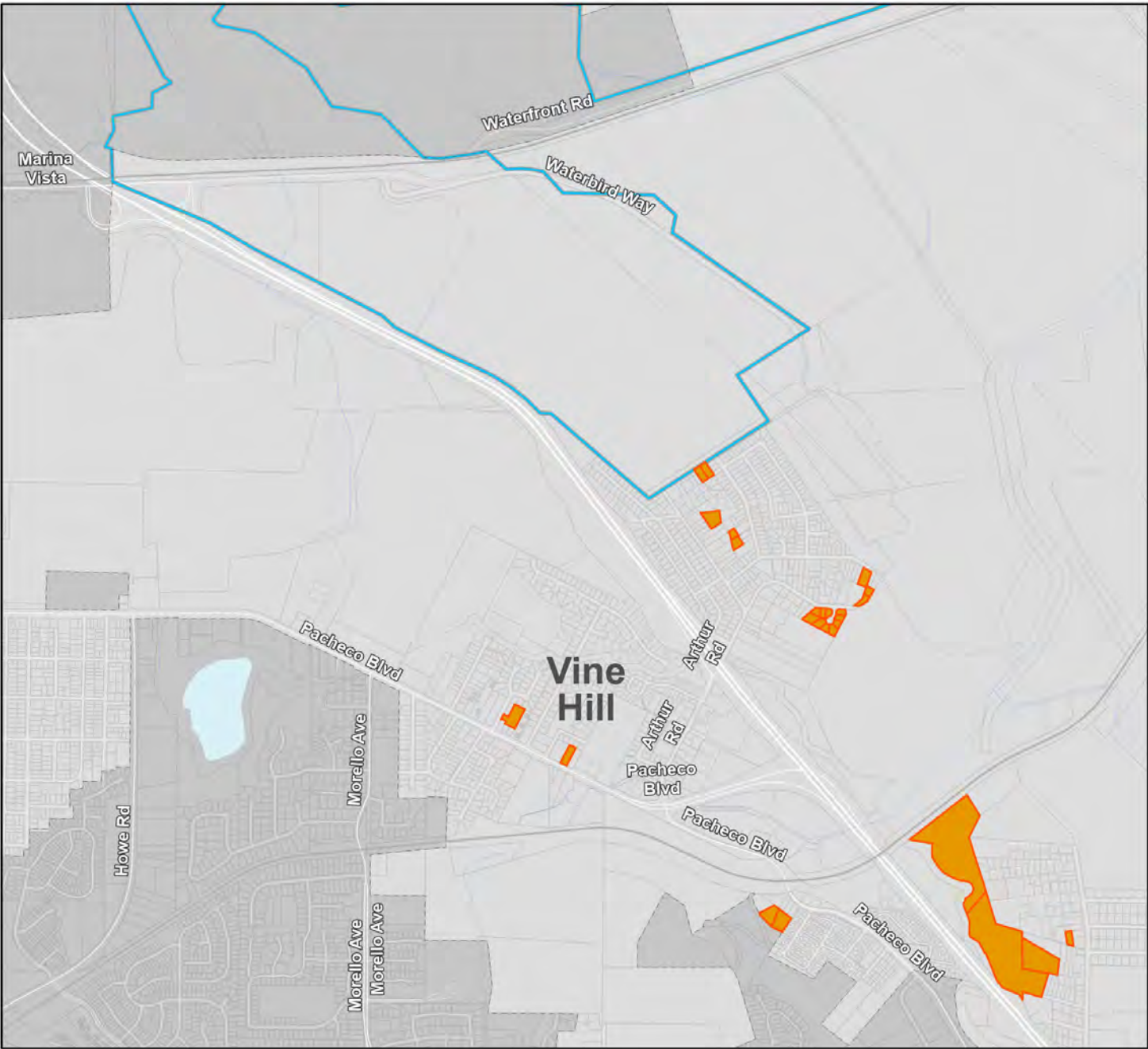
- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3m  
Housing Sites Inventory - Bayview/Tara Hills (North)

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3n  
Housing Sites Inventory - Vine Hill

PROJECT DESCRIPTION



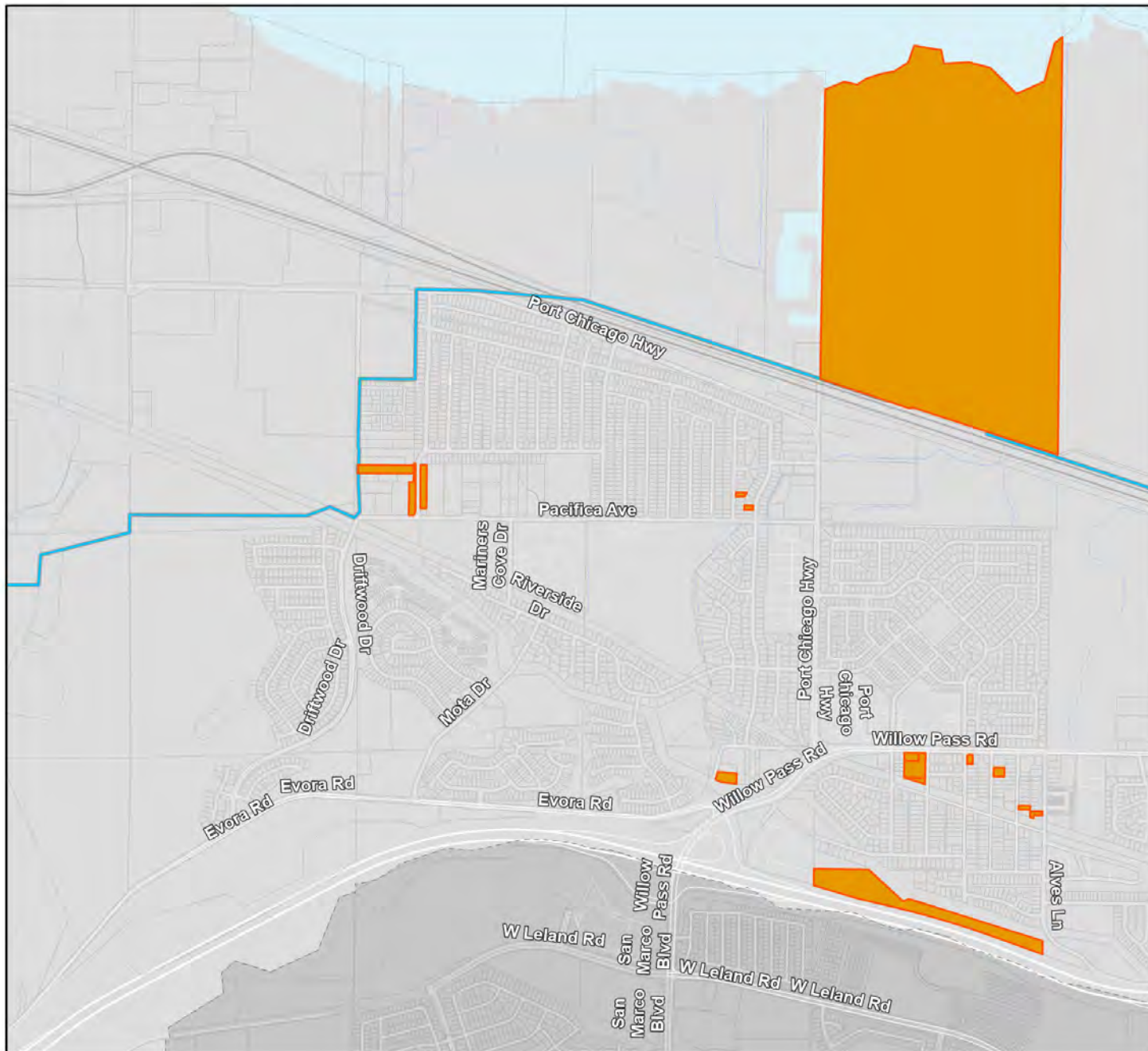
- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3o  
Housing Sites Inventory - Clyde

PROJECT DESCRIPTION



0 0.25 0.5 1 Miles

Figure 3-3p  
Housing Sites Inventory - Bay Point (West)

PROJECT DESCRIPTION

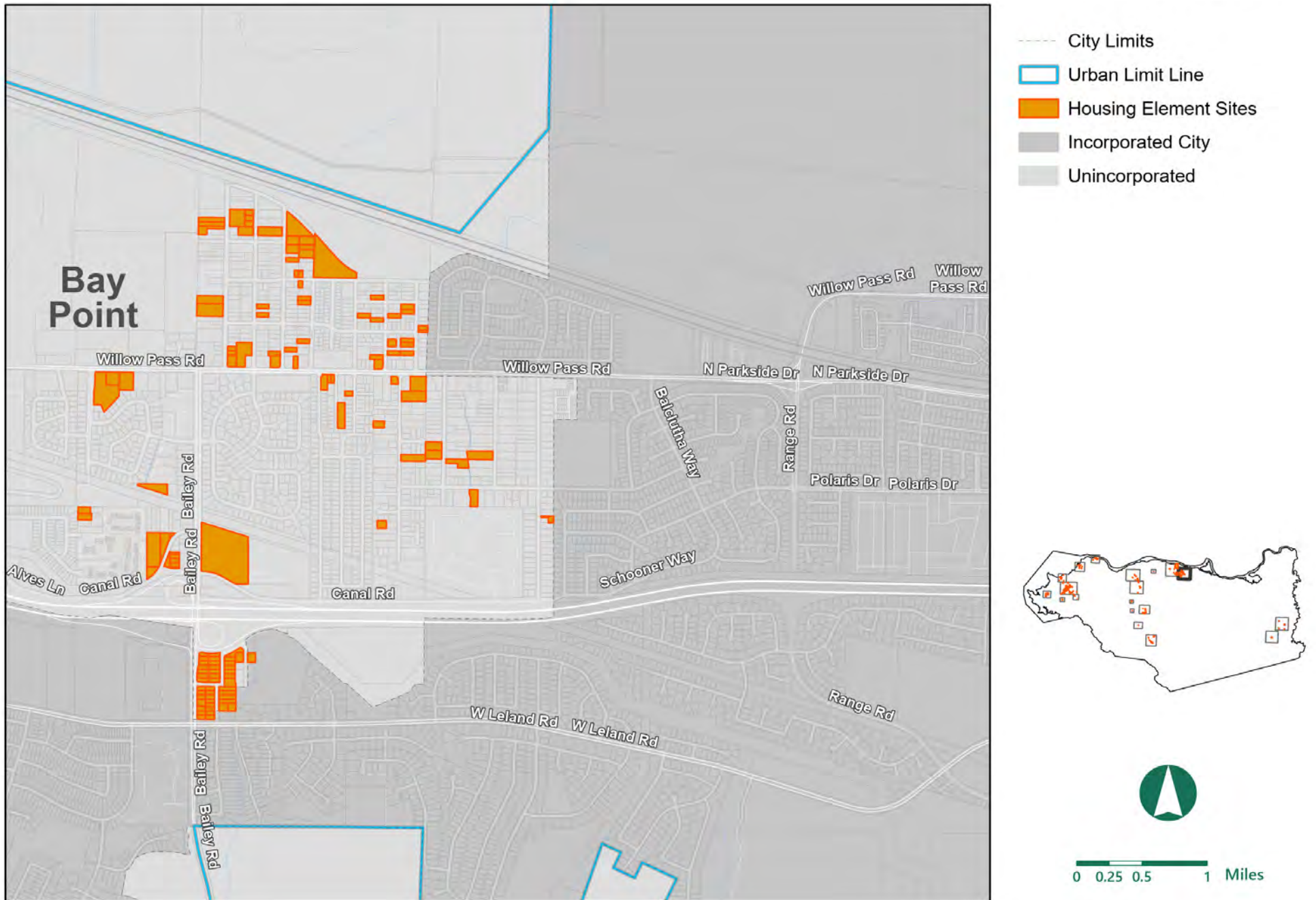
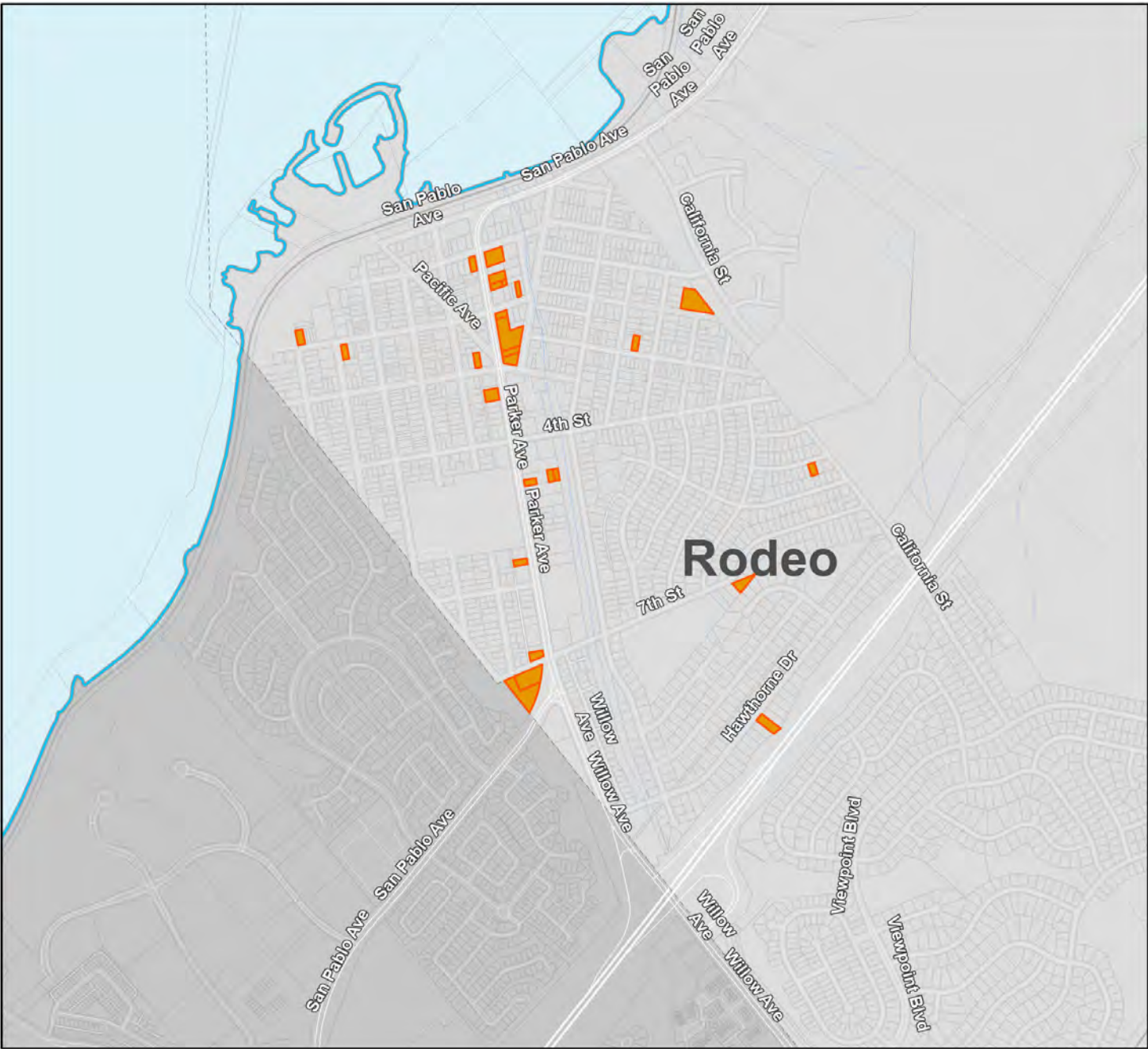


Figure 3-3q  
Housing Sites Inventory - Bay Point (East)

PROJECT DESCRIPTION



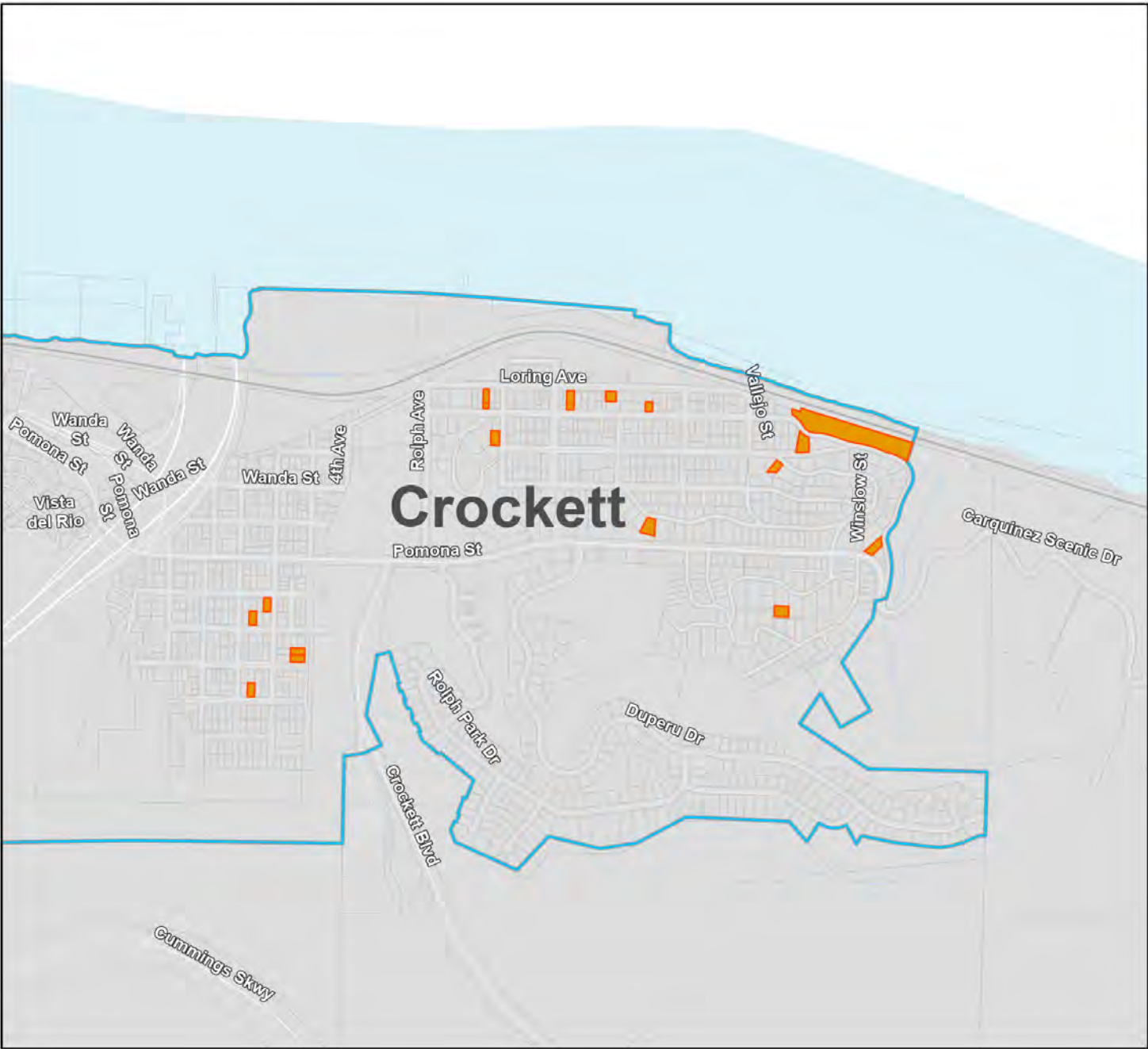
- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

Figure 3-3r  
Housing Sites Inventory - Rodeo

PROJECT DESCRIPTION



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



Figure 3-3s  
Housing Sites Inventory - Crockett

### 3. Project Description

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### 3. Project Description

#### 3.4 INTENDED USES OF THE EIR

This is a program EIR that examines the potential environmental impacts of the proposed project. It is the intent of the DEIR to evaluate the environmental impacts of the proposed project, thereby enabling Contra Costa County, other responsible agencies, and interested parties to make informed decisions. The anticipated approvals required for this project are:

Lead Agency	Action
Contra Costa County Board of Supervisors	Certification of the Program EIR Adoption of the Housing Element Adoption of Findings of Fact and Statement of Overriding Considerations (if required) Adoption of the Mitigation Monitoring Program Adoption of any ordinances, guidelines, programs, actions, or other mechanisms that implement the Housing Element.
Responsible Agencies	Action
California Department of Housing and Community Development	Review and certification of Housing Element <sup>3</sup>

<sup>3</sup> HCD's approval is not required for adoption by the County.

### 3. Project Description

#### 3.5 REFERENCES

Association of Bay Area Governments (ABAG). 2021, December. Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031.

[https://abag.ca.gov/sites/default/files/documents/2021-](https://abag.ca.gov/sites/default/files/documents/2021-12/Final_RHNA_Allocation_Report_2023-2031-approved_0.pdf)

[12/Final\\_RHNA\\_Allocation\\_Report\\_2023-2031-approved\\_0.pdf](https://abag.ca.gov/sites/default/files/documents/2021-12/Final_RHNA_Allocation_Report_2023-2031-approved_0.pdf).

Department of Housing and Community Development (HCD). 2022, March. Default Density Standard Option – 2020 Census Update.

## 4. Environmental Setting

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### 4.1 INTRODUCTION

This section provides a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, ... from both a local and a regional perspective” (Guidelines § 15125[a]), pursuant to provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

For many of the environmental impacts, the scale at which impacts are evaluated is the boundaries of the County, including its incorporated cities, unincorporated towns and other undeveloped areas. However, for some environmental topical sections—air quality, biological resources, greenhouse gas (GHG) emissions, and transportation—the setting is the regional context or larger. Section 4.2, *Regional Environmental Setting*, expands on the regional environmental context which plays a role in determining potential cumulative impacts throughout the DEIR. Section 4.4, *Assumptions Regarding Cumulative Environmental Impacts*, describes the methods used to analyze cumulative impacts as well as the cumulative setting for each topical area.

### 4.2 REGIONAL ENVIRONMENTAL SETTING

#### 4.2.1 Regional Location

Contra Costa County (County) covers 716 square miles, making it the eighth smallest county in California by land area. It borders Alameda County to the south and San Joaquin County to east. It is also adjacent to Solano County to the north, separated by the San Pablo Bay, Carquinez Strait and Suisun Bay. The San Francisco Bay borders the County to the west, which is followed by Marin County and San Francisco County to the west (see Figure 3-1, *Regional Location*). Regional connectivity to the County is provided by the Interstate 580 (I-580) via the Richmond-San Rafael Bridge, Interstate 80 (I-80), Interstate 680 (I-680), Interstate 10 (I-10), State Route 4 (SR-4) and State Route 24 (SR-24).

Over 1,147,788 residents live in the 19 incorporated cities and approximately 176,941 residents live in the unincorporated portions of the County (DOF 2022). Additionally, 563,813 people work in the County, with 186,503 jobs located in the unincorporated areas of the County (EDD 2022). Contra Costa can be divided into three subregions—the West County includes the urbanized shoreline of the San Francisco and San Pablo Bays with five cities, as well as the unincorporated communities of Kensington, El Sobrante, Rodeo, Crockett and Port Costa; the Central County area includes ten of the 19 cities in the County as the unincorporated communities Alamo, Alhambra Valley, Blackhawk, Canyon, Clyde, Diablo, Pacheco, and Saranap and over half the population; and the East County covers the hilly terrain of the Diablo Range and the unincorporated communities of Bay Point, Bethel Island, Knightsen, Byron and Discovery Bay.

## 4. Environmental Setting

### 4.2.2 Regional Planning Considerations

#### ABAG Regional Transportation Plan/Sustainable Communities Strategy

The Association of Bay Area Governments (ABAG) is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. It is also the regional clearinghouse for projects requiring environmental documentation under federal and state law. In this role, ABAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. The ABAG and the Metropolitan Transportation Commission (MTC) are jointly responsible for regional planning of the nine-county, 101-city, San Francisco Bay Area. These agencies are responsible for developing the long-range regional transportation plan, known as the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). ABAG/MTC adopted its RTP/SCS, known as Plan Bay Area 2050, in October 2021.

Plan Bay Area 2050 integrates the components of a RTP/SCS and the Regional Housing Needs Allocation into a single document. The Plan connects the elements of housing, the economy, transportation and the environment through 35 strategies that will make the Bay Area more equitable for all residents and more resilient in the face of unexpected challenges. In the short-term, the plan's Implementation Plan identifies more than 80 specific actions for MTC, ABAG and partner organizations to take over the next five years. The Plan focuses on five major principles to drive the overarching planning process, including: affordability, connectivity, diversity, health, and vibrancy. Using these principles, this Plan developed three sets of future conditions by which to analyze the success of its strategies. These scenarios varied in terms of economic vibrancy, population growth rates, severity of natural hazards, and adoption rates for telecommuting, among other forces. The Plan also emphasizes the role of advancing equity through investment in residents of systemically underserved communities in the region.

Plan Bay Area 2050 does not require that local general plans, specific plans, or zoning be consistent with its policies; instead, it provides incentives to governments and developers for consistency. The proposed Housing Element Update's (proposed project) consistency with the applicable Plan Bay Area 2050 policies is analyzed in detail in Section 5.11, *Land Use and Planning*.

#### Bay Area Air Quality Management District (BAAQMD) Clean Air Plan

The BAAQMD 2017 Clean Air Plan: Spare the Air, Cool the Climate was adopted on April 19, 2017, by the air district in cooperation with the Metropolitan Transportation Commission, the San Francisco Bay Conservation and Development Commission, and the Association of Bay Area Governments to provide a regional strategy to improve air quality within the SFBAAB and meet public health goals. The control strategy described in the 2017 Clean Air Plan includes a wide range of control measures designed to reduce emissions and lower ambient concentrations of harmful pollutants, safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and reduce greenhouse gas emissions (GHGs) to protect the climate.

## 4. Environmental Setting

The 2017 Clean Air Plan addresses four categories of pollutants: ground-level ozone and its key precursors, ROG and NO<sub>x</sub>; PM, primarily PM<sub>2.5</sub>, and precursors to secondary PM<sub>2.5</sub>; air toxics; and GHG emissions. The control measures are categorized based on the economic sector framework including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures.

The air district is the regional agency with jurisdiction over the nine-county region located in the air basin. ABAG, MTC, county transportation agencies, cities and counties, and various non-governmental organizations also participate in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs. The air district is responsible for attaining and/or maintaining air quality in the region within federal and state air quality standards. Specifically, the air district has the responsibility to monitor ambient air pollutant levels throughout the region and to develop and implement strategies to attain the applicable federal and state standards. The air district has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, and can impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The air district also regulates new or expanding stationary sources of TACs and requires air toxic control measures for many sources emitting TACs. The proposed project's consistency with the applicable policies is discussed in Section 5.3, *Air Quality*.

### Greenhouse Gas Emissions Reduction Legislation

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in a number of State regulations. Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction goals for the State of California:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

AB 32, the Global Warming Solutions Act (2006), was passed by the State legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 established a legislative target for the year 2020 goal outlined in Executive Order S-03-05. CARB prepared its first Scoping Plan in 2008 that outlined the State's plan for achieving the 2020 targets of AB 32.

In 2008, SB 375 was adopted to connect passenger-vehicle GHG emissions reduction targets for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips.

In September 2016, Governor Brown signed SB 32, making the Executive Order B-15-30 goal for year 2030 of a 40 percent reduction below 1990 levels by 2030 into a statewide-mandated legislative target. CARB issued an update to its Scoping Plan in 2017, with programs for meeting the SB 32 reduction target.

## 4. Environmental Setting

Executive Order B-55-18 sets a goal for the state to achieve carbon neutrality no later than 2045 and to achieve and maintain net negative emissions thereafter. SB 100 would help the state reach the goal set by Executive Order B-55-18 by requiring that the state's electricity suppliers have a source mix that consists of at least 60 percent renewable/zero carbon sources in 2030 and 100 renewable/zero carbon sources in 2045.

### Senate Bill 743

On September 27, 2013, SB 743 was signed into law and started a process that has fundamentally changed transportation impact analysis for CEQA compliance. With the adoption of SB 375, the state signaled its commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to the reduction of GHG emissions, as required by the California Warming Solutions Act of 2006 (AB 32).

SB 743 generally eliminates auto delay, level of service, and other similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts under CEQA. Pursuant to the CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses" (Public Resources Code § 21099[b][1]).

Pursuant to SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines to implement SB 743 on December 28, 2018. Under the new guidelines, VMT-related metric(s) that evaluate the significance of transportation-related impacts under CEQA for development projects, land use plans, and transportation infrastructure projects, were required beginning July 1, 2020. The legislation does not preclude the application of local general plan policies, zoning codes, conditions of approval, or any other planning requirements for evaluation of level of service, but these metrics can no longer be the basis for determining transportation impacts under CEQA.

### San Francisco Bay Water Quality Control Plan (Basin Plan)

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the master water quality control planning document used to designate beneficial uses and surface and ground water quality objectives. The County is located within the water quality control jurisdiction of Region 2, the San Francisco Bay Regional Water Quality Control Board (RWQCB). Region 2 is tasked with implementing the adopted Basin Plan for the San Francisco Bay Basin through planning, permitting, and enforcement of established water quality objectives. In accordance with State Policy for Water Quality Control, Region 2 employs a range of beneficial use designations for surface waters (including creeks, streams, lakes and reservoirs), groundwaters, marshes, and mudflats that serve as the basis for establishing water quality objectives, discharge conditions, and prohibitions. The Basin Plan, as updated with amendments adopted through May 4, 2017, has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdictional planning area.

## 4. Environmental Setting

### Habitat Conservation Plan/Natural Community Conservation Plan

The primary goal of the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) is to “provide an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species.” The HCP/NCCP provides comprehensive species, wetlands, and ecosystem conservation and contributes to the recovery of endangered species in northern California. The HCP/NCCP avoids project-by-project permitting that is generally costly and time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation.

The HCP/NCCP obtains authorization for take of covered species under the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) for the reasonable expansion of urban development and specific rural infrastructure projects outside these urban boundaries that will support urban growth. The HCP/NCCP inventory area is located in the eastern portion of Contra Costa County and is identified as the area in which impacts are evaluated and conservation will occur.

Covered species are those species fully addressed in the HCP/NCCP and are included in the ESA and NCCP incidental take permits by evaluating and complying with avoidance and minimization requirements at a regional scale. In addition, the HCP/NCCP includes “no-take” species, which are species for which take is not authorized under the Natural Community Conservation Plan Act. In order to comply with the terms of the HCP/NCCP, the applicant must avoid all direct and indirect impacts on no-take species.

### 4.3 LOCAL ENVIRONMENTAL SETTING

#### 4.3.1 Countywide Geographic Summary

##### 4.3.1.1 COUNTY SUBAREAS

The County’s 2022 Housing Element Update divides the County into three subareas primarily based on the jurisdictional boundaries of a variety of service districts as well as physical characteristics that distinguish the three areas including land use, natural resources, and landform. These regions are shown in Figure 6-1, Housing Element Sub Areas, in Appendix 3-1 and for planning purposes, the proposed project will refer to them as the following:

- **Western Subregion.** West County consists of five cities (El Cerrito, Hercules, Pinole, Richmond, and San Pablo); the unincorporated communities of Bay View-Montalvin Manor, East Richmond Heights, Kensington, North Richmond, Rodeo, Crockett, Tara Hills, and Port Costa; and rural unincorporated areas. This subarea contains approximately 20 percent of the urbanized land in the county and is developed with a wide variety of land uses.
- **Central Subregion.** Central County consists of 10 cities and towns (Clayton, Concord, Danville, Lafayette, Martinez, Moraga, Orinda, Pleasant Hill, San Ramon, and Walnut Creek), several unincorporated communities (Alamo, Alhambra Valley, Blackhawk, Canyon, Clyde, Diablo, Pacheco, and Saranap), and several additional urbanized and nonurbanized unincorporated areas.

## 4. Environmental Setting

- **Eastern Subregion.** East County includes four cities (Antioch, Brentwood, Oakley, and Pittsburg), four unincorporated communities (Bethel Island, Byron, Discovery Bay, and Knightsen), and several rural unincorporated areas.

### 4.3.2 Natural Setting

The county is a unique area where the greater San Francisco Bay Area, Sacramento River–San Joaquin River Delta (Delta), and Central Valley meet. Elevations range from at or below sea level (e.g., in the marshes adjacent to the Delta) to 3,849 feet at the peak of Mount Diablo, the highest point in the county. The physiography of the county is dominated by Mount Diablo and its surrounding hill slopes/valleys, which generally trend northwest/southeast according to local structure/faulting; lower valleys; and plains that transition to the San Francisco Bay/Delta zones (ICF 2019).

Urban development is dense in the western and northern portions of the county, especially adjacent to San Francisco Bay, while the eastern and southern portions of the county are made up of unincorporated rural developments. The unincorporated areas of the county are primarily rural agricultural and public lands and used principally for grazing, open space, and watershed protection (ICF 2019).

The county contains 145,855 acres of protected areas (28% of the county), comprising land protected in fee title only (136,318 acres), through conservation easement only (8,321 acres), or both (1,216 acres). Protected areas are defined as open space reserves that are managed primarily for their ecological functions and values. Lands within the county that fit this definition are owned by the East Bay Recreation and Parks District, the East Bay Municipal Utility District, and the Contra Costa Water District (ICF 2019).

#### 4.3.2.1 GEOLOGY

Contra Costa County is situated in the Coast Ranges geomorphic province of California. The Coast Ranges have experienced a complex geological history characterized by Late Tertiary folding and faulting that has resulted in a series of northwest-trending mountain ranges and intervening valleys. Bedrock in the Coast Ranges consists of igneous, metamorphic and sedimentary rocks that range in age from Jurassic to Pleistocene. The present physiography and geology of the Coast Ranges are the result of deformation and deposition along the tectonic boundary between the North American plate and the Pacific plate. Plate boundary fault movements are largely concentrated along the well-known fault zones, which in the area include the San Andreas Fault, Hayward Fault, and Calaveras Fault, as well as other lesser-order faults (Contra Costa 2018).

The geology of Contra Costa County is dominated by several northwest trending fault systems that divide the County into large blocks of rock. For example, the Briones Hills are bounded by the Hayward Fault on the west and elements of the Franklin-Calaveras fault system on the east. Within a particular block the rock sequence consists of a basement complex of broken and jumbled pre-tertiary sedimentary, igneous and metamorphic rocks; a section of younger Tertiary sedimentary rocks and some volcanic rocks (flows and tuffs) which locally intertongue with and overlie the sedimentary section; and, surficial deposits including stream alluvium, colluvium (slopewash deposits at the foot of steeper slopes), slides, alluvial fans, and Bay Plain deposits (Contra Costa 2018).



## 4. Environmental Setting

Contra Costa County is in California's Central Coast Range, with northwest trending mountain ranges and valleys. Alluvium, terrace deposits and bay mud, primarily composed of sand, silt, clay and gravel, are prevalent in the lowlands. The intermountain valleys and foothills contain alluvial soils and terrace deposits. In the east, north and northwest parts of the county, the soils generally consist of bay muds (Contra Costa 2018).

### 4.3.2.2 ECOREGIONS

Ecoregions are areas of general similarity in ecosystems, based on major terrain features, such as a desert, plateau, valley, mountain range, or a combination thereof. Three ecoregions overlap the county: the California Coastal Chaparral Forest and Shrub Province, the California Coastal Range Open Woodland-Shrub-Coniferous Forest-Meadow Province, and the California Dry Steppe Province (ICF 2019).

There are 293,887 acres of the California Coastal Chaparral Forest and Shrub Province in the county, covering the western and central portions. The primary distinguishing characteristic of this ecoregion is its Mediterranean climate, with hot, dry summers and cool, moist winters. The associated vegetative cover comprises primarily chaparral and woodlands (ICF 2019).

The California Coastal Range Open Woodland-Shrub-Coniferous Forest-Meadow Province overlaps the southeastern portion of the county. There are 67,863 acres of California Coastal Range Open Woodland-Shrub-Coniferous Forest-Meadow Province in the county, covering the southern portion. The ecoregion has a Mediterranean climate, with hot, dry summers and cool, moist winters. Most of the precipitation is rain. The associated vegetative cover comprises evergreen shrubland, with lesser areas of woodland, consisting of broadleaf species, some of which are drought-deciduous (ICF 2019).

The California Dry Steppe Province overlaps the northeastern corner of the county. There are 104,890 acres of California Dry Steppe Province in the county, covering the eastern portion. The ecoregion has a Mediterranean climate, with hot, dry summers and mild winters. Most of the precipitation is rain, which falls during the winter. The landscape, with its low hills, is typical of an alluvial plain. The associated vegetative cover was historically herbaceous but is now largely irrigated to support agricultural crops (ICF 2019).

### 4.3.2.3 WATERSHEDS

Fifteen major watersheds cover approximately 464,660 acres and overlap or occur completely within the county. The largest watershed in the county is the Walnut Creek-Frontal Suisun Bay Estuaries. This watershed contains nine San Francisco Bay Area cities: Orinda, Moraga, Danville, San Ramon, Lafayette, Walnut Creek, Pleasant Hill, Concord, and a portion of Martinez. Other sizeable watersheds in the county include the Kellogg Creek-Big Break, San Pablo Creek-Frontal Estuaries, Mount Diablo Creek-Frontal Suisun Bay Estuaries, and Marsh Creek. These watersheds catch precipitation and runoff from storm drains, then carry the water to the San Francisco Bay/Delta system. Water from the urbanized western portion of the county drains directly to San Francisco Bay or San Pablo Bay, while the northern and eastern portions of the county drain into Suisun Bay and the Delta river channels, eventually flowing into San Francisco Bay or San Pablo Bay. The south-central portion of the county is within the Alameda Creek drainage basin; this area's water drains south to Alameda Creek, then west to San Francisco Bay (Contra Costa County 2005).

## 4. Environmental Setting

Because of the Mediterranean climate and its characteristic lack of rainfall during the summer months, ephemeral and intermittent streams are the dominant hydrologic features within the county watersheds. The range of precipitation reflects variations in elevation and proximity to the coast. Surface flow in ephemeral streams is generally supplied by rainfall; these streams flow only during and immediately following rain events. Surface flow in intermittent or seasonal streams is supplied by a combination of rainfall runoff and groundwater; accordingly, these streams generally flow throughout the rainy season and into the late spring or early summer. Perennial streams in the county are also supported by rainfall runoff and groundwater, but unlike seasonal streams, they run year-round, with major dry-season inputs from both natural and artificial sources (e.g., upwelling springs and surface or subsurface flows from local irrigation, respectively).

The natural hydrology of many of the major creeks and streams in the urban areas has been altered to control flooding or convey irrigation water. Channels were made wider and deeper and lined with concrete or riprap. Creeks and streams were relocated and realigned to accommodate increased flows, then placed in conduits and culverts (Contra Costa 2005). Most creeks and streams have been disconnected from their historic floodplains by levees and channelization. Many of these streams are maintained as flood control channels, which support little or no riparian vegetation. Outside the urbanized areas, most drainages remain relatively natural and occupy at least a portion of their historic floodplains. Most of these features are ephemeral or intermittent, however, and generally support narrow floodplains with limited riparian habitat (ICF 2019).

### 4.3.2.4 LAND COVER TYPES

The county contains a diverse range of flora, from montane plant communities atop Mount Diablo to the saline plant communities of the San Francisco Bay estuaries. Natural communities are the assemblage of species that co-occur in the same habitat or area and interact through trophic and spatial relationships. Natural communities are defined by the land cover types, which are typically characterized one or more dominant species. A total of nine natural communities and 41 land cover types are found in the county. Excluding urban development, the predominant land cover type in the county is California annual grassland, which is abundant in the unincorporated portions of the eastern county. Shrubland, woodland, conifer forests, riparian woodland, wetland and pond, baylands, and cultivated agriculture land cover types also exist in the County (ICF 2019).

### 4.3.2.5 SPECIAL STATUS SPECIES

The county contains 72 special-status plant species (CDFW 2018a). These species are found across the diverse and, in some cases, specialized habitats in the county. Special-status plants are more abundant in the eastern portions of the county, which retains a rural lifestyle that is compatible with the habitat needs of many of the special-status plant species.

The county has a rich landscape that is home to a number of rare wildlife and fish species, including an endemic butterfly, the Lange's metalmark butterfly (*Apodemia mormo langei*), found only at the Antioch Dunes National Wildlife Refuge. A total of 84 special-status wildlife species are known to occur in the county, including the San Joaquin kit fox (*Vulpes macrotus mutica*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), western

## 4. Environmental Setting

burrowing owl (*Athene cunicularia hypugea*), and vernal pool fairy shrimp (*Brachinecta lynchi*) (CDFW 2018a). Often, these special-status wildlife species occur in protected areas, such as Mount Diablo State Park or Los Vaqueros Reservoir, or in various East Bay regional parks.

Similar to its benefits for special-status plant species, the rural grassland of the eastern portion of the county provides some of the best remaining undeveloped habitat for special-status wildlife species. For example, vernal pools, which provide essential habitat for special-status wildlife species such as California tiger salamander and fairy shrimp, are restricted to the Livermore Vernal Pool Region, which overlaps the eastern portion of the county. The Livermore Vernal Pool Region contains the Altamont Hills Core Area, with specific sites that are necessary for recovering endangered or threatened species or conserving species of concern. The Altamont Hills Core Area contains five distinct core area polygons near the Contra Costa County-Alameda County boundary (two in Alameda County and three in Contra Costa County), with the largest core area in the Bryon Hills/Vasco Caves region of Contra Costa County (ICF 2019).

### 4.3.2.6 SENSITIVE HABITAT

The 2005 General Plan identifies 41 unique biotic resource areas that have biological and wildlife importance (Figure 8-1 in Chapter 8, Conservation Element). Furthermore, the General Plan identifies these areas as significant ecological resource areas, most of which contain aquatic habitat, such as freshwater marsh, seasonal and perennial wetlands, alkali mud flats, coastal salt marsh, and riparian vegetation. Examples of significant ecological resource areas with aquatic habitat include the Marsh Creek Riparian Corridor, Big Break, Alkali Meadows and Northern Claypan Vernal Pools, Bay Point Salt Marsh, mouth of the Contra Costa Canal, and Brooks Islands. Other locations include a mix of aquatic and upland habitat or are entirely within upland areas. Significant ecological resource areas in upland habitat typically contain unique soil types (e.g., San Pablo Ridge, Shell Ridge, Antioch Sand Dunes, Blackhawk Ranch Fossil Locality), high-quality native habitats, and often special-status species (e.g., Mount Diablo, Las Trampas and Rocky Ridges, Redwood Regional Park, Los Vaqueros Watershed). The habitat constituents within each significant ecological resource area are described in detail in the General Plan (Contra Costa 2005).

### 4.3.2.7 SCENIC RESOURCES

The County features two scenic routes that have been designated by the Scenic Highway System. State Route 24 travels from south of the County past the City San Ramon and diverges at the City of Walnut Creek. This route travels for approximately 14 miles through the County. Interstate 680 travels east-west from the City of Walnut Creek into the City of Berkeley. This route travels for approximately nine miles in the County (CALTRANS 2018).

While there are many localized scenic features in the county, two of the most notable in the County are its abundance of scenic ridges, hillsides, and rock outcroppings; and the San Francisco Bay/Delta estuary system. Throughout much of Contra Costa County, there are significant topographic variations in the landscape. The largest and most prominent of these hills form the backdrop for much of the developed portions of the area. Views of these major ridgelines help to reinforce the rural feeling of the county's rapidly growing communities (Contra Costa 2005). The most notable scenic ridgeways in the County are shown in Figure 9-1 in the Open Space Element of the County's General Plan. The other major scenic

## 4. Environmental Setting

resource of Contra Costa County is the extensive water and delta system of San Francisco, San Pablo, and Suisun Bays. The bays extend along the entire western and northern perimeter of the county. This waterway system provides a pleasant contrast to the land forms of the area. Where the water reaches the shoreline, a mix of land uses occur: salt marshes, railroad tracks, industrial activities, housing and parkland. All add to the diversity and interest of the shoreline (Contra Costa 2005).

### 4.3.3 Land Use and Housing

#### 4.3.3.1 EXISTING USES

The majority of unincorporated land is protected for open space, recreation, and watershed purposes. Other dominant land uses include rural and agricultural uses, as well as institutional and public uses, most of which are on government-owned land, as well as other public and institutional uses, like schools, hospitals, and churches. Residential, commercial, and industrial uses make up a small portion of the unincorporated county (Contra Costa 2019).

#### 4.3.3.2 PLANNED USES

The County is currently in the process of updating its General Plan and Zoning Code in addition to its Housing Element (see Chapter 3, *Project Description* for more information). The County's adopted General Plan land use map includes over 40 separate designations which fall under nine larger categories. Currently 6 percent of land is designated for single-family residential uses; less than 1 percent for multiple family residential; less than 1 percent for commercial uses; less than 1 percent for mixed uses; 2 percent for industrial uses, 5 percent for public/semi-public uses; 39 percent for parks, watersheds and open space uses; 38 percent for agricultural uses; and 8 percent for water-related uses (Contra Costa 2019).

#### 4.3.3.3 PRIORITY DEVELOPMENT AREAS

The County has identified Priority Development Areas (PDAs) for focused development efforts. PDAs are areas that are designated for infill development opportunities because they are easily accessible to transit, jobs, shopping, and services. There are five designated PDAs within unincorporated Contra Costa County including, San Pablo Avenue Corridor, North Richmond, Downtown El Sobrante, Contra Costa Centre, and Pittsburg/Bay Point BART Station (Contra Costa 2019).

#### 4.3.3.4 URBAN LIMIT LINE

In an effort to manage and guide growth in Contra Costa County, in 1990 voters adopted Measure C-1990, which created the 65/35 Land Preservation Standard and Urban Limit Line (ULL). Together these play a major role in shaping land use and community character across the county. The 65/35 Standard limits the amount of land that can be devoted to urban development, while the ULL limits the areas where such development can occur (Contra Costa 2019).

The 65/35 Standard limits urban development to no more than 35 percent of the land area of the county. The remaining 65 percent must be preserved for agriculture, open space, wetlands, parks, and other non-urban uses. Institutional/public uses such as schools, transit facilities, fire and police stations, water and

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wastewater treatment plants, correctional facilities, and airports are also counted as non-urban. It is important to note that the 65/35 Standard addresses the amount of land devoted to development, not the intensity of development. Thus, one acre of single-family homes and one acre of high-rise apartments count equally against the 35-percent limit (Contra Costa 2019).

The ULL's function is to protect certain areas of the county from urban development. The urbanized areas of the county, including incorporated cities and unincorporated communities, are contained within the ULL. Urban and non-urban uses are allowed inside the ULL while only non-urban uses are allowed outside. There is a misconception that the ULL is aligned directly with the 65/35 Standard, and thus contains 35 percent of the land area in the county. The ULL actually contains about 45 percent because non-urban uses, such as schools, fire stations, and neighborhood parks, necessarily exist within it. There also must be flexibility to accommodate anticipated growth (Contra Costa 2019).

Changes to the ULL are rare. Any expansion of 30 acres or fewer must be approved by the County Board of Supervisors after making at least one of seven rigorous findings. Any change to the ULL that exceeds 30 acres is subject to a four-fifths vote of the Board of Supervisors and requires countywide voter approval. The County has adjusted the ULL on a handful of occasions, for example, to make it coterminous with city boundaries or exclude land unsuitable for development. As of 2019, no private project has been approved that involves expansion of the ULL (Contra Costa 2019).

### 4.3.3.5 HOUSING STOCK

Contra Costa is a diverse county with a variety of housing types. The unincorporated area, however, is dominated by single-family homes, which constitute about 80 percent of the housing stock. About 15 percent of the unincorporated housing is multi-family, with the majority being in buildings with five or more units. Mobile homes make up about 4 percent of the unincorporated county's housing. The areas in and around the cities of Richmond, Martinez, Concord, Pleasant Hill, Walnut Creek, Antioch, and Pittsburg have the greatest supply of multi-family units. Multi-family development has been the fastest growing type of new housing construction in the unincorporated county since 2010, with an 8-percent increase in buildings containing five or more units, compared to only 2-percent increases in single-family attached and detached housing (Contra Costa 2019).

### 4.3.4 Cultural and Tribal Resources

Contra Costa County is located in an area where traditional territories of three Native American groups – the Bay Miwok, Northern Valley Yokuts, and Ohlone – converged.

- The Bay Miwok inhabited the inner Coast Range, with territory stretching through eastern Contra Costa County, from Mount Diablo into the Sacramento River Delta. The Bay Miwok were politically organized by tribelet, which consisted of one or more villages and camps within a defined territory.
- The Northern Valley Yokuts are the historical occupants of the central and northern San Joaquin Valley, and their territory extended into eastern Contra Costa County. Their main settlements were built atop low mounds on or near the banks of large watercourses for protection against flooding.

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- The territory of the Ohlone people extended along the coast from the Golden Gate in the north to just below Carmel to the south, as well as along several inland valleys that led from the coastline. The Ohlone were also politically organized by tribelet, with each having a designated territory.

Over 400 historic sites, buildings, and other structures have been identified and mapped in the county. They range from historic buildings that were part of the early industrialization of the western county, like the C&H Sugar Factory, to historic ranches and homes, like the home of John Muir, which is part of the John Muir National Historic Site in Martinez (Contra Costa 2019).

### 4.3.5 Public Services and Utilities

#### 4.3.5.1 FIRE PROTECTION SERVICES

The Contra Costa County Fire Protection District (CCCYPD) provides fire protection and emergency medical response services for approximately 628,200 people within Contra Costa County. The East Contra Costa Fire Protection District (ECCYPD) covers approximately 249 square miles and services approximately 128,000 residents with three fire stations staffed by three firefighters each (ECCYPD 2022). However, in March of 2022, the Contra Costa Local Agency Formation Commission unanimously approved the annexation of ECCYPD to the CCCYPD and the dissolution of ECCYPD (Contra Costa LAFCO 2022). The Kensington Fire Protection District provides fire suppression and emergency services to the town of the Kensington, with one operating station. The District also receives aid from the El Cerrito Fire Department (KFPD 2019). The Moraga-Orinda Fire Protection District provides services to the cities of Moraga and Orinda with five stations operating in the district. The Rodeo-Hercules Fire Protection District services approximately 32 square miles and 34,000 residents in the City of Hercules and the Town of Rodeo (RHFPD 2022). The San Ramon Valley Fire Protection District services the cities of San Ramon and Danville and the unincorporated communities of Tassajara, Blackhawk, and Alamo with ten fire stations. The Crockett-Carquinez Fire Protection District is a volunteer fire department that serves the communities of Crockett, Valona, Port Costa, and Tormey.

#### 4.3.5.2 POLICE SERVICES

The Contra Costa County Office of the Sheriff (CCCOS) is the largest law enforcement agency in Contra Costa with 720 sworn officers and over 1,000 total personnel providing a full range of services to over 1,000,000 residents in the 715-square mile county. The Office provides uniformed law enforcement services to approximately 517,454 residents in the unincorporated areas of the County, with the exception of the community of Kensington which provides its own patrol services through the Kensington Community Services District. CCCOS also provides services to contract cities (Danville, Lafayette, and Orinda) and special districts (CCCOS 2022a).

The Contra Costa Emergency Services Division is a branch of the Sheriff's Office that provides disaster planning services, coordinates disaster outreach for public agencies and contract cities in the County and helps County Departments with emergency preparedness, disaster mitigation and recovery. It also serves as a liaison with the State Office of Emergency Services for all County agencies. In addition to providing

## 4. Environmental Setting

preparedness training, oversees responsibility for county staff in the Emergency Operations Center (CCCOS 2022b).

### 4.3.5.3 SCHOOL SERVICES

Contra Costa has the ninth largest public-school population in the state, containing 18 school districts and 285 schools. These school districts include: Acalanes Union High, Antioch Unified, Brentwood Union Elementary, Byron Union Elementary, Canyon Elementary, John Swett Unified, Knightsen Elementary, Lafayette Elementary, Liberty Union High, Martinez Unified, Moraga Elementary, Mt. Diablo Unified, Oakley Union Elementary, Orinda Union Elementary, Pittsburg Unified, San Ramon Valley Unified, Walnut Creek Elementary, and West Contra Costa Unified.

According to the California Department of Education's Overcrowded School Program, 20 schools in Contra Costa County are considered critically overcrowded. These include 16 in West Contra Costa Unified, two in Antioch Unified, and two in San Ramon Valley Unified (DOE 2022). However, according to each district's school enrollment and school capacity data, Brentwood Union Elementary School District, Liberty Union School District, Pittsburg Unified School District, and West Contra Costa Unified School District had enrollment levels in the 2021 to 2022 school year that exceed their estimated capacities (see Chapter 5.15, *Public Services and Recreation*).

### 4.3.5.4 PARKS AND RECREATION

The County contains thousands of acres of parks and recreational areas that are managed and operated by a number of different entities. These include the U.S. National Parks Service, the California State Parks Department, the California Department of Water Resources, the East Bay Regional Parks District, the East Bay Municipal Utility District, the Contra Costa Water District, independent Parks and Recreation Service Districts, County Service Districts, the Contra Costa County Public Works Department, and the incorporated cities and towns in the County.

The East Bay Regional Parks District (EBRPD) is currently that largest parks provider in the County, with nearly 125,000 acres across 73 parks in both Contra Costa County and Alameda County. EBRPD maintains 30 parks in the County and manages hundreds of additional acres of land in its land bank, which the district holds until the property is made suitable for public access. Other notable parks and recreation facilities include Frank Tracts State Recreation Area on Bethel Island in the Delta at 3,523 acres, the Marsh Creek State Historic Park located south of Brentwood at 3,673 acres, and the Mount Diablo State Park at 20,124 acres (CSP 2019). These are state parks managed by the State Parks Department. In addition, the State Department of Water Resources operates the Clifton Court Forebay on the southeastern edge of the County which provides water-based recreational opportunities.

### 4.3.5.5 WASTEWATER TREATMENT

As discussed in Section 5.17, Utilities and Service Systems, there are many wastewaters treatment and collection services throughout Contra Costa County. Water and wastewater services are provided through twenty-nine agencies: eight cities, twenty special districts, and one private water company. Eleven of these

## 4. Environmental Setting

would provide wastewater service to sites in the Housing Element Inventory. These include: Byron Sanitary District, Central Contra Costa Sanitary District, Crockett Community Services District, Delta Diablo, East Bay Municipal Utility District, Ironhouse Sanitary District, Mountain View Sanitary District, Rodeo Sanitary District, Stege Sanitary District, Town of Discovery Bay Community Services District, and West County Wastewater District.

### 4.3.5.6 WATER SUPPLY

There are two major water providers in the County: The East Bay Municipal Utility District (EBMUD) and the Contra Costa Water District (CCWD). EBMUD delivers water directly to its customers after it is treated. CCWD provides treated water services to several cities in the Central County area and several city and other water agencies buy "raw," untreated water from CCWD, treat it, and then sell it to their own local customers. CCWD is not limited to providing domestic urban water supplies. Other services include wholesale treated water, reclaimed water, industrial, agricultural, and landscaping irrigation water supplies.

EBMUD provides treated water to all western Contra Costa County, the Lamorinda area, portions of Walnut Creek and Pleasant Hill, and all the San Ramon Valley. The East Bay Municipal Utility District Urban Water Management Plan 2020 (EBMUD UWP) details serving a population of 473,000 in 2020. CCWD, supplies treated water to all urbanized areas in Central Contra Costa County that are not serviced by EBMUD: the northern and eastern portion of Walnut Creek, most of Pleasant Hill, all of Concord and Clayton, the Hidden Lakes area of Martinez, and the unincorporated areas of Vine Hill, Pacheco, Clyde, Port Chicago, and along Marsh Creek Road to Morgan Territory.

### 4.3.5.7 SOLID WASTE

In Contra Costa County the private sector has traditionally been responsible for solid waste collection and disposal. The role of government in solid waste management is one of planning, administration, and facility approval. Fourteen of the nineteen cities and four special districts franchise solid waste collection. Cities and districts enter into franchise agreements with private collectors to provide for collection services. Cities and counties also have land use approval over solid waste facilities located within their jurisdiction. It is noted that all the disposal facilities, as well as the collection services, are privately owned. As a result, the range of actions, including new facility applications, and landfill expansions, requires private sector-initiated applications or agreements as well as government policy direction and approvals. There are three separate landfill sites disbursed geographically throughout Contra Costa County, with one site serving West County, one serving Central and South County, and another serving East County.

There are also six community services districts that provide solid waste services as many city governments within both incorporated and unincorporated (Contra Costa 2019). These six community service districts include: Crockett Community Services District, Diablo Community Services District, Town of Discovery Bay Community Services District, Dublin-San Ramon Services District, Kensington Police Protection and Community Services District, and Knightsen Town Community Services District.



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### 4.4 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when a project's incremental effect is cumulatively considerable. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great detail as that necessary for the proposed Project alone. Section 15355 of the CEQA Guidelines defines cumulative impacts to be "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of the proposed Project when added to effects of past projects, other current projects and probable future projects in the vicinity.

CEQA Guidelines Section 15130 (b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of two sources, either:

- 1) A list of past, present and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or
- 2) A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impacts analyses in this DEIR use method No. 2. The proposed project consists of the Contra Costa County Housing Element Update. Consistent with Section 15130(b)(1)(B), this DEIR analyzes the environmental impacts of developments in accordance with buildout of the proposed land use plan for the proposed General Plan Update. As a result, this DEIR addresses the cumulative impacts of the proposed housing development within the County and region, as appropriate. In most cases, the potential for cumulative impacts is contiguous with the County boundary. Potential cumulative impacts that have the potential for impacts beyond the County boundary (e.g., traffic, air quality, noise) have addressed through cumulative growth in the County and region. Regional growth outside the County has accounted for traffic, air quality, and noise impacts through use of the Contra Costa Transportation Authority Congestion Management Plan (CMP), which is a model that uses regional growth projection to calculate future traffic volumes. The growth projections adopted by the County and surrounding area are used for the cumulative impact analyses of this DEIR. Please refer to Chapter 5, *Environmental Analysis*, of this DEIR for a discussion of the cumulative impacts associated with development and growth in the County and region.

A summary of the extent of cumulative impacts is also identified below:

- **Aesthetics:** Contiguous with Contra Costa County.
- **Agricultural and Forestry Resources:** Contiguous with Contra Costa County boundary but considers regional resources.
- **Air Quality:** Based on the regional boundaries of the San Francisco Bay Area Air Basin.
- **Biological Resources:** Contiguous with Contra Costa County boundary but considers regional resources.
- **Cultural Resources:** Contiguous with Contra Costa County.
- **Energy:** Based on the use of resources during the development process.

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- **Geology and Soils:** Contiguous with Contra Costa County.
- **Greenhouse Gas Emissions:** Considers impacts to worldwide climate
- **Hazards and Hazardous Materials:** Contiguous with Contra Costa County and jurisdictions that border the County.
- **Hydrology and Water Quality:** Encompasses all watersheds in Contra Costa County.
- **Land Use and Planning:** Contiguous with Contra Costa County.
- **Mineral Resources:** Contiguous with Contra Costa County but considers resources of statewide and regional importance.
- **Noise:** Contiguous with Contra Costa County.
- **Population and Housing:** Contiguous with Contra Costa County.
- **Public Services:** Contiguous with Contra Costa County.
- **Recreation:** Contiguous with Contra Costa County but considers impacts to shared regional facilities.
- **Transportation & Traffic:** Contiguous with Contra Costa County and surrounding roadways in the region.
- **Tribal Cultural Resources:** Contiguous with Contra Costa County.
- **Utilities and Service Systems:** Contiguous with Contra Costa County.
- **Wildfire:** Contiguous with Contra Costa County.

## 4. Environmental Setting

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## 5. Environmental Analysis

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Chapter 5 examines the environmental setting of the proposed project, analyzes its effects and the significance of its impacts, and recommends mitigation measures to reduce or avoid impacts. This chapter has a separate section for each environmental topic that was determined to need further study in the EIR. This scope was determined in the Notice of Preparation (NOP), which was re-published on December 19, 2022 (see Appendix 2-1), and through public and agency comments received during the NOP comment period from December 19 2022, to January 18, 2022 (see Appendix 2-1). Environmental issues and their corresponding EIR sections are below:

- Section 5.1 Aesthetics
- Section 5.2 Agriculture and Forestry Resources
- Section 5.3 Air Quality
- Section 5.4 Biological Resources
- Section 5.5 Cultural and Tribal Cultural Resources
- Section 5.6 Energy
- Section 5.7 Geology and Soils
- Section 5.8 Greenhouse Gas Emissions
- Section 5.9 Hazards and Hazardous Materials
- Section 5.10 Hydrology and Water Quality
- Section 5.11 Land Use and Planning
- Section 5.12 Mineral Resources
- Section 5.13 Noise
- Section 5.14 Population and Housing
- Section 5.15 Public Services and Recreation
- Section 5.16 Transportation
- Section 5.17 Utilities and Service Systems
- Section 5.18 Wildfire

EIR sections 5.1 through 5.18 provide a detailed discussion of the environmental setting, impacts associated with the proposed project, and mitigation measures designed to reduce significant impacts where required and when feasible. The residual impacts following the implementation of any mitigation measure are also discussed.

### Organization of Environmental Analysis

To assist the reader with comparing information between environmental issues, each section is organized under nine major headings:

- Environmental Setting

## 5. Environmental Analysis

- Thresholds of Significance
- Proposed Housing Element Policies
- Environmental Impacts
- Cumulative Impacts
- Level of Significance Before Mitigation
- Mitigation Measures
- Level of Significance After Mitigation
- References

In addition, Chapter 1, *Executive Summary*, has a table that summarizes all impacts by environmental issue.

### Terminology Used in This Draft EIR

The level of significance is identified for each impact in this DEIR. Although the criteria for determining significance are different for each topic area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would not change the environment.
- **Less than significant.** The project would not cause any substantial, adverse change in the environment.
- **Less than significant with mitigation incorporated.** The EIR includes mitigation measures that avoid substantial adverse impacts on the environment.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

## 5. Environmental Analysis

### 5.1 AESTHETICS

This section of the Draft Environmental Impact Report (DEIR) discusses the potential impacts to the visual character of Contra Costa County from implementation of the proposed project. Parcels that are identified in Table 3-5, *Suitably Zoned/Designated Sites*, as having the correct land use designation will not change because of the proposed project and are therefore not analyzed in this section of the EIR. Note that all existing policies and ordinances of the County concerning aesthetics will continue to apply to these parcels.

#### 5.1.1 Environmental Setting

##### 5.1.1.1 REGULATORY BACKGROUND

###### State Regulations

###### *Caltrans Scenic Highway Program*

In 1963, California's Scenic Highway Program was created to preserve and protect the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The state laws governing this program are in the Streets and Highways Code, Sections 260 to 263, and Caltrans oversees the program. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Suitability for designation as a State Scenic Highway is based on three criteria described in Caltrans' Guidelines for Official Designation of Scenic Highways (2008) (Caltrans 2022):

- **Vividness.** The extent to which the landscape is memorable. This is associated with the distinctiveness, diversity, and contrast of visual elements.
- **Intactness.** The integrity of visual order and the extent to which the natural landscape is free from visual intrusions (e.g., buildings, structures, equipment, grading).
- **Unity.** The extent to which development is sensitive to and visually harmonious with the natural landscape.

###### Local Regulations

###### *Contra Costa County General Plan*

The following policies, which pertain to aesthetics, are included in the Land Use Element of the General Plan:

- **Policy 3-16:** Community appearance shall be upgraded by encouraging redevelopment, where appropriate, to replace inappropriate uses.
- **Policy 3-19:** Buffers shall be provided between new industrial development and residential areas by establishing setbacks, and park-like landscaping or other appropriate mechanisms.

## 5. Environmental Analysis

### AESTHETICS

- **Policy 3-21:** The predominantly single-family character of substantially-developed portions of the County shall be retained. Multiple-family housing shall be dispersed throughout the County and not concentrated in single locations. Multi-family housing shall generally be located in proximity to facilities such as arterial roads, transit corridors, and shopping areas.
- **Policy 3-24:** Housing opportunities shall be improved through encouragement of distinct styles, desirable amenities, attractive design, and enhancement of neighborhood identity.

#### *Contra Costa County Ordinance Code*

##### ***Chapter 76-4 Modifications***

Section 76-4.612, Public Nuisance Lighting, states that lighting fixtures shall be installed, controlled or directed so that the light will not glare or be blinding to pedestrians or vehicular traffic or on adjoining property.

##### ***Chapter 82-1***

Section 82-1.010, Urban Limit Line (ULL), establishes an urban limit line to ensure the enforcement of the 65/35 standard set forth in Section 82-1.006 of the County Ordinance Code. The ULL limits potential urban development in the County to 35 percent of the land in the County and prohibits that County from designating any land located outside the urban limit line for an urban land use.

##### ***Chapter 814-2***

Chapter 814-2, SD-1 Slope Density and Hillside Development Combining District, provides objectives for the Chapter's regulation of residential slope density and hillside, which include requiring the retention of trees and other vegetation which stabilize steep hillsides by retaining moisture, minimizing erosion and enhancing the natural scenic beauty, and where necessary, requiring additional landscaping to enhance the scenic and safety qualities of the hillsides.

##### ***Chapter 816-6***

Chapter 816-6, Tree Protection and Preservation, provides for the preservation of certain protected trees in the unincorporated area of this County. In addition, this Chapter provides for the protections of trees on private property by controlling tree removal while allowing for reasonable enjoyment of private property rights and property development for the following reasons:

1. The County finds it necessary to preserve trees on private property in the interest of the public health, safety and welfare and to preserve scenic beauty.
2. Trees provide soil stability, improve drainage conditions, provide habitat for wildlife and provide aesthetic beauty and screening for privacy.
3. Trees are a vital part of a visually pleasing, healthy environment for the unincorporated area of this County.



## 5. Environmental Analysis AESTHETICS

### 5.1.1.2 EXISTING CONDITIONS

Land uses in the County include both urban and rural with open spaces between development areas. In the West and Central County subareas, primary uses in suburban cities and towns are residential, commercial, and industrial. In the East County subarea, land is still primarily used for agriculture and general open space. Over the years, development pressure has steadily moved eastward from the flat Baylands, to the valleys near Mt. Diablo, and now to the communities of East County. The elongated corridors of cities and towns are connected by a network of major transportation routes linking the County directly to employment centers in San Francisco and Alameda Counties.

The proposed project includes parcels that are already designated for the appropriate residential density, parcels that will increase in density from a lower to a higher density, and parcels that will introduce residential uses. All project sites within the Urban Limit Line (ULL) are subject to general plan policies and ordinances of the County that regulate development standards, such as siting, lighting, landscaping, and design.

As indicated in the Transportation and Circulation Element of the General Plan, SR-24 from the Alameda County line to the Interstate 680 interchange, and Interstate 680 south of that interchange to the Alameda County line are state designated scenic routes, as shown in Figure 5.1-1, *Scenic Routes*, (Contra Costa County 2005). SR-4 is eligible for scenic highway designation.

There are 12 housing sites within a ¼ mile of two National Historic Places/Landmarks— Memorial Hall and William T. Hendrick House.

### 5.1.2 Thresholds of Significance

The County has determined that a project would normally have a significant effect on the environment if the project would:

- AE-1 Have a substantial adverse effect on a scenic vista.
- AE-2 Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- AE-3 In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality.
- AE-4 Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

## 5. Environmental Analysis

### AESTHETICS

#### 5.1.3 Proposed Housing Element Policies

The following proposed Housing Element policies pertain to aesthetics:

- **Policy HE-P1.2:** To the extent practicable, focus rehabilitation expenditures and code enforcement efforts in communities with a high concentration of older and/or substandard residential structures for continued reinvestment in established neighborhoods. The goal of the code enforcement effort is to improve quality of life in these neighborhoods.
- **Policy HE-P1.1:** Assist low-income homeowners in maintaining and improving residential properties through housing rehabilitation and energy-efficiency assistance programs. Promote increased awareness among property owners and residents of the importance of property maintenance to neighborhood quality.
- **Policy HE-P2.5:** Encourage innovative housing design and building types to lower housing costs and provide high quality options for affordable housing.
- **Policy HE-P2.6:** Plan for a variety of housing types in the county. Encourage innovative, nontraditional designs and layouts in response to evolving housing needs. Provide housing opportunities for all economic segments of the community while ensuring compatibility with surrounding uses.

#### 5.1.4 Environmental Impacts

##### 5.1.4.1 DISCUSSION OF NO AESTHETICS IMPACTS

All impacts in this chapter would be less than significant or potentially significant.

##### 5.1.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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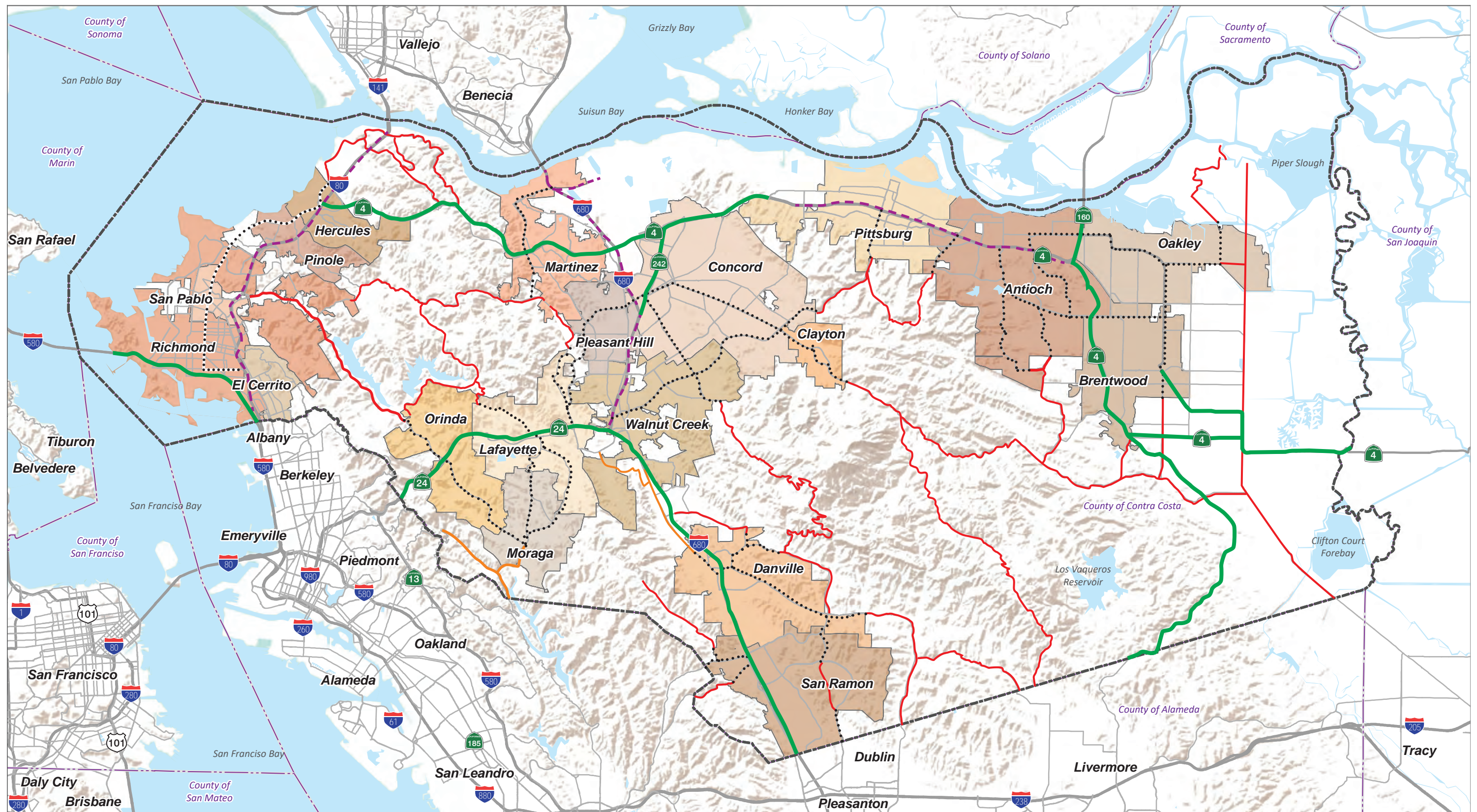
Impact 5.1-1: Development in accordance with the proposed project would not substantially alter or damage scenic vistas or substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. [Thresholds AE-1 and AE-2]

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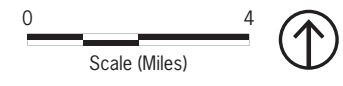
Parcels identified in Table 3-3, *Residential Sites with Increasing Allowable Density*, as requiring an increase in density from an existing residential designation could have larger buildings occupying a larger percentage of the parcel. This could result in less area between the building and the property line resulting in less landscape area and views between buildings. Increase density often results in larger overall building size that would be obvious from the public street and may be larger than existing surrounding buildings.

Parcels identified in Table 3-4, *Non-Residential Sites Proposed to Allow Residential Units*, that are designated non-residential (e.g., commercial, public and semi-public, and industrial) would be redesignated for residential uses could also impact views of scenic resources. Parcels that are currently designated public and semi-public, single-family, mixed use, and open space that would result in a decrease in density which would allow for more views of visual resources compared to what the existing designations would allow. Furthermore, there are 12 housing sites within a ¼ mile of two National Historic Places/Landmarks— Memorial Hall and William T. Hendrick House.

HOUSING ELEMENT



Source: ESRI, 2022



- Contra Costa County Boundary
  - County Boundary
  - Scenic Highways and Expressways
  - Scenic Routes
  - Connecting Highways
  - Connecting Roads
- Note: Unincorporated county areas are shown in white.

Figure 5.1-1  
Scenic Routes

## 5. Environmental Analysis AESTHETICS

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## 5. Environmental Analysis AESTHETICS

Nonetheless, all development in the County must comply with policies that govern visual resources, such as the County's General Plan policies, Zoning Code, and building and design standards which would ensure new development complements existing development. Additionally, the proposed project would be required to comply with the development standards in the County Ordinance Code, such as Chapter 814-2, which governs hillside development. Additionally, the Urban Limit Line standards (65/35 Standard) would ensure that urban development is limited to 35 percent of the County's land area and that the remaining 65 percent of land area would be preserved for agriculture, open space, wetlands, parks, and other non-urban uses. Therefore, public vistas and scenic resources from publicly accessible locations in the County would not be adversely impacted.

The majority of the lands surrounding these freeways are currently developed with a variety of uses, including residential; several housing parcels are adjacent or within proximity to scenic routes such as I-680. As all parcels included in Table 3-3 and Table 3-4 are within the ULL and are contemplated as having urban development styles including larger buildings, landscaping, and reduced views of the horizon from adjacent roadways. Development consistent with the proposed project is anticipated to reduce views from scenic highways on individual parcels, however the urban nature of the development would be similar to existing conditions. As some form of development was anticipated on all parcels in Table 3-3 and Table 3-4 and all General Plan policies, ordinances, and development standards would apply to future development, impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.1-1 would be less than significant.

### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.1-1 would be less than significant.

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Impact 5.1-2: Buildout in accordance with the proposed project would alter visual appearance in the County, but would not substantially degrade its existing visual character or quality.  
[Threshold AE-3]

---

The proposed project identifies sites that the County may redesignate land to residential uses in order to meet their RHNA. Although new development would alter the visual appearance of the County, portions of the County are developed with urban and suburban uses. Further, the sites shown in Table 3-3 and Table 3-4 are within the ULL adopted by the County and would be anticipated to develop over time. Adherence to County ordinances regarding development, lighting, and landscaping is required of all development. Compliance with development regulations is verified prior to issuance of a building permit and is therefore not reliant upon future CEQA action. As all properties were within the ULL, and all projects must comply with design regulations of the County, the proposed project would not substantially degrade the visual character or quality of the County.

***Level of Significance Before Mitigation:*** Impact 5.1-2 would be less than significant.

## 5. Environmental Analysis

### AESTHETICS

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.1-3 would be less than significant.

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Impact 5.1-3: The proposed project would not generate substantial light and glare. [Threshold AE-4]

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The two major causes of light pollution are glare and spill light. Spill light is caused by misdirected light that illuminates outside the intended area. Glare is light that shines directly or is reflected from a surface into a viewer's eyes. Spill light and glare impacts are effects of a project's exterior lighting on adjoining uses and areas.

Sources of light in the County include building lighting (interior and exterior), security lighting, sign illumination, sports fields lighting, and parking area lighting. These sources of light and glare are mostly associated with residential, commercial, and industrial uses, as well as larger community parks. Other sources of nighttime light and glare include streetlights, vehicular traffic along surrounding roadways, and ambient lighting from surrounding communities.

Future development could increase nighttime light and glare as a result of additional housing, including sites that are currently designated agriculture/open space that would be redesignated for residential uses. Additionally, the redesignation and rezoning of land to accommodate housing would introduce new sources of light into areas where less light is currently anticipated. All new development are required to comply with the lighting standards of the County Ordinance in Chapter 76-4, Modifications, which requires that lighting fixtures be installed, controlled or directed so that the light will not glare or be blinding to pedestrians or vehicular traffic or on adjoining property. Additionally, landscaping, walls, and fences that would be constructed as part of future projects that would further reduce light and glare spillover. Through the compliance of the County Ordinance Code and site-planning/design standards pertaining to light and glare, any potential spillover would be minimized, and the impact considered less than significant.

***Level of Significance Before Mitigation:*** Impact 5.1-3 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.1-3 would be less than significant.

### 5.1.5 Cumulative Impacts

Cumulative aesthetic impacts are based on potential changes to the visual quality in the County. Future development under the proposed project would alter the visual quality of the landscape through the introduction of structures on undeveloped parcels. Future development would contribute to the cumulative loss of undeveloped land in the County; however, compliance with the Urban Limit Line standards would ensure that urban development in the County would not exceed 35 percent of the County's land area.

## 5. Environmental Analysis

### AESTHETICS

Nonetheless, the permanent change in visual character of the County from past and future development would be considered a significant cumulative impact.

Future development under the proposed project would be subject to discretionary and design review by the Conservation and Development Department. As indicated above, all future development that adheres to the General Plan policies, Housing Element Update policies, County Ordinance, and development standards would result in less than significant aesthetic impacts. However, although the visual character of the County would only incrementally change as future development projects are constructed, when combined with past development in the County, the proposed project's contribution to the visual impact would be cumulatively considerable. The majority of the land surrounding the scenic highways in the County are developed. Future development would result in similar impacts, and therefore, cumulative impacts would be less than significant.

Past development in the County have added substantial sources of light and glare to the area, which is considered a significant cumulative impact. New sources of light and glare, as well as an overall increase in lighting levels, would be introduced with new development and redevelopment in the County. Glass and glazing in new structures would potentially create additional sources of glare in the County. While compliance with the County Ordinance would prevent light spillover and adverse impacts on adjacent light-sensitive uses, when combined with past and future development in the County, the project's contribution to the cumulative impact would be cumulatively considerable.

#### 5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

#### 5.1.7 Mitigation Measures

No mitigation measures are required.

#### 5.1.8 Level of Significance After Mitigation

Impact would be less than significant.

## 5. Environmental Analysis

### AESTHETICS

#### 5.1.9 References

California Department of Transportation (Caltrans). 2022. Scenic Highways: California State Scenic Highway. Accessed May 24, 2022. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

Contra Costa, County of. 2005, January 18. Transportation and Circulation Element. <https://www.contracosta.ca.gov/DocumentCenter/View/30915/Ch5-Transportation-and-Circulation-Element?bidId=https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=7>



## 5. Environmental Analysis

### 5.2 AGRICULTURE AND FORESTRY RESOURCES

This section of the Draft Environmental Impact Report (DEIR) discusses the potential impacts to the County's agricultural and forestry resources as a result of implementation of the proposed project.

#### 5.2.1 Environmental Setting

##### 5.2.1.1 REGULATORY BACKGROUND

###### State Regulations

###### *California General Plan Law*

The California Government Code (§ 65302(d)) requires the general plan to include an open space and conservation element for the conservation, development, and utilization of natural resources—including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element must consider the effect of development on natural resources that are on public lands. The element must also cover:

- The reclamation of land and waters.
- Prevention and control of the pollution of streams and other waters.
- Regulation of the use of land for the accomplishment of the conservation plan.
- Prevention, control, and correction of the erosion of soils, beaches, and shores.
- Protection of watersheds.
- Location, quantity, and quality of the rock, sand, and gravel resources.
- Waterways, flood corridors, riparian habitats, and land that may accommodate floodwater for groundwater recharge and stormwater management.

In October 2017, the state legislature passed SB 732, which authorizes a city to develop an agricultural land component of the open space element or a separate agricultural element in its general plan. For local governments that choose this option, the bill authorizes the Department of Conservation to award grants, bond proceeds, and other assistance provided the element meets certain requirements.

###### *Farmland Mapping and Monitoring Program*

The California Natural Resources Agency is charged with restoring, protecting, and maintaining the state's natural, cultural, and historical resources. Within it, the State Department of Conservation (DCNR) provides technical services and information to promote informed land use decisions and sound management of the State's natural resources. DCNR manages the Farmland Mapping and Monitoring Program (FMMP), which supports agriculture throughout California by developing maps and statistical data for analyzing land use impacts to farmland. FMMP publishes a field report for each county in the state, the most recent field report was published in 2018. The field report categorizes land by agricultural production potential, according to the following classifications:

## 5. Environmental Analysis

### AGRICULTURE AND FORESTRY RESOURCES

- **Prime Farmland** has the best combination of physical and chemical features able to sustain long-term agricultural production. Prime Farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agriculture production at some time during the four years prior to the mapping date.
- **Farmland of Statewide Importance** is like Prime Farmland, but with minor shortcomings, such as steeper slopes or less ability to store moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.
- **Unique Farmland** consists of lesser quality soils used to produce the state's leading agricultural crops. This land is usually irrigated but may include no irrigated orchards or vineyards as found in some climatic zones in California. Land must have been farmed at some time during the four years prior to the mapping date.
- **Farmland of Local Importance** includes lands The lands within the Tassajara area, extending eastward to the county boundary and bordered on the north by the Black Hills, the Deer, Lone Tree and Briones Valleys, the Antioch area, and the Delta. These lands are typically used for livestock grazing. They are capable of producing dryland grain on a two-year summer fallow or longer rotation with volunteer hay and pasture. The farmlands in this category are included in 2 the U.S. Natural Resources Conservation Service's Land Capability Classes I, II, III, and IV, and lack some irrigation water (CDC 2018a).
- **Grazing Land** is the land on which the existing vegetation is suited to the grazing of livestock.
- **Confined Animal Agriculture** lands include poultry facilities, feedlots, dairy facilities, and fish farms. In some counties, confined animal agriculture is a component of the farmland of local importance category.
- **Nonagricultural and Natural Vegetation** includes heavily wooded, rocky, or barren areas; riparian and wetland areas; grassland areas that do not qualify for grazing land due to their size or land management restrictions; small water bodies; and recreational water ski lakes. Constructed wetlands are also included in this category.
- **Semi-agricultural and Rural Commercial Land** includes farmstead, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds.
- **Vacant or Disturbed Land** includes open field areas that do not qualify for an agricultural category, mineral and oil extraction areas, off-road vehicle areas, electrical substations, channelized canals, and rural freeway interchanges.
- **Rural Residential Land** includes residential areas of one to five structures per 10 acres.
- **Urban and Built-Up Land** is occupied by structures with a building density of at least one unit per 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential structures, industrial structures, commercial structures, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment structures, and water control structures.
- **Water** is used to describe perennial water bodies with an extent of at least 40 acres.

#### *California Land Conservation Act (Williamson Act)*

The California Land Conservation Act of 1965, better known as the Williamson Act, conserves agricultural and open space lands through property tax incentives and voluntary restrictive land use contracts administered by local governments under State regulations. Private landowners voluntarily restrict their land to agricultural and compatible open space uses under minimum 10-year rolling term contracts, with counties

## 5. Environmental Analysis AGRICULTURE AND FORESTRY RESOURCES

and cities also acting voluntarily. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value.

Nonrenewal status is applied to Williamson Act contracts that are within the nine-year termination process, during which the annual tax assessment for the property gradually increases.

### *Forestland and Timberland Protection*

State regulations such as the Forest Taxation Reform Act of 1976 and the Z'berg-Nejedly Forest Practice Act of 1973 (California Forest Practice Act) provide for the preservation of forest lands from encroachment by other, incompatible land uses and for oversight of the management of forest practices and forest resources.

Public Resources Code Section 12220(g) defines “forest land” for the purposes of CEQA as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water-quality, recreation, and other public benefits.

The California Timberland Productivity Act of 1982, like the Land Conservation Act, was passed to encourage the production of timber resources. Government Code Section 51104(g) defines “Timber,” “Timberland,” and “Timberland Production Zone” for the purposes of CEQA and “Timberland Preserve Zone,” which may be used in city and county general plans.

- **“Timber”** means trees of any species maintained for eventual harvest for forest production purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.
- **“Timberland”** means privately owned land, or land acquired for State Forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.
- **“Timberland Production Zone”** or **“TPZ”** means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, “Timberland Preserve Zone” means “Timberland Production Zone.”

County boards of supervisors may designate areas of timberland preserve, referred to as Timberland Production Zones, which restrict the land's use to the production of timber for an initial 10-year term in return for lower property taxes.

### Regional Regulations

#### *Contra Costa County Department of Conservation and Development*

The Department of Conservation and Development (DCD) is the planning and permitting agency for unincorporated Contra Costa County. The department serves the citizens of Contra Costa County through the formulation and implementation of the County General Plan, the administration of the Building Code,

## 5. Environmental Analysis

### AGRICULTURE AND FORESTRY RESOURCES

and coordination of planning, building, special housing, economic development, transportation, infrastructure, solid waste, and habitat conservation programs.

#### *Contra Costa General Plan*

The Contra Costa General Plan, Chapter 8, *Conservation Element*, contains goals and policies regarding agriculture resources and activities in the County. The labeling of the goals and policies below are consistent with the labeling in the respective of the General Plan.

#### **Agricultural Resources**

- **Policy 8-30:** In order to reduce adverse impacts on agricultural and environmental values, and to reduce urban costs to taxpayers, the County shall not designate land located outside the ULL for an urban land use.
- **Policy 8-31:** Urban development in the future shall take place within the Urban Limit Line and areas designated by this plan for urban growth.
- **Policy 8-34:** Urban developments shall be required to establish effective buffers between them, and land planned for agricultural uses.
- **Policy 8-35:** Residents in or near agricultural areas shall be informed and educated regarding the potential nuisances and hazards associated with nearby agricultural practices.

#### *Contra Costa Municipal Code*

#### **Chapter 82-1 – 65/35 Land Preservation Plan**

Urban development in the county shall be limited to no more than thirty-five percent of the land in the county. At least sixty-five percent of all land in the county shall be preserved for agriculture, open space, wetlands, parks, and other nonurban use. An urban limit line (ULL) was established to enforce the 65/35 standard.

#### **Chapter 810-2 – Agricultural Preserves**

The board of supervisors designates areas of the county agricultural preserves pursuant to the California Land Conservation Act (Government Code Section 51200, ff. as amended) to be devoted to agricultural and compatible uses. This chapter establishes uniform standards, minimum acreage and parcel sizes, land use restrictions, and regulations regarding agricultural preserves.

#### **Chapter 810-4 – Land Conservation Contracts**

Land conservation contracts are contracts with the owners of land located within agricultural preserves, pursuant to the California Land Conservation Act. Contracts shall be for a term of ten years renewable annually in the manner provided in Government Code Section 51244. This chapter establishes uniform standards, land use restrictions, and regulations regarding land conservation contracts

## 5. Environmental Analysis AGRICULTURE AND FORESTRY RESOURCES

### 5.2.1.2 EXISTING CONDITIONS

#### Agricultural Uses

The County Zoning Code has six agricultural land use designations: General Agricultural District (A-2), Heavy Agricultural District (A-3), Agricultural Preserve District (A-4), Exclusive Agricultural (A-20), Exclusive Agricultural District (A-40), and Exclusive Agricultural District (A-80). Uses allowed in the General Agricultural and Heavy Agricultural Districts include all type of agriculture, including general farming, wholesale horticulture and floriculture, wholesale nurseries and greenhouses, dairying, livestock production, poultry raising, animal breeding, forestry, and similar agricultural uses. Additionally, they allow other agricultural uses, including the erection and maintenance of buildings for the storage of agricultural products and equipment; sheds; warehouses; granaries; dehydration plants; hullers; fruit and vegetable packing plants; and agricultural cold storage plants on parcels at least 10 acres in size. The Agricultural Preserve District is intended to provide areas that provide primarily for the commercial production of food and other compatible uses consistent with the intent and purpose of the Williamson Act. The three Exclusive Agricultural Districts are intended to provide and protect areas for agricultural uses by setting a maximum acre size that can be developed for each district.

#### Agricultural Designations and Williamson Act Contracts

Table 5.2-1, *Land Use Summary for Contra Costa County*, compiles the 2018 inventory conducted by the DOC documenting the changes to agricultural resources in Contra Costa County. As shown in the Table 5.2-1, the Contra Costa contains 25,174 acres of Prime Farmland, 7,592 acres of Farmland of Statewide Importance, 3,291 acres of Unique Farmland, and 61,016 acres of Farmland of Local Importance. Contra Costa is comprised of approximately 19 percent Important Farmland. With the addition of Grazing Land, Contra Costa is 50 percent agricultural land, while 30 percent of the county is categorized as urbanized and built-up. Agricultural land is primarily in the eastern portion of the County.

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### AGRICULTURE AND FORESTRY RESOURCES

Table 5.2-1 Land Use Summary for Contra Costa County

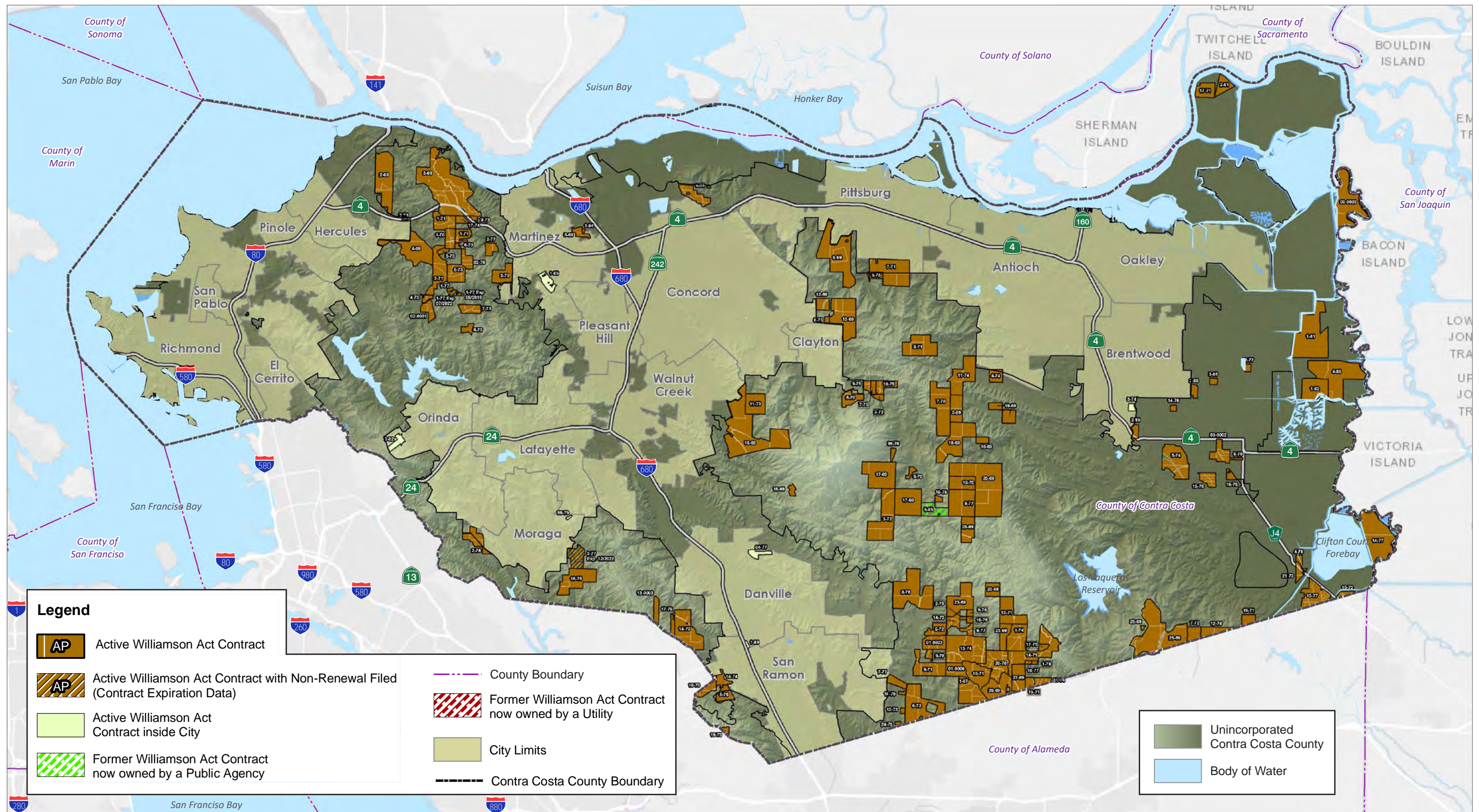
Land Use Category	Acreage 2018	2004-2018 Net Acreage Changed	Average Annual Acreage Change
Prime Farmland	25,174	6,850	489
Farmland of Statewide Importance	7,592	955	68
Unique Farmland	3,291	638	46
Farmland of Local Importance	61,016	-8,759	-626
Important Farmland Subtotal	97,073	-316	-23
Grazing Land	157,424	11,359	811
Agricultural Land Subtotal	254,497	11,043	789
Urban and Built-Up Land	152,513	-5,071	-362
Other Land	52,578	-4,777	-341
Water Area	54,486	-1,246	-89
Total Area Inventoried	514,074	-51	-4

Source: CDC 2018b

Contra Costa County has been implementing the Williamson Act since 1968 when the Board of Supervisors adopted Ordinance 68-53, which authorized the creation of Agricultural Preserves and the execution of Land Conservation Contracts pursuant to state law. Figure 5.2-1, *Active Williamson Act Contracts within Contra Costa*, depicts active contracts to be outside the ULL (DCD 2017).

#### Forestland and Timberland

The Contra Costa Municipal Code zones forestland as Forest Recreation district (F-R). F-R district allows uses permitted in single-family residential districts and agricultural districts. Forestry is also listed as a permitted use under General Agricultural and Heavy Agricultural districts.

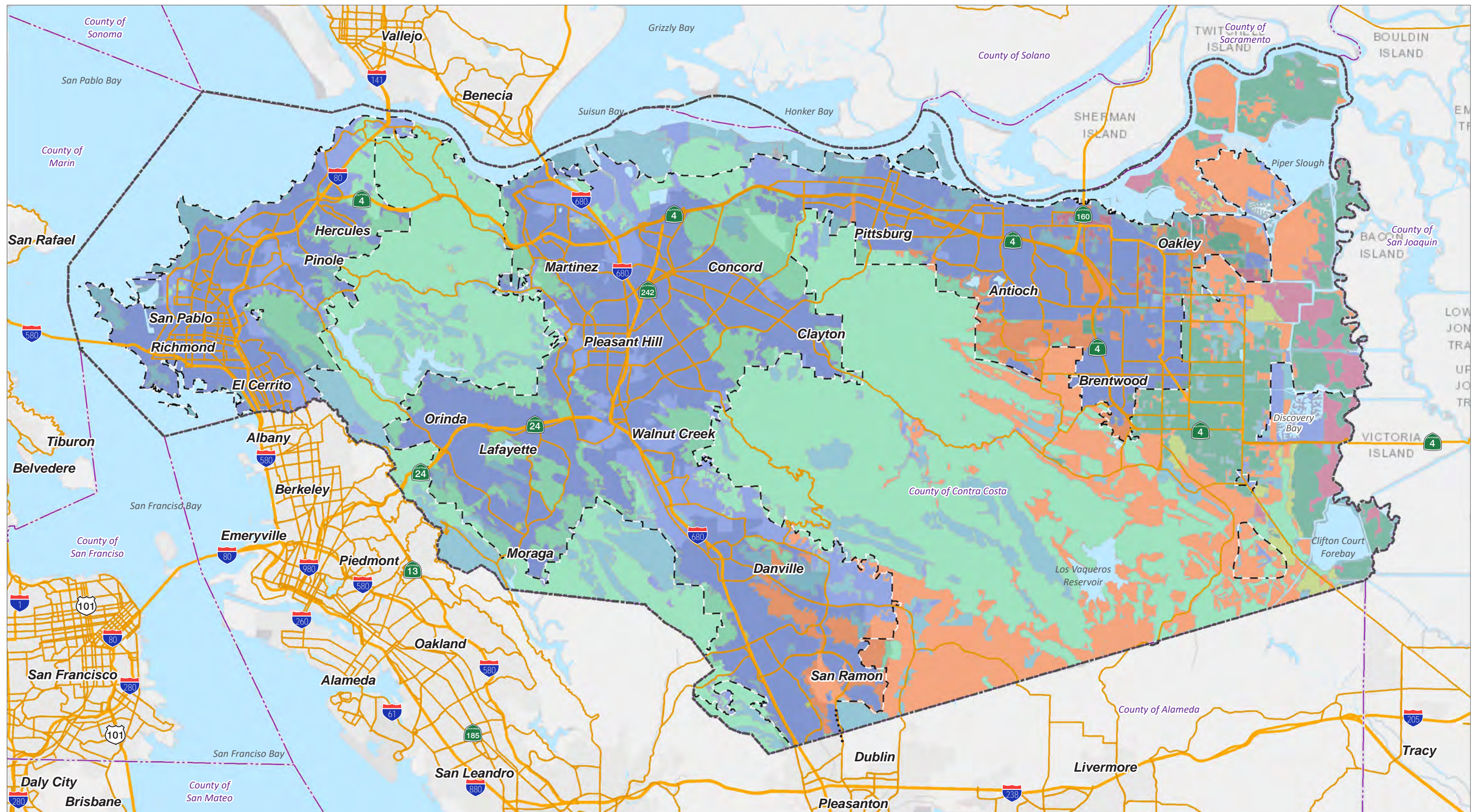


Source: Contra Costa County Department of Conservation and Development, February 1, 2017



Figure 5.2-1  
 Active Williamson Act Contracts within Contra Costa County

HOUSING ELEMENT



Source: Conservation.ca.gov, 2009



- |                                  |                             |                                |                |                   |                           |
|----------------------------------|-----------------------------|--------------------------------|----------------|-------------------|---------------------------|
| --- Contra Costa County Boundary | ■ Incorporated Communities  | ■ Farmland of Local Importance | ■ Grazing Land | ■ Prime Farmland  | ■ Urban and Built-Up Land |
| - - - County Boundary            | □ Uncorporated County Areas | ■ Farmland of State Importance | ■ Other Land   | ■ Unique Farmland | ■ Water                   |
| - - - Urban Limit Line           |                             |                                |                |                   |                           |

Figure 5.2-2  
 Designated Farmland within Contra Costa



## 5. Environmental Analysis AGRICULTURE AND FORESTRY RESOURCES

### 5.2.2 Thresholds of Significance

The County has determined that a project would normally have a significant effect on the environment if the project would:

- AG-1 Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use.
- AG-2 Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- AG-3 Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)).
- AG-4 Result in the loss of forest land or conversion of forest land to non-forest use.
- AG-5 Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

### 5.2.3 Proposed Housing Element Policies

- **Policy HE-P3.1:** Expand affordable housing opportunities for households with special needs, including but not limited to seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, persons with development disabilities, farmworkers, and persons experiencing homelessness.
- **Policy HE-P5.2:** Provide adequate sites to meet the housing needs of special-needs groups, including seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, farmworkers, and the homeless.
- **Policy HE-P7.3:** Enhance the opportunity for seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, and farmworkers to have access to housing.

### 5.2.4 Environmental Impacts

The existing Contra Costa General Plan EIR states the adoption of the existing County General Plan would convert a total of approximately 3,895 acres of prime and 4,904 of non-prime agriculture in the East of Contra Costa County to urban uses and lost for agricultural production (Contra Costa 2005b).

## 5. Environmental Analysis

### AGRICULTURE AND FORESTRY RESOURCES

#### 5.2.4.1 DISCUSSION OF NO AGRICULTURAL AND FORESTRY RESOURCE IMPACTS

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Impact 5.2-1: The proposed project would convert approximately 22.86 acres of California Resource Agency designated Prime Farmland and Farmland of Local Importance to residential land use. [Threshold AG-1]

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Figure 5.2-2, *Designated Farmland within Contra Costa*, shows that Prime Farmland and Farmland of Local Importance is primarily located in the eastern portion of the County. Three of the proposed housing sites (APNs: 003-120-008, 003-120-009 and 011-220-039) are located on parcels designated farmland. Although these proposed housing sites are on designated farmland, development could be allowed. The General Plan includes policies that require future urban development to be designated within the ULL, such as Policy 8-30 and Policy 8-31. These designated sites are all within the ULL, which would allow for high levels of residential development than its agricultural counterparts outside the ULL. As outlined in the General Plan and Zoning Code, certain intensities of residential uses are allowed within agricultural land use districts, and future development would be required to comply with standards and regulations in the Zoning Code. Following the 65/35 Land Preservation Plan, and agricultural zoning regulations outlined in the Zoning Code, future housing development under the Housing Element Update will not impact designated agricultural land.

***Level of Significance Before Mitigation:*** Impact 5.2-1 would have no impact.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.2-1 would have no impact.

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Impact 5.2-2: The proposed project could potentially require a zone change/general plan amendment from agriculture designation to residential use and/or conflict with an existing Williamson contract. [Threshold AG-2, AG-3, AG-4]

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The Housing Sites Inventory includes sites designated as agricultural as shown in Table 3-3, *Residential Sites with Increasing Allowable Density*, and Table 3-4, *Non-Residential Sites Proposed to Allow Residential Units*. These proposed sites allow for residential uses; however, the proposed project would change the allowable density. The proposed project would not significantly impact agricultural designation as a result of the residential density since the zone district already allows for residential use.

While none of the parcels included in Table 3-4, *Non-Residential Sites Proposed to Allow Residential Units*, are designated agriculture or within an active Williamson Act Contract, there is always a potential for land being used for agricultural purposes to be converted into residential uses. However, as all future development under the Housing Element Update must comply with the ULL standards (65/35 urban/rural standards), and all parcels in Table 3-3, 3-4, and 3-5 are within the ULL, the proposed project would not result in the cancellation of Williamson Act contracts or conflict with any agricultural land use designation. The proposed project would not impact the existing agricultural designations to residential use.

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***Level of Significance Before Mitigation:*** Impact 5.2-2 would have no impact.

### *Mitigation Measures*

No mitigation measures are required

***Level of Significance After Mitigation:*** Impact 5.2-2 would have no impact.

### 5.2.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.2-3: The proposed project could potentially result in other agricultural impact not related to above. e.g., diminish available water quality and supply for agricultural uses. [Threshold AG-5]

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While the specific sites intended for redesignation are not known, all the parcels in Tables 3-3, 3-4, and 3-5 are within the ULL on lands intended for some form of development in the Land Use Element of the General Plan. The sites in Tables 3-3, 3-4, and 3-5 are distributed throughout the County as shown in Figure 5.2.2, which spreads the impact over a large geographic area. Further, the development of homes, and in particular multiple family homes, would require connection to municipal water provider(s). Water connections are regulated by Section 414-4.2 of the County Ordinance Code, the purpose of which is to "...provide protection of the county's groundwater sources from degradation that could result from inadequately constructed, defective, or improperly abandoned wells, to provide for regulation of small water systems in accordance with federal standards as mandated by the state, and to require submission of tentative subdivision maps and building permit applications to the health officer for him to review the availability of an approved water supply prior to recordation of final maps and issuance of building permits."

Construction activities can increase urban runoff containing nutrients, sediments, and toxic contaminants polluting nearby water streams impacting agricultural uses. Increase in future residential housing will bring in more residents which can contribute to urban runoff. However, the following would help avoid or mitigate potential impacts to agricultural lands. For example, Chapter 74-6.012, states a drainage plan for development projects is required to determine methods to reduce runoff. The drainage plan must include provisions to stop erosion of exposed soil into drainages such as covering of stockpiles, jute-bales and silt fencing, frequent watering, and replanting to prevent both wind and rain erosion. Through compliance with County Ordinance Code, sediment and erosion of material would not leave any project site and would not affect available water quality or supply for agricultural uses. The General Plan also includes Policy 8-34 which requires future urban developments to establish effective buffers between the project and land planned for agricultural uses. Therefore, the environmental impacts for this project during construction and operation would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.2-3 would be less than significant

### *Mitigation Measures*

No mitigation measures would be required.

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***Level of Significance After Mitigation:*** Impact 5.2-3 would be less than significant

#### 5.2.5 Cumulative Impacts

Future development under the proposed project could directly and/or indirectly impact agricultural and forestry resources. However future development under the HEU would be required to comply with existing laws and regulations protecting agricultural and forestry resources, including the ULL.

Future development under the proposed project may result in impacts to agricultural and forestry resources. Out of the total 652 acres in Tables 3-3, 3-4, and 3-5, there are 16.44 acres that are currently classified as designated farmland. The proposed project could result in some form of urban development that would change existing land uses, including any agricultural use. However, all the sites included in Table 3-3, 3-4, and 3-5 are within the ULL and are currently designated or intended for some form of development. Through compliance with County codes, observance of the ULL, and existing planned development of the parcels, the proposed project impacts on agriculture are cumulatively less than significant.

#### 5.2.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

#### 5.2.7 Mitigation Measures

No mitigation measures are required.

#### 5.2.8 Level of Significance After Mitigation

Impact would be less than significant.

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### 5.2.9 References

Contra Costa, County of. 2005a. General Plan <https://www.contracosta.ca.gov/4732/General-Plan>.

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<https://www.cocohcp.org/DocumentCenter/View/420/Appendix-D-Summary-of-Impacts-and-Recommended-Mitigation-Measures-from-City-General-Plan-EIRs-PDF>

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[https://www.conservation.ca.gov/dlrp/fmmp/Documents/Farmland\\_of\\_Local\\_Importance\\_2018.pdf](https://www.conservation.ca.gov/dlrp/fmmp/Documents/Farmland_of_Local_Importance_2018.pdf).

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<https://www.conservation.ca.gov/dlrp/fmmp/Pages/ContraCosta.aspx>

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### 5.3 AIR QUALITY

This section describes the potential impacts to air quality due to the buildout of the proposed project in the County. This section describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential air quality impacts, and identifies General Plan policies and feasible mitigation measures that could minimize any potentially significant impacts.

This evaluation is based on the methodology recommended by the Bay Air Quality Management District (BAAQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling is included in Appendix 5.3-1, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft Environmental Impact Report (EIR). Transportation-sector impacts are based on trip generation and vehicle miles traveled (VMT) provided by Fehr and Peers. Note that this analysis was conducted based on the change areas identified in the upcoming General Plan Update. Cumulative impacts related to air quality are based on the regional boundaries of the San Francisco Bay Area Air Basin (SFBAAB).

#### 5.3.1 Environmental Setting

##### 5.3.1.1 TERMINOLOGY

- **AAQS.** Ambient Air Quality Standards
- **CES.** CalEnviroScreen. CES is a mapping tool that helps identify the California communities most affected by sources of pollution and where people are often especially vulnerable to pollution's effects.
- **Concentrations.** Refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm), parts per billion (ppb), or micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ).
- **Criteria Air Pollutants.** Those air pollutants specifically identified for control under the Federal Clean Air Act (currently seven—carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone, and coarse and fine particulates).
- **DPM.** Diesel particulate matter.
- **Emissions.** Refers to the actual quantity of pollutant, measured in pounds per day or tons per year.
- **ppm.** Parts per million.
- **Sensitive receptor.** Land uses that are considered more sensitive to air pollution than others due to the types of population groups or activities involved. These land uses include residential, retirement facilities, hospitals, and schools.
- **TAC.** Toxic air contaminant.
- **$\mu\text{g}/\text{m}^3$ .** Micrograms per cubic meter.
- **VMT.** Vehicle miles traveled.

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#### 5.3.1.2 AIR POLLUTANTS OF CONCERN

##### *Criteria Air Pollutants*

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb) are primary air pollutants. Of these, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are “criteria air pollutants,” which means that AAQS have been established for them. VOC and NO<sub>x</sub> are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants. Table 5.3-1, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

Table 5.3-1 Criteria Air Pollutant Health Effects Summary

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	Chest pain in heart patients Headaches, nausea Reduced mental alertness Death at very high levels	Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Ozone (O <sub>3</sub> )	Cough, chest tightness Difficulty taking a deep breath Worsened asthma symptoms Lung inflammation	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO <sub>2</sub> )	Increased response to allergens Aggravation of respiratory illness	Same as carbon monoxide sources
Particulate Matter (PM <sub>10</sub> and PM <sub>2.5</sub> )	Hospitalizations for worsened heart diseases Emergency room visits for asthma Premature death	Cars and trucks (particularly diesels) Fireplaces and woodstoves Windblown dust from overlays, agriculture, and construction
Sulfur Dioxide (SO <sub>2</sub> )	Aggravation of respiratory disease (e.g., asthma and emphysema) Reduced lung function	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	Behavioral and learning disabilities in children Nervous system impairment	Contaminated soil

Source: CARB 2022d; South Coast AQMD 2005.

A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- Carbon Monoxide (CO)** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. When inhaled at high concentrations, CO combines with



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hemoglobin in the blood and reduces its oxygen-carrying capacity. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death (BAAQMD 2017a).

- **Nitrogen Oxides (NO<sub>x</sub>)** are a by-product of fuel combustion and contribute to the formation of ground-level O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The two major forms of NO<sub>x</sub> are nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO<sub>x</sub> produced by combustion is NO, but NO reacts quickly with oxygen to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. NO<sub>2</sub> is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. NO<sub>2</sub> absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (BAAQMD 2017a). NO<sub>2</sub> acts as an acute irritant and in equal concentrations is more injurious than NO. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million (ppm) (BAAQMD 2017a).
- **Sulfur Dioxide (SO<sub>2</sub>)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO<sub>2</sub>. When sulfur dioxide forms sulfates (SO<sub>4</sub>) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO<sub>x</sub>). Thus, SO<sub>2</sub> is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO<sub>2</sub> may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO<sub>2</sub>, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO<sub>2</sub> may do greater harm by injuring lung tissue. (BAAQMD 2017a).
- **Suspended Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. In the San Francisco Bay Area Air Basin (SFBAAB or Air Basin), most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM<sub>10</sub>, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or PM<sub>2.5</sub>, have an aerodynamic diameter of 2.5 microns or less (i.e., 2.5 millionths of a meter or 0.0001 inch). Diesel particulate matter (DPM) is also classified a carcinogen. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM<sub>10</sub> bypasses the body's natural filtration system more easily than larger particles and can lodge deep in the lungs. The EPA scientific review concluded that PM<sub>2.5</sub> penetrates even more deeply into the lungs, and this is more likely to contribute to health effects—at concentrations well

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below current PM<sub>10</sub> standards. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing). Motor vehicles are currently responsible for about half of particulates in the SFBAAB. Wood burning in fireplaces and stoves is another large source of fine particulates (BAAQMD 2017a).

- **Ozone (O<sub>3</sub>)** is a key ingredient of “smog” and is a gas that is formed when ROG<sub>s</sub> and NO<sub>x</sub>, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O<sub>3</sub> is a secondary criteria air pollutant. O<sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O<sub>3</sub> poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O<sub>3</sub> can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma; reduce lung function; and inflame the linings of the lungs. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. O<sub>3</sub> can also damage plants and trees and materials such as rubber and fabrics (BAAQMD 2017a).
- **Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs)** are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs to form secondary pollutants such as O<sub>3</sub>. There are no AAQS established for ROGs. However, because they contribute to the formation of O<sub>3</sub>, the BAAQMD has established a significance threshold for this pollutant (BAAQMD 2017a).
- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phasing out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Because emissions of lead are found only in projects that are permitted by the BAAQMD, lead is not an air quality of concern for the proposed project (BAAQMD 2017a).

#### *Toxic Air Contaminants*

People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems (USEPA 2020). By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. There are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure.

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The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most relevant to the proposed project being particulate matter from diesel-fueled engines.

***Diesel Particulate Matter***

In 1998, CARB identified DPM as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs. Long-term (chronic) inhalation of DPM is likely a lung cancer risk. Short-term (i.e., acute) exposure can cause irritation and inflammatory symptoms and may exacerbate existing allergies and asthma symptoms (USEPA 2002).

***Placement of New Sensitive Receptors***

Because placement of sensitive land uses falls outside CARB’s jurisdiction, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to address the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources.

CARB’s recommendations on the siting of new sensitive land uses identified in Table 5.3-2, *CARB Recommendations for Siting New Sensitive Land Uses*, were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources.

Table 5.3-2 CARB Recommendations for Siting New Sensitive Land Uses

Source/Category	Advisory Recommendations
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units [TRUs] per day, or where TRU unit operations exceed 300 hours per week).
Rail Yards	Take into account the configuration of existing distribution centers and avoid locating residences and other sensitive land uses near entry and exit points.
Ports	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Refineries	Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or CARB on the status of pending analyses of health risks.
Chrome Platers	Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with three or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.

Source: CARB 2005.

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The key observation in these studies is that proximity to air pollution sources substantially increases both exposure and the potential for adverse health effects. There are three carcinogenic TACs that constitute the majority of the known health risks from motor vehicle traffic: DPM from trucks and benzene and 1,3-butadiene from passenger vehicles.

In 2017, CARB provided a supplemental technical advisory to the handbook for near-roadway air pollution exposure, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways*. Strategies include practices and technologies that reduce traffic emissions, increase dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air (CARB 2017).

#### 5.3.1.3 REGULATORY BACKGROUND

AAQS have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of TACs. Land uses in Contra Costa are subject to the rules and regulations imposed by the Bay Area Air Quality AQMD, the California AAQS adopted by the California Air Resources Board (CARB), and National AAQS adopted by the US Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized in this section.

#### Federal and State Regulations

##### *Ambient Air Quality Standards*

The Clean Air Act (CCA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or include other pollutants. The California Clean Air Act, signed in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.3-3, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter

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(PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Table 5.3-3 Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Ozone (O <sub>3</sub> ) <sup>3</sup>	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Respirable Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>4</sup>	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m <sup>3</sup>	
Lead (Pb)	30-Day Average	1.5 µg/m <sup>3</sup>	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m <sup>3</sup>	
	Rolling 3-Month Average	*	0.15 µg/m <sup>3</sup>	
Sulfates (SO <sub>4</sub> ) <sup>5</sup>	24 hours	25 µg/m <sup>3</sup>	No Federal Standard	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

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Table 5.3-3 Ambient Air Quality Standards for Criteria Air Pollutants

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H <sub>2</sub> S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.

Notes: ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter

\* Standard has not been established for this pollutant/duration by this entity.

<sup>1</sup> California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

<sup>2</sup> National standards (other than O<sub>3</sub>, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

<sup>3</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

<sup>4</sup> On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

<sup>5</sup> On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions.

- **AB 1493: Pavley Fuel Efficiency Standards.** Pavley I is a clean-car standard that reduces emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025.
- **Heavy-Duty (Tractor-Trailer) GHG Regulation.** The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay-verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the heavy-duty tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low-rolling-resistance tires. Sleeper-cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay-verified low-rolling-resistance tires. This rule has criteria air pollutant co-benefits.

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- **SB 1078 and SB 107: Renewables Portfolio Standards.** A major component of California’s Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under this standard, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010.
- **California Code of Regulations (CCR) Title 20: Appliance Energy Efficiency Standards.** The 2006 Appliance Efficiency Regulations (20 CCR secs. 1601–1608) were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. This code reduces natural gas use from appliances.
- **24 CCR, Part 6: Building and Energy Efficiency Standards.** Energy conservation standards for new residential and nonresidential buildings adopted by the California Energy Resources Conservation and Development Commission (now the California Energy Commission) in June 1977. This code reduces natural gas use from buildings.
- **24 CCR, Part 11: Green Building Standards Code.** Establishes planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. This code reduces natural gas use from buildings.

*Tanner Air Toxics Act and Air Toxics Hot Spot Information and Assessment Act*

Public exposure to TACs is a significant environmental health issue in California. In 1983, the California legislature enacted a program to identify the health effects of TACs and reduce exposure to them. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health” (17 CCR sec. 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code sec. 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set up a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit that TAC. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate “toxics best available control technology” to minimize emissions. To date, CARB has established formal control measures for 11 TACs that are identified as having no safe threshold.

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Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- **13 CCR Chapter 10 Section 2485.: Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.** Generally restricts on-road diesel-powered commercial motor vehicles with a gross vehicle weight rating of greater than 10,000 pounds from idling more than five minutes.
- **13 CCR Chapter 10 Section 2480: Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools.** Generally restricts a school bus or transit bus from idling for more than five minutes when within 100 feet of a school.
- **13 CCR Section 2477 and Article 8: Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate.** Regulations established to control emissions associated with diesel-powered TRUs.

### Regional Regulations

#### *Bay Area Air Quality Management District*

The BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the SFBAAB. Air quality conditions in the SFBAAB have improved significantly since the BAAQMD was created in 1955. The BAAQMD prepares air quality management plans (AQMP) to attain ambient air quality standards in the SFBAAB. The BAAQMD prepares ozone attainment plans for the National O<sub>3</sub> standard and clean air plans for the California O<sub>3</sub> standard. The BAAQMD prepares these air quality management plans in coordination with Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) to ensure consistent assumptions about regional growth.

#### ***Bay Area Air Quality Management District 2017 Clean Air Plan***

The BAAQMD adopted the 2017 “Clean Air Plan: Spare the Air, Cool the Climate” (2017 Clean Air Plan) on April 19, 2017, making it the most recently adopted comprehensive plan. The 2017 Clean Air Plan incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2017 Clean Air Plan serves as an update to the adopted Bay Area 2010 Clean Air Plan and continues to provide the framework for SFBAAB to achieve attainment of the California and National AAQS. The 2017 Clean Air Plan updates the Bay Area’s ozone plan, which is based on the “all feasible measures” approach to meet the requirements of the California Clean Air Act. It sets a goal of reducing health risk impacts to local communities by 20 percent between 2015 and 2020 and lays the groundwork for reducing GHG emissions in the Bay Area to meet the State’s 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following: Construct buildings that are energy efficient and powered by renewable energy.



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- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy was developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, TACs, and GHG from a full range of emission sources. These control measures cover the following sectors: (1) stationary (industrial) sources, (2) transportation, (3) energy, (4) agriculture, (5) natural and working lands, (6) waste management, (7) water, (8) super-GHG pollutants, and (9) buildings. The proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs” such as methane, black carbon, and fluorinated gases.
- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel, and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors (BAAQMD 2017c).

#### ***Community Air Risk Evaluation (CARE) Program***

The BAAQMD’s Community Air Risk Evaluation program was initiated in 2004 to evaluate and reduce health risks associated with exposure to outdoor TACs in the Bay Area, primarily DPM. The last update to this program was in 2014. Based on findings of the latest report, DPM was found to account for approximately 85 percent of the cancer risk from airborne toxics. Carcinogenic compounds from gasoline-powered cars and light duty trucks were also identified as significant contributors: 1,3-butadiene contributed 4 percent of the cancer risk-weighted emissions, and benzene contributed 3 percent. Collectively, five compounds—DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde—were found to be responsible for more than 90 percent of the cancer risk attributed to emissions. All of these compounds are associated with emissions from internal combustion engines. The most important sources of cancer risk-weighted emissions were combustion-related sources of DPM, including on-road mobile sources (31 percent), construction equipment (29 percent), and ships and harbor craft (13 percent). Overall, cancer risk from TAC dropped by more than 50 percent between 2005 and 2015, when emissions inputs accounted for State diesel regulations and other reductions.

The major contributor to acute and chronic non-cancer health effects in the BAAQMD is acrolein (C<sub>3</sub>H<sub>4</sub>O). Major sources of acrolein are on-road mobile sources and aircraft near freeways and commercial and military airports. Currently CARB does not have certified emission factors or an analytical test method for acrolein. Since the appropriate tools needed to implement and enforce acrolein emission limits are not available, BAAQMD does not conduct health risk screening analysis for acrolein emissions.

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#### ***Assembly Bill 617 Community Action Plans***

AB 617 (C. Garcia, Chapter 136, Statutes of 2017) was signed into law in July 2017 to develop a new community-focused program to reduce exposure more effectively to air pollution and preserve public health in environmental justice communities. AB 617 directs CARB and all local air districts to take measures to protect communities disproportionately impacted by air pollution through monitoring and implementing air pollution control strategies.

On September 27, 2018, CARB approved the BAAQMD's recommended communities for monitoring and emission reduction planning. The State approved communities for year 1 of the program as well as communities that would move forward over the next five years. Bay Area recommendations included all the Community Air Risk Evaluation areas, areas with large sources of air pollution (refineries, seaports, airports, etc.), areas identified via statewide screening tools as having pollution and/or health burden vulnerability, and areas with low life expectancy (BAAQMD 2019a).

- Year 1 Communities:
  - *West Oakland.* The West Oakland community was selected for the BAAQMD's first Community Action Plan. In 2017, cancer risk from sources in West Oakland (local sources) was 204 in a million. The primary sources of air pollution in West Oakland include heavy trucks and cars, port and rail sources, large industries, and to a lesser extent other sources such as residential sources (i.e., wood burning). The majority (over 90 percent) of cancer risk is from DPM (BAAQMD 2019b).
  - *Richmond.* Richmond was selected for a community monitoring plan in year 1 of the AB 617 program. The Richmond area is in western Contra Costa County and includes most of the city of Richmond and portions of El Cerrito. It also includes communities just north and east of Richmond, such as San Pablo and several unincorporated communities, including North Richmond. The primary goals of the Richmond monitoring effort are to leverage historical and current monitoring studies, to better characterize the area's mix of sources, and to more fully understand the associated air quality and pollution impact (BAAQMD 2019a).
- Year 2 to 5 Communities: East Oakland/San Leandro, Eastern San Francisco, the Pittsburg-Bay Point area, San Jose, Tri-Valley, and Vallejo are slated for action in years 2 to 5 of the AB 617 program (BAAQMD 2019a).

#### ***BAAQMD Rules and Regulations***

##### *Regulation 7, Odorous Substances*

Sources of objectionable odors may occur within the unincorporated County. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under the BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property."

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Under the BAAQMD's Rule 1-301, a facility that receives three or more violation notices within a 30-day period can be declared a public nuisance.

#### *Other BAAQMD Regulations*

In addition to the plans and programs described above, the BAAQMD administers a number of specific regulations on various sources of pollutant emissions that would apply to the proposed project:

- Regulation 2, Rule 2, Permits, New Source Review
- Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- Regulation 2, Rule 6, Permits, Major Facility Review
- Regulation 6, Rule 1, General Requirements
- Regulation 6, Rule 2, Commercial Cooking Equipment
- Regulation 8, Rule 3, Architectural Coatings
- Regulation 8, Rule 4, General Solvent and Surface Coatings Operations
- Regulation 11, Rule 2, Asbestos, Demolition, Renovation and Manufacturing

#### ***Contra Costa Transportation Authority Congestion Management Plan***

The Contra Costa Transportation Authority prepares and adopts a Congestion Management Program (CMP) for Contra Costa every two years. The 2021 CMP is the 15<sup>th</sup> biennial update of the CMP (CCTA 2021). The CMP provides a roadmap to reduce congestion, improve mobility, and increase overall sustainability of the transportation system in the county. The 2021 update also document changes in the use of level of service (LOS) as a finding of significant impact in CEQA under Senate Bill 743. Consistent with State law, and the MTC's Regional Transportation Plan the CMP contains the following components: traffic LOS standards, performance element to evaluate current and future multi-modal system performances, seven-year capital improvement program (CIP), program to analyze the impacts of land use decisions, and a travel demand element to promote more transportation alternatives.

#### ***Plan Bay Area 2050***

MTC and ABAG adopted Plan Bay Area 2050 on October 21, 2021 (ABAG/MTC 2021). Plan Bay Area provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of Senate Bill 375. Strategies to reduce GHG emissions include focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes. To achieve MTC's/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions.

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#### Local Regulations

##### *Contra Costa General Plan*

The Conservation Element of the current General Plan includes in the following goals, policies, and implementation measures that protect air resources in the County.

- **Goal 8-AA:** To meet Federal Air Quality Standards for all air pollutants.
- **Goal 8-AB:** To continue to support Federal, State and regional efforts to reduce air pollution in order to protect human and environmental health.
- **Goal 8-AC:** To restore air quality in the area to a more healthful level.
- **Goal 8-AD:** To reduce the percentage of Average Daily Traffic (ADT) trips occurring at peak hours.
  - **Policy 8-103:** When there is a finding that a proposed project might significantly affect air quality, appropriate mitigation measures shall be imposed.
  - **Policy 8-104:** Proposed projects shall be reviewed for their potential to generate hazardous air pollutants.
  - **Policy 8-107:** New housing in infill and peripheral areas which are adjacent to existing residential development shall be encouraged.
    - **Implementation Measure 8-dl:** Review major development applications for consistency with regional air quality plan assumptions.
    - **Implementation Measure 8-dm:** Review major development applications to ensure that buffer zones are provided between major air pollution sources (freeways, industry, etc.) or sources of hazardous pollutants and sensitive receptors such as hospitals, convalescent homes and residences.
    - **Implementation Measure 8-dn:** Consistent with the uses and ranges of density specified in this plan, particularly those in the Land Use Element and the Growth Management Element, encourage development that would reduce long distance commuting, positively affect the desired jobs/housing balance or promote alternative forms of transportation.

##### *Contra Costa County Ordinance Code*

The Contra Costa County Ordinance Code includes various directives to minimize adverse impacts to air quality in Contra Costa County. The Ordinance Code is organized by title, division, chapter, section, and in some cases articles. Most provisions related to air quality impacts are included in Title 7, *Building Regulations*, and Title 8, *Zoning*, as follows:

- **Chapter 74-2, Adoption:** Section 74-2.002, Adoption, incorporates the CCR Title 24, Part 11, California Green Building Standards Code.
- **Chapter 84-52, R-B Retail Business District:** Section 84-52.404, Uses-Requiring a land use permit, establishes that no odors created by an industrial or processing operation shall be perceptible at the property site boundaries.

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Additionally, Ordinance No. 2022-02, All-Electric Ordinance (New Construction), amends the 2019 California Energy Code to require the following building types to be all-electric:

- Residential (including single-family and multi-family buildings)
- Detached Accessory Dwelling Units
- Hotel
- Office
- Retail

### *2015 Climate Action Plan*

The 2015 Climate Action Plan (CAP) identifies how the County will achieve the AB 32 greenhouse gas emissions reduction target of 15 percent below baseline levels by the year 2020, in addition to supporting other public health, energy efficiency, water conservation, and air quality goals identified in the County’s General Plan and other policy documents.

#### 5.3.1.4 EXISTING CONDITIONS

##### San Francisco Bay Area Air Basin Conditions

California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The State is divided into 15 air basins. Contra Costa County is in the SFBAAB. The discussion below identifies the natural factors in the Air Basin that affect air pollution. Air pollutants of concern are criteria air pollutants and TACs. Federal, State, and local air districts have adopted laws and regulations intended to control and improve air quality.

The BAAQMD is the regional air quality agency for the SFBAAB, which comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions (BAAQMD 2017a).

### *Meteorology*

The SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys, and bays, which distort normal wind flow patterns. The Coast Range<sup>1</sup> splits in the Bay Area, creating a western coast gap, the Golden Gate, and an eastern coast gap, the Carquinez Strait, which allows air to flow in and out of the Bay Area and the Central Valley. The climate is dominated by the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a

<sup>1</sup> The Coast Range traverses California’s west coast from Humboldt County to Santa Barbara County.

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band of cold water off the California coast. The cool and moisture-laden air approaching the coast from the Pacific Ocean is further cooled by the presence of the cold-water band, resulting in condensation and the presence of fog and stratus clouds along the Northern California coast. In the winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Weak inversions coupled with moderate winds result in a low air pollution potential.

#### *Wind Patterns*

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais in Marin County, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San José when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno gap.

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon and the sea breeze deepens and increases in velocity while spreading inland. Under normal atmospheric conditions, the air in the lower atmosphere is warmer than the air above it. In the winter, the SFBAAB frequently experiences stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds. Winter stagnation episodes (i.e., conditions where there is little mixing, which occurs when there is a lack of or little wind) are characterized by nighttime drainage flows in coastal valleys. Drainage is a reversal of the usual daytime air-flow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the SFBAAB.

#### *Temperature*

Summertime temperatures in the Air Basin are determined in large part by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays. The temperature gradient near the ocean is also exaggerated, especially in summer, because of the upwelling of cold water from the ocean bottom along the coast. On summer afternoons, the temperatures at the coast can be 35 degrees Fahrenheit (°F) cooler than temperatures 15 to 20 miles inland; at night, this contrast usually decreases to less than 10°F. In the winter, the relationship of minimum and maximum temperatures is reversed. During the daytime the temperature contrast between the coast and inland areas is small, whereas at night the variation in temperature is large.

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#### *Precipitation*

The Air Basin is characterized by moderately wet winters and dry summers. Winter rains (November through March) account for about 75 percent of the average annual rainfall. The amount of annual precipitation can vary greatly from one part of the Air Basin to another, even within short distances. In general, total annual rainfall can reach 40 inches in the mountains, but it is often less than 16 inches in sheltered valleys.

During rainy periods, ventilation (rapid horizontal movement of air and injection of cleaner air) and vertical mixing (an upward and downward movement of air) are usually high, and thus pollution levels tend to be low (i.e., air pollutants are dispersed more readily into the atmosphere rather than accumulate under stagnant conditions). However, during the winter, frequent dry periods do occur, where mixing and ventilation are low and pollutant levels build up.

#### *Wind Circulation*

Low wind speed contributes to the buildup of air pollution because it allows more pollutants to be emitted into the air mass per unit of time. Light winds occur most frequently during periods of low sun (fall and winter, and early morning) and at night. These are also periods when air pollutant emissions from some sources are at their peak, namely, commuter traffic (early morning) and wood-burning appliances (nighttime). The problem can be compounded in valleys, when weak flows carry the pollutants up-valley during the day, and cold air drainage flows move the air mass down-valley at night. Such restricted movement of trapped air provides little opportunity for ventilation and leads to buildup of pollutants to potentially unhealthy levels.

#### *Inversions*

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the SFBAAB. Elevation inversions<sup>2</sup> are more common in the summer and fall, and radiation inversions<sup>3</sup> are more common during the winter. The highest air pollutant concentrations in the SFBAAB generally occur during inversions.

#### Attainment Status of the SFBAAB

The AQMP provides the framework for air quality basins to achieve attainment of the State and federal AAQS through the State Implementation Plan. Areas that meet AAQS are classified attainment areas, and areas that do not meet these standards are classified nonattainment areas. Severity classifications for O<sub>3</sub> range from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

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<sup>2</sup> When the air blows over elevated areas, it is heated as it is compressed into the side of the hill/mountain. When that warm air comes over the top, it is warmer than the cooler air of the valley.

<sup>3</sup> During the night, the ground cools off, radiating the heat to the sky.

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- **Attainment:** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- **Nonattainment/Transitional:** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SFBAAB is shown in Table 5.3-4, *Attainment Status of Criteria Pollutants in the San Francisco Bay Area Air Basin*. The SFBAAB is currently designated a nonattainment area for California and National O<sub>3</sub>, California and National PM<sub>2.5</sub>, and California PM<sub>10</sub> AAQS.

Table 5.3-4 Attainment Status of Criteria Air Pollutants in the San Francisco Bay Area Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal) <sup>1</sup>
PM <sub>10</sub>	Nonattainment	Unclassified/Attainment <sup>2</sup>
PM <sub>2.5</sub>	Nonattainment	Unclassified/Attainment
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment	Unclassified
SO <sub>2</sub>	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

Source: CARB 2022a.

<sup>1</sup> Severity classification current as of February 13, 2017.

<sup>2</sup> In December 2014, US EPA issued final area designations for the 2012 primary annual PM<sub>2.5</sub> National AAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

### Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the County are best documented by measurements taken by the BAAQMD. The BAAQMD has 24 permanent monitoring stations around the Bay Area. The nearest station is the Concord-2975 Treat Blvd Monitoring Station, which monitors O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>2.5</sub>. Data from this monitoring station is summarized in Table 5.3-5, *Ambient Air Quality Monitoring Summary*. The data show that the area regularly exceeds the State and federal one-hour, eight-hour O<sub>3</sub> standards and federal PM<sub>2.5</sub>, and occasionally exceeds the State and federal PM<sub>10</sub> in the last five recorded years.



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Table 5.3-5 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels				
	2016	2017	2018	2019	2020
<b>Ozone (O<sub>3</sub>)</b>					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	1	0	0	0	2
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	2	0	0	2	3
Max. 1-Hour Conc. (ppm)	0.095	0.082	0.077	0.092	0.108
Max. 8-Hour Conc. (ppm)	0.074	0.070	0.061	0.074	0.083
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.0336	0.0406	0.0383	0.0406	0.0339
<b>Coarse Particulates (PM<sub>10</sub>)</b>					
State 24-Hour > 50 µg/m <sup>3</sup> (days exceed threshold)	0	0	1	0	1
Federal 24-Hour > 150 µg/m <sup>3</sup> (days exceed threshold)	0	0	0	0	1
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	18.7	41.2	99.3	34.8	165.4
<b>Fine Particulates (PM<sub>2.5</sub>)</b>					
Federal 24-Hour > 35 µg/m <sup>3</sup> (days exceed threshold)	0	6	14	0	16
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	20.7	89.4	180.0	28.2	119.8

Source: CARB 2022c.  
ppm = parts per million; parts per billion, µg/m<sup>3</sup> = micrograms per cubic meter  
Data for O<sub>3</sub>, NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> obtained from the Concord-2975 Treat Blvd Monitoring Station.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. Disadvantaged communities identified by CalEnviroScreen 4.0 (i.e., environmental justice communities) may be disproportionately affected by and vulnerable to poor air quality.<sup>4, 5</sup> The CalEnviroScreen cumulative score is a cumulative measure of overall environmental justice burden based on 24 indicators, including pollution, social, and health indicators, four of which are specifically having to do with air quality or air pollution.

Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent,

<sup>4</sup> Under Senate Bill 535, disadvantaged communities are defined as the top 25% scoring areas from CalEnviroScreen along with other areas with high amounts of pollution and low populations.

<sup>5</sup> CalEnviroScreen 4.0. Indicator Maps can be found at: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

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as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

#### Existing Emissions

Table 5.3-6, *Existing EIR Study Area Regional Criteria Air Pollutant Emissions Inventory*, identifies the existing criteria air pollutant emissions inventory using emission rates for year 2019 (current conditions). The inventories are based on existing land uses in the County. The Year 2019 inventory represents the projected emissions currently generated by existing land uses using the baseline year 2019 emission factors for on-road vehicles and emissions from off-road construction equipment.

Table 5.3-6 County of Contra Costa Criteria Air Pollutant Emissions Inventory

Sector	Existing Criteria Air Pollutant Emissions (tons per year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	31	159	8	9
Energy <sup>2</sup>	8	138	11	11
Area –Off-Road Equipment <sup>3</sup>	2	<1	<1	<1
Area – Consumer Products <sup>4</sup>	444	–	–	–
Total	484	298	19	20

Sector	Existing Criteria Air Pollutant Emissions (lbs per day)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	179	916	48	54
Energy <sup>2</sup>	41	759	58	58
Area –Off-Road Equipment <sup>3</sup>	12	1	0	0
Area – Consumer Products <sup>4</sup>	2,432	–	–	–
Total	2,663	1,676	106	111

Notes: Conservative analysis as proposed project examines a higher housing unit amount in comparison to what has been identified in the Housing Element Update.

<sup>1</sup> EMFAC2021 V.1.0.2. Based on daily VMT provided by Fehr & Peers (see Appendix 5.3-1).

<sup>2</sup> Based on natural gas use provided by PG&E.

<sup>3</sup> OFFROAD2021 V.1.02.

<sup>4</sup> Based on CalEEMod **User's Guide methodology** to calculate VOC emissions from use of household consumer cleaning products.

### 5.3.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
- AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

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AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

5.3.2.1 BAY AREA AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD’s Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. These thresholds are designed to establish the level at which the BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA.

In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts; however, this later amendment regarding risk and hazards was the subject of the December 17, 2015, California Supreme Court decision (*California Building Industry Association v BAAQMD*), which clarified that CEQA does not require an evaluation of impacts of the environment on a project. The Supreme Court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The Supreme Court also held that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA. To account for these updates, the BAAQMD published a new version of the Guidelines dated May 2017, which includes revisions made to address the Supreme Court’s opinion. This latest version of the BAAQMD CEQA Guidelines was used to prepare the analysis in this EIR.

Criteria Air Pollutant Emissions and Precursors

*Regional Significance Criteria*

The BAAQMD’s regional significance criteria for projects that exceed the screening thresholds are shown in Table 5.3-7, *BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds*. Criteria for both the construction and operational phases of the project are shown.

Table 5.3-7 BAAQMD Regional (Mass Emissions) Criteria Air Pollutant Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase	
	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (Tons/year)
ROG	54	54	10
NO <sub>x</sub>	54	54	10
PM <sub>10</sub>	82 (Exhaust)	82	15
PM <sub>2.5</sub>	54 (Exhaust)	54	10
PM <sub>10</sub> and PM <sub>2.5</sub> Fugitive Dust	Best Management Practices	None	None

Source: BAAQMD 2017a.

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If projects exceed the emissions in Table 5.3-7, emissions would cumulatively contribute to the nonattainment status and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

However, for projects that exceed the emissions in Table 5.3-7, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above. The BAAQMD is the primary agencies responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the Air Basin and at the present time, it has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S21978* (Friant Ranch).

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. To achieve the health-based standards established by the EPA, the air districts prepare air quality management plans that details regional programs to attain the AAQS. However, if a project within the Plan Area exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time the attainment standards are met in the Air Basin.

#### *CO Hotspots*

Congested intersections have the potential to create elevated concentrations of CO, referred to as CO hotspots. The significance criteria for CO hotspots are based on the California AAQS for CO, which are 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology, the SFBAAB is in attainment of the California and National AAQS, and CO concentrations in the SFBAAB have steadily declined. Because CO concentrations have improved, the BAAQMD does not require a CO hotspot analysis if the following criteria are met (BAAQMD 2017a):

- The project is consistent with an applicable congestion management program established by the County Congestion Management Agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersection to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

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#### Community Risk and Hazards

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and PM<sub>2.5</sub> because emissions of these pollutants can have significant health impacts at the local level. The proposed project would generate TACs and PM<sub>2.5</sub> during construction activities that could elevate concentrations of air pollutants at the nearby sensitive receptors. The thresholds for construction-related local community risk and hazard impacts are the same as for project operations. The BAAQMD has adopted screening tables for air toxics evaluation during construction (BAAQMD 2010b). Construction-related TAC and PM<sub>2.5</sub> impacts should be addressed on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity to off-site and on-site receptors, as applicable (BAAQMD 2010b and BAAQMD 2017a).

#### *Community Risk and Hazards: Project*

Project-level emissions of TACs or PM<sub>2.5</sub> from individual sources that exceed any of the thresholds listed below are considered a potentially significant community health risk:

- An excess cancer risk level of more than 10 in one million, or a noncancer (i.e., chronic or acute) hazard index greater than 1.0 would be a significant project contribution.
- An incremental increase of greater than 0.3 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) annual average PM<sub>2.5</sub> from a single source would be a significant project contribution (BAAQMD 2017a).

#### *Community Risk and Hazards: Cumulative*

Cumulative sources represent the combined total risk values of each of the individual sources within the 1,000-foot evaluation zone. A project would have a cumulatively considerable impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius from the fence line of a source or location of a receptor, plus the contribution from the project, exceeds any of the following:

- An excess cancer risk level of more than 100 in one million or a chronic noncancer hazard index (from all local sources) greater than 10.0.
- 0.8  $\mu\text{g}/\text{m}^3$  annual average PM<sub>2.5</sub> (BAAQMD 2017a).

In February 2015, Office of Environmental Health Hazard Assessment (OEHHA) adopted new health risk assessment guidance that includes several efforts to be more protective of children's health. These updated procedures include the use of age sensitivity factors to account for the higher sensitivity of infants and young children to cancer causing chemicals, and age-specific breathing rate (OEHHA 2015).

#### *Odors*

BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds. Odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that no person shall discharge from any source whatsoever such quantities of air contaminants or other material

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which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health, or safety of any such persons or the public, or which cause, or has a natural tendency to cause, injury, or damage to business or property. Under BAAQMD's Rule 1-301. BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants (BAAQMD 2017a). For a plan-level analysis, BAAQMD requires:

- Identification of potential existing and planned location of odors sources.
- Policies to reduce odors.

### 5.3.3 Proposed Housing Element Policies

The following proposed Housing Element policy pertain to air quality:

- **Policy HE-P8.2:** Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

### 5.3.4 Environmental Impacts

#### 5.3.4.1 METHODOLOGY

##### *Emissions Sectors*

The air quality analysis was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with future development that would be accommodated by the proposed project. The BAAQMD has published the CEQA Air Quality Guidelines that provides local governments with guidance for analyzing and mitigating air quality impacts and was used in this analysis. The County's criteria air pollutant emissions inventory includes the following sectors:

- **Transportation.** Transportation emissions forecasts were modeled using CARB's EMFAC2021, version 1.0.1, web database. Model runs were based on Origin Destination (OD) Method VMT data provided by Fehr & Peers and calendar year 2019 (existing) and 2030 emission rates. Residential VMT was approximated based on VMT per service population for the Housing Element. VMT that have an origin or destination in the County use a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under SB 375. For accounting purposes, there are three types of trips:
  - **Internal-Internal.** Vehicle trips that originated and terminated within the County (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips and their emissions are attributed to the County.

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- **Internal-External/External-Internal.** Vehicle trips that either originated or terminated (but not both) in the County (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the County.
- **External-External.** Vehicle trips that neither originated nor terminated in the County. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted toward the County's VMT or emissions.
- **Energy:** Emissions associated with natural gas use for residential land uses in the County were modeled based on energy use gathered as part of the Climate Action Plan (CAP) Update (see Appendix 5.3-1). Forecasts are adjusted for increases in population in the County based on the with state actions energy forecast conducted for CAP (see Appendix 5.3-1).
- **Off-Road Equipment:** Emission rates from CARB's OFFROAD2021, version 1.0.2, web database was used to estimate criteria air pollutant emissions from lawn and garden equipment. OFFROAD is a database of equipment use and associated emissions for each county compiled by CARB. Annual emissions for each of the sectors were compiled using OFFROAD for the County of Contra Costa for year 2019 and forecasted based on the increase in population.
- **Area Sources:** Area sources are based on the emission factors from the CalEEMod Users Guide for emissions generated from use of consumer products and cleaning supplies.

### *Impacts of the Environment on a Project*

BAAQMD's CEQA Guidelines include methodology for jurisdictions wanting to evaluate the potential impacts from placing sensitive receptors proximate to major air pollutant sources. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered. Sources are defined as freeways, high volume roadways (with volume of 10,000 vehicles or more per day or 1,000 trucks per day) and permitted sources (BAAQMD 2017a).

Buildout under the proposed project could result in siting sensitive uses (e.g., residential) near sources of emissions (e.g., freeways, industrial uses, etc.). Developing new sensitive land uses near sources of emissions could expose persons that inhabit these sensitive land uses to potential air quality-related impacts. However, the purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478). Thus, CEQA does not require analysis of the potential environmental effects from siting sensitive receptors near existing sources, and this type of analysis is not provided below in the Impact Analysis section.

While it is generally not within the purview of CEQA to analyze impacts of the environment on a project, the proposed project includes policies which would ensure priority of the health of Contra Costa County residents through enforcement of County codes and incorporation of design features to minimize air quality impacts and to achieve appropriate health standards.

#### 5.3.4.2 DISCUSSION OF NO AIR QUALITY IMPACTS

All of the impacts in this chapter would be less than significant or potentially significant.

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#### 5.3.4.3 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

The applicable thresholds are identified in brackets after the impact statement.

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Impact 5.3-1: Implementation of the proposed project would not conflict with or obstruct implementation of the BAAQMD Clean Air Plan. [Threshold AQ-1]

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The following describes potential air quality impacts of consistency with the AQMP from the implementation of the proposed project. The General Plan plays an important role in local agency project review by linking local planning and individual projects to the *2017 Clean Air Plan*. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration at an early enough stage to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to clean air goals in the Bay Area.

BAAQMD requires a consistency evaluation of a plan with its current AQMP measures. BAAQMD considers project consistency with the AQMP in accordance with the following:

- Does the project support the primary goals of the AQMP?
- Does the project include applicable control measures from the AQMP?
- Does the project disrupt or hinder implementation of any AQMP control measures?
- Is the project VMT or vehicle trip increase less than or equal to the projected population increase.

#### Bay Area Air Quality Management District 2017 Clean Air Plan Goals

The primary goals of the 2017 Clean Air Plan are to attain the State and federal AAQS, reduce population exposure and protect public health in the Bay Area, reduce GHG emissions, and protect the climate. Furthermore, the 2017 Clean Air Plan lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal.

#### Attain Air Quality Standards

BAAQMD's 2017 Clean Air Plan strategy is based on regional population and employment projections in the Bay Area compiled by ABAG, which are based in part on cities' general plan land use designations. These demographic projections are incorporated into Plan Bay Area. Demographic trends incorporated into Plan Bay Area determine VMT in the Bay Area, which BAAQMD uses to forecast future air quality trends. The SFBAAB is currently designated a nonattainment area for O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> (State AAQS only).

The proposed project will induce population and housing growth due to the RHNA requirement to identify development sites for potential housing. While the land use amendments and zoning ordinance revisions would indirectly induce growth, the provisions of the housing units are much needed and mandated by the State (see Chapter 5.14, *Population and Housing*). Therefore, the population projections of the proposed project would be consistent with regional projections. The emissions resulting from potential future development associated with the proposed project are included in BAAQMD projections, and future development accommodated under the



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proposed project would not hinder BAAQMDs ability to attain the California or National AAQS. Accordingly, impacts would be less than significant.

#### Reduce Population Exposure and Protect Public Health

Buildout of the proposed project could result in new sources of TACs and PM<sub>2.5</sub>. Stationary sources, including smaller stationary sources (e.g., emergency generators and boilers) are subject to review by BAAQMD as part of the permitting process. Adherence to BAAQMD permitting regulations would ensure that new stationary sources of TACs do not expose populations to significant health risk. Mobile sources of air toxics (e.g., truck idling) are not regulated directly by BAAQMD. However, residential development associated with the proposed project would not generate truck traffic. Furthermore, individual development projects would be required to achieve the incremental risk thresholds established by BAAQMD. Thus, implementation of the proposed project would not result in introducing new sources of TACs that on a cumulative basis, could expose sensitive populations to significant health risk. Therefore, impacts would be less than significant.

#### Reduce GHG Emissions and Protect the Climate

Consistency of the proposed project with State, regional, and local plans adopted for the purpose of reducing GHG emissions are discussed under Impact 5.8-2 in Chapter 5.8, *Greenhouse Gas Emissions*, of this Draft EIR. Future development allowed by the proposed project would be required to adhere to statewide measures that have been adopted to achieve the GHG reduction targets of AB 32 and SB 32, and a trajectory consistent with the carbon neutrality targets of Executive Order B-55-18. The proposed is consistent with regional strategies for infill development identified in *Plan Bay Area 2050* and the Contra Costa County Climate Action Plan. While Impact GHG 5.8-1 identifies that the proposed project would generate a substantial increase in emissions, GHG 5.8-2 identifies that the proposed project is consistent with state, regional and local plans to reduce GHG emissions. Therefore, the proposed project is consistent with the goal of the 2017 *Clean Air Plan* to reduce GHG emissions and protect the climate, and the impact would be less than significant.

#### 2017 Clean Air Plan Control Measures

Table 5.3-8, *Control Measures from the BAAQMD 2017 Clean Air Plan*, identifies the control measures included in the 2017 *Clean Air Plan* that are required by BAAQMD to reduce emissions for a wide range of both stationary and mobile sources. As shown in Table 5.3-8, the proposed project would not conflict with the 2017 *Clean Air Plan* and would not hinder BAAQMD from implementing the control measures in the 2017 *Clean Air Plan*. Accordingly, impacts would be less than significant.

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Table 5.3-8 Control Measures from the BAAQMD 2017 Clean Air Plan

Type	Measure Number / Title	Consistency
Stationary Source Control Measures	<ul style="list-style-type: none"> <li>• SS 1 – Fluid Catalytic Cracking in Refineries</li> <li>• SS 2 – Equipment Leaks</li> <li>• SS 3 – Cooling Towers</li> <li>• SS 4 – Refinery Flares</li> <li>• SS 5 – Sulfur Recovery Units</li> <li>• SS 6 – Refinery Fuel Gas</li> <li>• SS 7 – Sulfuric Acid Plants</li> <li>• SS 8 – Sulfur Dioxide from Coke Calcining</li> <li>• SS 9 – Enhanced NSR Enforcement for Changes in Crude Slate</li> <li>• SS 10 – Petroleum Refining Emissions Tracking</li> <li>• SS 11 – Petroleum Refining Facility-Wide Emission Limits</li> <li>• SS 12 – Petroleum Refining Climate Impacts Limit</li> <li>• SS 13 – Oil and Gas Production, Processing and Storage</li> <li>• SS 14 – Methane from Capped Wells</li> <li>• SS 15 – Natural Gas Processing and Distribution</li> <li>• SS 16 – Basin-Wide Methane Strategy</li> <li>• SS 17 – GHG BACT Threshold</li> <li>• SS 18 – Basin-Wide Combustion Strategy</li> <li>• SS 19 – Portland Cement</li> <li>• SS 20 – Air Toxics Risk Cap and Reduction from Existing Facilities</li> <li>• SS 21 – New Source Review for Toxics</li> <li>• SS 22 – Stationary Gas Turbines</li> <li>• SS 23 – Biogas Flares</li> <li>• SS 24 – Sulfur Content Limits of Liquid Fuels</li> <li>• SS 25 – Coatings, Solvents, Lubricants, Sealants and Adhesives</li> <li>• SS 26 – Surface Prep and Cleaning Solvent</li> <li>• SS 27 – Digital Printing</li> <li>• SS 28 – LPG, Propane, Butane</li> <li>• SS 29 – Asphaltic Concrete</li> <li>• SS 30 – Residential Fan Type Furnaces</li> <li>• SS 31 – General Particulate Matter Emission Limitation</li> <li>• SS 32 – Emergency Backup Generators</li> <li>• SS 33 – Commercial Cooking Equipment</li> <li>• SS 34 – Wood Smoke</li> <li>• SS 35 – PM from Bulk Material Storage, Handling and Transport, Including Coke and Coal</li> <li>• SS 36 – PM from Trackout</li> <li>• SS 37 – PM from Asphalt Operations</li> <li>• SS 38 – Fugitive Dust</li> <li>• SS 39 – Enhanced Air Quality Monitoring</li> <li>• SS 40 – Odors</li> </ul>	<p>Stationary and area sources are regulated directly by BAAQMD; therefore, as the implementing agency, new stationary and area sources within the County would be required to comply with BAAQMDs regulations. BAAQMD routinely adopts/revises rules or regulations to implement the stationary source (SS) control measures to reduce stationary source emissions. Based on the new residential uses under the proposed project, implementation of the proposed project would not hinder the ability of BAAQMD to implement these SS control measures. Major stationary source are more commonly associated with industrial manufacturing or warehousing. However, BAAQMD and the County has existing regulations in place to ensure potential future development under the proposed project would not conflict with the applicable SS control measures. Non-residential land uses may generate small quantities of stationary source emissions during project operation (e.g., emergency generators, dry cleaners, and gasoline dispensing facilities); however, these small-quantity generators would require review by BAAQMD for permitted sources of air toxics, which would ensure consistency with the 2017 Clean Air Plan.</p> <p>The proposed project involves residential uses and would not include major stationary sources of emissions. Boilers and emergency generators for multi-family residential products <b>would be required to follow BAAQMD's</b> permitting requirements.</p>

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Table 5.3-8 Control Measures from the BAAQMD 2017 Clean Air Plan

Type	Measure Number / Title	Consistency
Transportation Control Measures	<ul style="list-style-type: none"> <li>• TR 1 – Clean Air Teleworking Initiative</li> <li>• TR 2 – Trip Reduction Programs</li> <li>• TR 3 – Local and Regional Bus Service</li> <li>• TR 4 – Local and Regional Rail Service</li> <li>• TR 5 – Transit Efficiency and Use</li> <li>• TR 6 – Freeway and Arterial Operations</li> <li>• TR 7 – Safe Routes to Schools and Safe Routes to Transit</li> <li>• TR 8 – Ridesharing, Last-Mile Connection</li> <li>• TR 9 – Bicycle and Pedestrian Access and Facilities</li> <li>• TR 10 – Land Use Strategies</li> <li>• TR 11 – Value Pricing</li> <li>• TR 12 – Smart Driving</li> <li>• TR 13 – Parking Policies</li> <li>• TR 14 – Cars and Light Trucks</li> <li>• TR 15 – Public Outreach and Education</li> <li>• TR 16 – Indirect Source Review</li> <li>• TR 17 – Planes</li> <li>• TR 18 – Goods Movement</li> <li>• TR 19 – Medium and Heavy Duty Trucks</li> <li>• TR 20 – Ocean Going Vessels</li> <li>• TR 21 – Commercial Harbor Craft</li> <li>• TR 22 – Construction, Freight and Farming Equipment</li> <li>• TR 23 – Lawn and Garden Equipment</li> </ul>	<p>Transportation (TR) control measures are strategies to reduce vehicle trips, vehicle use, VMT, vehicle idling, and traffic congestion for the purpose of reducing motor vehicle emissions. Although most of the TR control measures are implemented at the regional level—that is, by MTC or Caltrans—the 2017 Clean Air Plan relies on local communities to assist with implementation of some measures.</p> <p>The development under the proposed project would be reviewed based on current General Plan policies. The Transportation and Circulation Element contains the following goals, policies, and measures to expand the pedestrian and bicycle network:</p> <p>Goal 5-L: Roadway and Transit Goals To reduce greenhouse gas emissions from transportation sources through provision of transit, bicycle, and pedestrian facilities.</p> <p>Goal 5-J: Roadway and Transit Goals To reduce single-occupant auto commuting and encourage walking and bicycling.</p> <p>Measure 5-k: Circulation Safety, Convenience, and Efficiency</p> <p>Design a system of local and collector streets within a development to connect pedestrians and bicyclists with transit stops, activity centers and adjacent neighborhoods.</p> <p><i>Policy 5-38: Pedestrian Facilities and Bikeways</i></p> <p>Encourage adequate long term and routine maintenance of bikeway and walkway network facilities, including regular sweeping of bikeways and shared use pathways, utilizing private and/or local community resources when feasible.</p> <p>The following goals and policies also reduce vehicle travel in the County.</p> <p>Goal 5-F: Roadway and Transit Goals To reduce cumulative regional traffic impacts of development through participation in cooperative, multi-jurisdictional planning processes and forums.</p> <p><i>Policy 5-24: Alternative Transportation/Circulation Systems</i></p> <p>Use of alternative forms of transportation, such as transit, bike and pedestrian modes, shall be encouraged in order to provide basic accessibility to those without access to a personal automobile and to help minimize automobile congestion and air pollution.</p> <p><i>Policy 5-27: Alternative Transportation/Circulation Systems</i></p>

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Table 5.3-8 Control Measures from the BAAQMD 2017 Clean Air Plan

Type	Measure Number / Title	Consistency
Energy and Climate Control Measures	<ul style="list-style-type: none"> <li>• EN 1 – Decarbonize Electricity Production</li> <li>• EN 2 – Renewable Energy Decrease Electricity Demand</li> </ul>	<p>Rail transit facilities or additional high occupancy vehicle lanes proposed within a designated transit corridor shall be considered consistent with this General Plan.</p> <p>The energy and climate (EN) control measures are intended to reduce energy use as a means to reducing adverse air quality emissions.</p> <p>The development under the proposed project would be reviewed based on current General Plan policies. The Conservation Element contains the following goals, <b>policies, and measures that align with the County's goals to meet the State's carbon neutrality initiatives:</b></p> <p>Goal 8-AB: Air Resources Goals</p> <p>To continue to support Federal, State and regional efforts to reduce air pollution in order to protect human and environmental health.</p> <p><i>Policy 8-103: Air Resources Policies</i></p> <p>When there is a finding that a proposed project might significantly affect air quality, appropriate mitigation measures shall be imposed.</p> <p><i>Policy 8-106: Air Resources Policies</i></p> <p>Air quality planning efforts shall be coordinated with other local, regional and State agencies.</p> <p>Measure 8-dq: Intergovernmental Coordination</p> <p>Support efforts at the State and regional level to enact legislation providing for stricter controls on mobile, stationary and area sources of air pollutants.</p> <p>Furthermore, new developments accommodated under the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. On January 18, 2022, the County also adopted an All-Electric Ordinance requirement for new construction to amend the 2019 California Energy Code and requires residential (including single-family and multi-family buildings) to be all-electric. Therefore, implementation of the proposed project would not conflict with these EN control measures.</p>
Buildings Control Measures	<ul style="list-style-type: none"> <li>• BL 1 – Green Buildings</li> <li>• BL 2 – Decarbonize Buildings</li> <li>• BL 3 – Market-Based Solutions</li> <li>• BL 4 – Urban Heat Island Mitigation</li> </ul>	<p>The buildings (BL) control measures focus on working with local governments to facilitate adoption of best GHG emissions control practices and policies.</p> <p>The development under the proposed project would be reviewed based on current General Plan policies. The Conservation Element contains the following goals, policies, and measures to promote energy efficiency and sustainability:</p> <p>Goal 8-K: Renewable Energy Resources Goals</p> <p>To encourage the use of renewable resources where they are compatible with the maintenance of environmental quality.</p>

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Table 5.3-8 Control Measures from the BAAQMD 2017 Clean Air Plan

Type	Measure Number / Title	Consistency
		<p><i>Policy 8-52: Renewable Energy Resources Policies</i> Energy recovery projects, e.g. methane recovery from sewage (biomass), shall be encouraged, subject to adequate environmental protection.</p> <p><i>Policy 8-53: Renewable Energy Resources Policies</i> The County shall cooperate with PG&amp;E to retrofit existing homes with energy saving devices.</p> <p>In addition, as stated, new developments accommodated under the proposed project would be built to comply with the latest Building Energy Efficiency Standards and CALGreen standards. On January 18, 2022, the County also adopted an All-Electric Ordinance requirement for new construction to amend the 2019 California Energy Code and requires residential (including single-family and multi-family buildings) to be all-electric. Thus, the proposed project would not conflict with these BL control measures.</p>
Agriculture Control Measures	<ul style="list-style-type: none"> <li>• AG 1 – Agricultural Guidance and Leadership</li> <li>• AG 2 – Dairy Digesters</li> <li>• AG 3 – Enteric Fermentation</li> <li>• AG 4 – Livestock Waste</li> </ul>	<p>Agricultural practices in the Bay Area accounts for a small portion, roughly 1.5 percent, of the Bay Area GHG emissions inventory. The GHGs from agriculture include methane and nitrous oxide, in addition to carbon dioxide. While the Agriculture (AG) control measures target larger scale farming practices that are not proposed under the project, the type of urban farming (i.e., community gardens) associated with the proposed project would support reduced GHG emission by increasing the amount of food grown and consumed locally. Therefore, implementation of the proposed project would not conflict with these AG control measures.</p>
Natural and Working Lands Control Measures	<ul style="list-style-type: none"> <li>• NW 1 -- Carbon Sequestration in Rangelands</li> <li>• NW 2 – Urban Tree Planting</li> <li>• NW 3 – Carbon Sequestration in Wetlands</li> </ul>	<p>The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands.</p> <p>The development under the proposed project would be reviewed based on current General Plan policies. The Open Space and Conservation Element contains the following policies and measures to promote carbon sequestration:</p> <p><i>Policy 9-3: Overall Open Space Policies</i> Areas designated for open space shall not be considered as a reserve for urban land uses. In accordance with Measure C-1990, at least 65 percent of all land in the county shall be preserved for agriculture, open space, wetlands, parks, and non-urban uses.</p> <p><i>Policy 8-6: Vegetation and Wildlife Policies</i> Significant trees, natural vegetation, and wildlife populations generally shall be preserved.</p> <p><i>Policy 8-21: Vegetation and Wildlife Policies</i> The planting of native trees and shrubs shall be encouraged in order to preserve the visual integrity of the</p>

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Table 5.3-8 Control Measures from the BAAQMD 2017 Clean Air Plan

Type	Measure Number / Title	Consistency
		<p>landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are sustained in urban areas.</p> <p><i>Policy 8-78: Policies to Protect and Maintain Riparian Zones</i></p> <p>Where feasible, existing natural waterways shall be protected and preserved in their natural state, and channels which already are modified shall be restored. A natural waterway is defined as a waterway which can support its own environment of vegetation, fowl, fish and reptiles, and which appears natural.</p> <p><i>Policy 8-88: Policies for New Development Along Natural Watercourses</i></p> <p>New development which modifies or destroys riparian habitat because of needed flood control, shall be responsible for restoring and enhancing an equivalent amount of habitat within or near the project area.</p> <p>Measure 8-cp: Zoning and Code Revisions</p> <p>Review and revise the County ordinance code to provide for the protection and enhancement of watercourses and riparian vegetation, as outlined in the above policies (e.g. building setback requirements, regulations limiting the removal of trees and vegetation, etc.).</p>
Water Control Measures	<ul style="list-style-type: none"> <li>• WR 1 – Limit GHGs from publicly owned treatment works (POTWs)</li> <li>• WR 2 – Support Water Conservation</li> </ul>	<p>The 2017 Clean Air Plan includes measures to reduce water use.</p> <p>The development under the proposed project would be reviewed based on current General Plan policies. The Conservation Element contains the following goals and measures to increase plumbing water efficiency and reduce landscape water use:</p> <p>Goal 8-T: Water Resources Goals</p> <p>To conserve, enhance and manage water resources, protect their quality, and assure an adequate long-term supply of water for domestic, fishing, industrial and agricultural use.</p> <p>Measure 8-cq: Other Programs</p> <p>Develop a program that fosters the participation of public agencies, private organizations and individuals in the development of watershed management practices that reduce soil loss and excessive runoff (i.e. control of grazing in upper watersheds, timing of release of water from upstream dams, revegetation of upper watersheds), and that minimize the effect on downstream areas.</p>

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Table 5.3-8 Control Measures from the BAAQMD 2017 Clean Air Plan

Type	Measure Number / Title	Consistency
Super-GHG Control Measures	<ul style="list-style-type: none"> <li>• SL 1 – Short-Lived Climate Pollutants</li> <li>• SL 2 – Guidance for Local Planners</li> <li>• SL 3 – GHG Monitoring and Emissions Measurements Network</li> </ul>	<p>Super-GHGs include methane, black carbon and fluorinated gases. The compounds are sometimes referred to as short-lived climate pollutants because their lifetime in the atmosphere is generally fairly short. Measures to reduce super GHGs are addressed on a sector-by-sector basis in the 2017 Clean Air Plan.</p> <p><b>Through ongoing implementation of the County's CAP, the County will continue to reduce local GHG emissions, meet State, regional, and local reduction targets, which would ensure implementation of the proposed project would not conflict with these SL control measures.</b></p> <p>The development under the proposed project would be reviewed based on current General Plan policies. The Conservation Element contains the following goals, policies, and measures for encouraging use of renewable energy.</p> <p>Goal 8-K: Renewable Energy Resources Goals</p> <p>To encourage the use of renewable resources where they are compatible with the maintenance of environmental quality.</p> <p>Goal 8-L: Renewable Energy Resources Goals</p> <p>To reduce energy use in the County to avoid risks of air pollution and energy shortages which could prevent orderly development.</p> <p><i>Policy 8-52: Renewable Energy Resources Policies</i></p> <p>Energy recovery projects, e.g. methane recovery from sewage (biomass), shall be encouraged, subject to adequate environmental protection.</p> <p><i>Policy 8-53: Renewable Energy Resources Policies</i></p> <p>The County shall cooperate with PG&amp;E to retrofit existing homes with energy saving devices.</p>
Further Study Control Measures	<ul style="list-style-type: none"> <li>• FSM SS 1 – Internal Combustion Engines</li> <li>• FSM SS 2 – Boilers, Steam Generator and Process Heaters</li> <li>• FSM SS 3 – GHG Reductions from Non Cap-and Trade Sources</li> <li>• FSM SS 4 – Methane Exemptions from Wastewater Regulation</li> <li>• FSM SS 5 – Controlling start-up, shutdown, maintenance, and malfunction (SSMM) Emissions</li> <li>• FSM SS 6 – Carbon Pollution Fee</li> <li>• FSM SS 7 – Vanishing Oils and Rust Inhibitors</li> <li>• FSM SS 8 – Dryers, Ovens and Kilns</li> <li>• FSM SS 9 – Omnibus Rulemaking to Achieve Continuous Improvement</li> <li>• FSM BL 1 – Space Heating</li> <li>• FSM AG 1 – Wineries</li> </ul>	<p>The majority of the further study control measures apply to sources regulated directly by BAAQMD. Because BAAQMD is the implementing agency, new and existing sources of stationary and area sources in the project area would be required to comply with these additional further study control measures in the 2017 Clean Air Plan.</p>

Source: BAAQD 2017a.

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#### Regional Growth Projections for VMT and Population

Future potential development allowed by the proposed project would result in additional sources of criteria air pollutants. Growth accommodated by the proposed project could occur throughout the 2030 buildout. BAAQMDs approach to evaluating impacts from criteria air pollutants generated by a plan’s long-term growth is done by comparing population estimates to the VMT estimates. This is because BAAQMDs AQMP plans for growth in the SFBAAB are based on regional population projections identified by ABAG and growth in VMT identified by Contra Costa Transportation Authority. Changes in regional, community-wide emissions in the project area could affect the ability of BAAQMD to achieve the air quality goals in the AQMP. Therefore, air quality impacts for a plan-level analysis are based on consistency with the regional growth projections. Table 5.3-9, *Comparison of the Change in Population and VMT in the County of Contra Costa*, compares the projected increase in population with the projected increases in total VMT.

Table 5.3-9 Comparison of the Change in Population and VMT in the County of Contra Costa

Category	Existing	2030 With Project	Change from Existing	
			Change	%
Population	174,150	199,600	25,450	15%
Daily VMT <sup>1</sup>	3,276,401	3,653,776	377,375	12%
VMT/person	18.8	18.3	-0.5	-3%

Notes:

<sup>1</sup> Modeling of VMT is provided by Fehr and Peers is based on the Contra Costa County Transportation Authority’s Contra Costa Transportation Analysis Guidelines. VMT from passenger vehicles and trucks that have an origin or destination in the County using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB’s Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375).

As stated, BAAQMD’s AQMP requires that the VMT increase by less than or equal to the projected population increase from the proposed project (e.g., generate the same or less VMT per population). In addition, because the 2017 *Clean Air Plan* utilized growth projections based, in part, on cities’ general plan land use designations, the growth rate in VMT compared to service population is evaluated between buildout under the proposed project and buildout under the currently allowed under the Housing Element.

VMT estimates based on data provided by Fehr & Peers, were calculated for the County of Contra Costa. As shown in Table 5.3-9, implementation of the proposed project would result in a slight increase for daily VMT by 377,375 vehicle miles per day in the unincorporated County (about 12 percent increase) but lead to a lower VMT per capita than under existing conditions (approximately 0.5 percent lower decrease). Thus, the proposed project would be consistent with the goals of the 2017 *Clean Air Plan* and impacts would be less than significant.

**Level of Significance Before Mitigation:** Impact 5.3-1 would be less than significant.

#### Mitigation Measures

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.3-1 would be less than significant.



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Impact 5.3-2: Short-term construction activities associated with the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards. [Threshold AQ-2]

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This section analyzes potential impacts related to air quality that could occur from the buildout associated with the proposed project in combination with the regional growth in the SFBAAB. The SFBAAB is currently designated a nonattainment area for California and National O<sub>3</sub>, California and National PM<sub>2.5</sub>, and California PM<sub>10</sub> AAQS. At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMDs significance criteria and contribute to the State and federal nonattainment designations in the SFBAAB. Any project that produces a significant regional air quality impact in an area that is in nonattainment adds to the cumulative impact. As described in Impact 5.3-1, the proposed project would be consistent with the 2017 Clean Air Plan. However, the proposed project could generate a substantial increase in criteria air pollutant emissions from construction activities that could exceed the BAAQMD regional significance thresholds.

Construction

Construction activities would temporarily increase criteria air pollutant emissions within the SFBAAB. The primary source of NO<sub>x</sub> emissions is the operation of construction equipment. The primary sources of particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions are activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary sources of VOC emissions are the application of architectural coating and off-gas emissions associated with asphalt paving. A discussion of health impacts associated with air pollutant emissions generated by construction activities is included under “Air Pollutants of Concern” in Section 5.3.2.1 of this DEIR section.

Construction activities associated with the proposed project would occur over the forecast year, causing short-term emissions of criteria air pollutants. Information regarding specific development projects, soil types, and the locations of receptors would be needed in order to quantify the level of impact associated with construction activity. Due to the scale of development activity associated with buildout of proposed project, emissions would likely exceed the BAAQMD regional significance thresholds. In accordance with the BAAQMD methodology, emissions that exceed the regional significance thresholds would cumulatively contribute to the nonattainment designations of the SFBAAB. Emissions of VOC and NO<sub>x</sub> are precursors to the formation of O<sub>3</sub>. In addition, NO<sub>x</sub> is a precursor to the formation of particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>). Therefore, the proposed General Plan would cumulatively contribute to the nonattainment designations of the SFBAAB for O<sub>3</sub> and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>).

Future development under the proposed project would be subject to separate environmental review pursuant to CEQA in order to identify and mitigate potential air quality impacts. Subsequent environmental review of development projects would be required to assess potential impacts under BAAQMDs project-level thresholds based on site-specific construction phasing and buildout characteristics. For the proposed project, which is a broad-based policy plan, it is not possible to determine whether the scale and phasing of individual projects would exceed the BAAQMD's short-term regional or localized construction emissions thresholds. As a result, construction activities associated with implementation of the proposed project could potentially violate an air quality standard or contribute substantially to an existing or projected air quality violation.

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Existing federal, State, and local regulations, and the policies and programs of the proposed project described throughout this section protect local and regional air quality. Continued compliance with these regulations would reduce construction-related impacts. In addition, there are certain proposed project policies that would reduce construction emissions. The following Housing Element policy would serve to minimize potential adverse impacts related to particulate matter air pollution:

**Policy HE-P8.2.** Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

While these existing regulations, policies, and programs have the potential to reduce emissions, potential future development projects accommodated under the proposed project (individually or cumulatively) could still exceed the BAAQMD significance thresholds for construction. Therefore, implementation of the proposed project could result in significant construction-related regional air impacts.

***Level of Significance Before Mitigation:*** Impact 5.3-2 would be potentially significant.

#### *Mitigation Measures*

AQ-1 Prior to discretionary approval by the unincorporated County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the County Department of Conservation and Development for review and approval. The evaluation shall be prepared in conformance with the Bay Area Air Quality Management District (BAAQMD) methodology for assessing air quality impacts identified in their *CEQA Air Quality Guidelines*. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the Department of Conservation and Development shall require feasible mitigation measures to reduce air quality emissions. Potential measures may include:

- Require implementation of the BAAQMD Best Management Practices for fugitive dust control, such as:
  - Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
  - Apply water twice daily or as often as necessary to control dust or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.

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- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (e.g., dirt, sand).
- Limit vehicle traffic speeds on unpaved roads to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.
- Emissions control measures such as:
  - Using construction equipment rated by the United States Environmental Protection Agency as having Tier 4 interim or higher exhaust emission limits.
  - Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards.
  - Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
  - Using zero- or low-VOC paints for coating of architectural surfaces whenever possible.

Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) submitted to the County and shall be verified by the Department of Conservation and Development.

***Level of Significance After Mitigation:*** Impact 5.3-2 would remain significant and unavoidable.

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Impact 5.3-3: Buildout of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards. [Thresholds AQ-2]

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This section analyzes potential impacts related to air quality that could occur from the buildout associated with the proposed project in combination with the regional growth in the SFBAAB. The SFBAAB is currently designated a nonattainment area for California and National O<sub>3</sub>, California and National PM<sub>2.5</sub>, and California PM<sub>10</sub> AAQS. At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMDs significance criteria and contribute to the State and federal nonattainment designations in the SFBAAB. Any project that produces a significant regional air quality impact in an area that is in nonattainment adds to the

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cumulative impact. As described in Impact 5.3-1, the proposed project would be consistent with the 2017 Clean Air Plan. However, the proposed project could generate a substantial increase in criteria air pollutant emissions from operational activities that could exceed the BAAQMD regional significance thresholds.

#### Operation

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, NO, PM<sub>10</sub> and PM<sub>2.5</sub>. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. According to BAAQMD's CEQA Guidelines, long-range plans, such as the proposed project, present unique challenges for assessing impacts. Due to the SFBAAB's nonattainment status for ozone and PM and the cumulative impacts of growth on air quality, these plans almost always have significant, unavoidable adverse air quality impacts.

Implementation and adoption of the proposed project would result in an increase in development intensity in the County. Buildout of the proposed project would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., aerosols and landscaping equipment). Mobile-source criteria air pollutant emissions are based on the traffic analysis conducted by Fehr and Peers (see Appendix 5.16-1, *Transportation Data*, of this Draft EIR). The emissions forecast for the County under the proposed project compared to existing conditions is shown in Table 5.3-10, *County of Contra Costa Criteria Air Pollutant Emissions Forecast*. As shown in Table 5.3-10, implementation of the proposed project would result in an increase in criteria air pollutant emissions from existing conditions. This increase is based on the difference between existing land uses and land uses associated with development allowed under the proposed project, as well as an estimate of population and employment in the County for the year 2030.

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Table 5.3-10 County of Contra Costa Criteria Air Pollutant Emissions Forecast

Sectors	Criteria Air Pollutant Emissions (Tons per year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing Land Uses (Year 2030)</b>				
Transportation <sup>1</sup>	11	49	1	8
Energy <sup>2</sup>	8	138	11	11
Area –Off-Road Equipment <sup>3</sup>	2	0	0	0
Area – Consumer Products <sup>4</sup>	444	–	–	–
Total Average (Tons/year)	464	188	12	19
<b>Proposed Project Land Uses (Year 2030)</b>				
Transportation <sup>1</sup>	12	54	1	9
Energy <sup>2</sup>	8	154	12	12
Area –Off-Road Equipment <sup>3</sup>	2	0	0	0
Area – Consumer Products <sup>4</sup>	543	–	–	–
Total Average (Tons/year)	566	209	13	21
Change from Existing Land Uses	102	21	1	2
BAAQMD Annual Project-Level Threshold	10	10	15	10
Exceeds Annual Threshold	Yes	Yes	No	No
Sectors	Criteria Air Pollutant Emissions (lbs per day)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Existing Land Uses (Year 2030)</b>				
Transportation <sup>1</sup>	62	281	7	48
Energy <sup>2</sup>	41	759	58	58
Area –Off-Road Equipment <sup>3</sup>	12	1	0	0
Area – Consumer Products <sup>4</sup>	2,432	–	–	–
Total Average (Tons/year)	2,546	1,041	65	106
<b>Proposed Project Land Uses (Year 2030)</b>				
Transportation <sup>1</sup>	68	312	8	53
Energy <sup>2</sup>	46	846	64	64
Area –Off-Road Equipment <sup>3</sup>	13	2	0	0
Area – Consumer Products <sup>4</sup>	2,976	–	–	–
Total Average (Tons/year)	3,104	1,160	72	118
Change from Existing Land Uses	558	119	7	12
BAAQMD Annual Project-Level Threshold	54	54	82	54
Exceeds Annual Threshold	Yes	Yes	No	No

Notes: Emissions may not total to 100 percent due to rounding.

<sup>1</sup> EMFAC2021 Version 1.0.2 using 2030 emission rates. Based on on-road transportation VMT provided by Fehr & Peers (see Appendix 5.3-1).

<sup>2</sup> Building electricity and natural gas are based on data provided by the County for the GHG emissions inventory conducted for their CAP from PG&E and MCE. The electricity rates were adjusted to reflect the increase in dwelling units and employment within the County.

<sup>3</sup> OFFROAD2021 v.1.0.2.

<sup>4</sup> Based on CalEEMod 2022 User's Guide methodology to calculate VOC emissions from use of household consumer cleaning products.

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As shown in Table 5.3-10, buildout of the proposed project would generate a substantial increase in criteria air pollutant emission for VOC and NO<sub>x</sub> that exceeds the BAAQMD regional significance thresholds, but not for PM<sub>10</sub> and PM<sub>2.5</sub>. Compliance with applicable policies and programs would contribute towards minimizing long-term emissions. However, implementation of the proposed project would still exceed the BAAQMD significance thresholds for operation. Therefore, implementation of the proposed project could result in significant long-term regional air quality impacts.

***Level of Significance Before Mitigation:*** Impact 5.3-3 would be potentially significant.

#### *Mitigation Measures*

AQ 2            Prior to discretionary approval by the County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operation-phase-related air quality impacts to the Department of Conservation and Development for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology in assessing air quality impacts identified in their *CEQA Air Quality Guidelines*. If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the Department of Conservation and Development shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.
- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 sec. 2485).
- Provide changing/shower facilities as specified in the Nonresidential Voluntary Measures of CALGreen.
- Provide bicycle parking facilities per the Nonresidential Voluntary Measures and Residential Voluntary Measures of CALGreen.

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- Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles per the Nonresidential Voluntary Measures of CALGreen.
- Provide facilities to support electric charging stations per the Nonresidential Voluntary Measures and Residential Voluntary Measures of CALGreen.
- Applicant-provided appliances shall be Energy Star–certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star–certified or equivalent appliances shall be verified by the County during plan check.
- New residential construction, including detached accessory dwelling units, shall comply be all-electric as required by County Ordinance No. 2022-02.

**Level of Significance After Mitigation:** Impact 5.3-3 would remain significant and unavoidable.

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Impact 5.3-4: Construction activities associated with the proposed project could expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]

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Implementation of the proposed project would cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction Community Risk and Hazards

Future construction under the proposed project would temporarily elevate concentrations of TACs and DPM in the vicinity of sensitive land uses during construction activities. Since the details regarding future construction activities are not known at this time, due to this analysis being conducted at a GPU Program level—including phasing of future individual projects, construction duration and phasing, and preliminary construction equipment—construction emissions are evaluated qualitatively in accordance with BAAQMD’s plan-level guidance. Subsequent environmental review of future development projects would be required to assess potential impacts under BAAQMD’s project-level thresholds. However, construction emissions associated with the proposed project could exceed BAAQMD’s project level and cumulative significance thresholds for community risk and hazards. Therefore, construction-related health risk impacts associated with the proposed project are considered significant.

**Level of Significance Before Mitigation:** Impact 5.3-4 would be potentially significant.

Mitigation Measures

AQ-3 Applicants for construction within 1,000 feet of residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in the unincorporated County, as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the County Department of Conservation and Development prior to future discretionary project approval. The HRA shall

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be prepared in accordance with policies and procedures of the Office of Environmental Health Hazard Assessment (OEHHA) and the BAAQMD. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM<sub>2.5</sub> concentrations exceed 0.3 µg/m<sup>3</sup>, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include, but are not limited to:

- Use of construction equipment rated as US EPA Tier 4 Interim for equipment of 50 horsepower or more.
- Use of construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more.

Measures identified in the HRA shall be included in the environmental document and/or incorporated into the site development plan as a component of the proposed project. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the Department of Conservation and Development clearly show incorporation of all applicable mitigation measures.

**Level of Significance After Mitigation:** Impact 5.3-4 would be less than significant. Mitigation Measure AQ-3 would ensure that discretionary development projects with construction proximate to sensitive receptors achieve the BAAQMD significance criteria of one million (10E-06) cancer risk, PM<sub>2.5</sub> concentrations exceed 0.3 µg/m<sup>3</sup>, or the noncancer hazard index exceeds 1.0 by requiring use of newer, lower emitting construction equipment, and would not expose sensitive receptors to substantial pollutant concentrations.

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Impact 5.3-5: Operational-phase emissions associated with the proposed project would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-3]

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Implementation of the proposed project would cause or contribute significantly to elevated pollutant concentration levels such that it would expose sensitive receptors to elevated pollutant concentrations. Unlike regional emissions, localized emissions are typically evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects. Residential uses are not land uses identified by BAAQMD that generate TACs or localized PM<sub>2.5</sub>; and therefore, impacts are less than significant. However, operation of new land uses consistent with the proposed project could generate new sources of criteria air pollutants and TACs in the County associated with CO hotspots. The following describes potential localized operational air quality impacts from implementation of the proposed project.



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CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO, called hotspots. These pockets have the potential to exceed the State 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. Since CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

The Contra Costa Transportation Authority CMP must be consistent with the ABAG/MTC's Plan Bay Area, which is updated periodically. An overarching goal of the Plan Bay Area 2050 is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle VMT and associated GHG emissions reductions.

The proposed project would be consistent with the overall goals of the Plan Bay Area 2050. Additionally, the proposed project would not hinder the capital improvements outlined in the CMP. Thus, the proposed project would not conflict with the Contra Costa Transportation Authority CMP. Furthermore, under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact (BAAQMD 2017a). The proposed project would not increase traffic volumes at affected intersections by more than BAAQMD screening criteria of 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Therefore, overall, the proposed project would not have the potential to substantially increase CO hotspots at intersections in the County and vicinity. Overall, these components of the proposed project would contribute to reducing congestion and associated emissions. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

**Level of Significance Before Mitigation:** Impact 5.3-5 would be less than significant.

*Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.3-5 would be less than significant.

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Impact 5.3-6: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. [Threshold AQ-4]

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Construction-Related Odors

During construction activities of future developments in the County, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the

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immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern, and impacts would be less than significant.

#### Operational-Related Odors

Buildout permitted under the proposed project would not include odor-generating uses, such as composting, greenwaste, and recycling operations; food processing; and painting/coating operations, because these are types of uses are often found in the commercial and/or industrial areas. Increase in residential uses would not generate substantial odors that would affect a substantial number of people. During operation, residences could generate odors from cooking. However, odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance. Compliance with BAAQMD Regulation 7 would ensure that odor impacts associated with the proposed project are minimized to less than significant.

***Level of Significance Before Mitigation:*** Impact 5.3-6 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.3-6 would be less than significant.

### 5.3.5 Cumulative Impacts

#### Construction

The cumulative setting for air quality is the Air Basin. The BAAQMD is designated nonattainment for O<sub>3</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> under the California and/or National AAQS. Construction of cumulative projects would further degrade the regional and local air quality. Air quality would be temporarily impacted during construction activities. Implementation of mitigation measures for related projects would reduce cumulative impacts. However, project-related construction emissions could still potentially exceed the BAAQMD significance thresholds on a project and cumulative basis. Consequently, the proposed project's contribution to cumulative air quality impacts would be cumulatively considerable and would therefore be significant.

#### Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by BAAQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Operation of the proposed project would result in emissions in excess of the BAAQMD regional emissions thresholds for long-term operation. Therefore, the proposed project's air pollutant emissions would be cumulatively considerable and therefore significant.

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### 5.3.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.3-1, 5.3-5, and 5.3-6.

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.3-2: Short-term construction activities associated with the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.
- Impact 5.3-3: Buildout of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.
- Impact 5.3-4: Construction activities associated with the proposed project could expose sensitive receptors to substantial pollutant concentrations.

### 5.3.7 Mitigation Measures

#### Impact 5.3-2

##### AQ-1

Prior to discretionary approval by the unincorporated County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project construction-related air quality impacts to the County Department of Conservation and Development for review and approval. The evaluation shall be prepared in conformance with the Bay Area Air Quality Management District (BAAQMD) methodology for assessing air quality impacts identified in their *CEQA Air Quality Guidelines*. If construction-related criteria air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the Department of Conservation and Development shall require feasible mitigation measures to reduce air quality emissions. Potential measures may include:

- Require implementation of the BAAQMD Best Management Practices for fugitive dust control, such as:
  - Water all active construction areas at least twice daily or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
  - Apply water twice daily or as often as necessary to control dust or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.

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- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least 2 feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
  - Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
  - Hydro-seed or apply non-toxic soil stabilizers to inactive construction areas.
  - Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (e.g., dirt, sand).
  - Limit vehicle traffic speeds on unpaved roads to 15 mph.
  - Replant vegetation in disturbed areas as quickly as possible.
  - Install sandbags or other erosion control measures to prevent silt runoff from public roadways.
- Emissions control measures such as:
- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 4 interim or higher exhaust emission limits.
  - Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards.
  - Limiting nonessential idling of construction equipment to no more than five consecutive minutes.
  - Using zero- or low-VOC paints for coating of architectural surfaces whenever possible.

Measures shall be incorporated into appropriate construction documents (e.g., construction management plans) submitted to the County and shall be verified by the Department of Conservation and Development.

#### Impact 5.3-3

##### AQ 2

Prior to discretionary approval by the County for development projects subject to CEQA (California Environmental Quality Act) review (i.e., nonexempt projects), future project applicants shall prepare and submit a technical assessment evaluating potential project operation-phase-related air quality impacts to the Department of Conservation and Development for review and approval. The evaluation shall be prepared in conformance with Bay Area Air Quality Management District (BAAQMD) methodology in assessing air quality impacts identified in their *CEQA Air Quality Guidelines*. If operation-related air pollutants are determined to have the potential to exceed the BAAQMD-adopted thresholds of significance, the Department of Conservation and Development shall require that applicants for new

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development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions could include, but are not limited to the following:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.
- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with California Air Resources Board Rule 2845 (13 CCR Chapter 10 sec. 2485).
- Provide changing/shower facilities as specified in the Nonresidential Voluntary Measures of CALGreen.
- Provide bicycle parking facilities per the Nonresidential Voluntary Measures and Residential Voluntary Measures of CALGreen.
- Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles per the Nonresidential Voluntary Measures of CALGreen.
- Provide facilities to support electric charging stations per the Nonresidential Voluntary Measures and Residential Voluntary Measures of CALGreen.
- Applicant-provided appliances shall be Energy Star–certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star–certified or equivalent appliances shall be verified by the County during plan check.
- New residential construction, including detached accessory dwelling units, shall comply be all-electric as required by County Ordinance No. 2022-02.

Impact 5.3-4

AQ-3

Applicants for construction within 1,000 feet of residential and other sensitive land use projects (e.g., hospitals, nursing homes, day care centers) in the unincorporated County, as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the County Department of Conservation and Development prior to future discretionary project approval. The HRA shall be prepared in accordance with policies and procedures of the Office of Environmental

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Health Hazard Assessment (OEHHA) and the BAAQMD. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children ages 0 to 16 years. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E-06), PM<sub>2.5</sub> concentrations exceed 0.3 µg/m<sup>3</sup>, or the appropriate noncancer hazard index exceeds 1.0, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below ten in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures to reduce risk may include, but are not limited to:

- Use of construction equipment rated as US EPA Tier 4 Interim for equipment of 50 horsepower or more.
- Use of construction equipment fitted with Level 3 Diesel Particulate Filters for all equipment of 50 horsepower or more.

Measures identified in the HRA shall be included in the environmental document and/or incorporated into the site development plan as a component of the proposed project. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the Department of Conservation and Development clearly show incorporation of all applicable mitigation measures.

#### 5.3.8 Level of Significance After Mitigation

##### Impact 5.3-2

Buildout in accordance with the proposed project would generate short-term emissions that would exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SFBAAB Mitigation Measure AQ-1 would reduce construction-related air pollutant emissions to the extent feasible. However, individual projects accommodated under the proposed project may exceed the BAAQMD regional significance thresholds. Therefore, Impact 5.3-2 would remain ***significant and unavoidable***.

##### Impact 5.3-3

Buildout in accordance with the proposed project would generate long-term emissions that would exceed BAAQMD's regional significance thresholds and cumulatively contribute to the nonattainment designations of the SFBAAB. Mitigation Measure AQ-2 would reduce air pollutant emissions to the extent feasible. However, Impact 5.3-3 would remain ***significant and unavoidable***.

Contributing to the nonattainment status would also contribute to elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants.

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It is speculative for this broad-based policy plan to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions, or how many additional individuals in the air basin would be affected by the health effects cited above.

This EIR quantifies the increase in criteria air pollutants emissions in the unincorporated County. However, at a programmatic level analysis, it is not feasible to quantify the increase in TACs from stationary sources associated with the proposed project or meaningfully correlate how regional criteria air pollutant emissions above the BAAQMD significance thresholds correlate with basinwide health impacts.

To determine cancer and noncancer health risk, the location, velocity of emissions, meteorology and topography of the area, and locations of receptors are equally important as model parameters as the quantity of TAC emissions. The white paper in Appendix C “We Can Model Regional Emissions, But Are the Results Meaningful for CEQA” describe several of the challenges of quantifying local effects—particularly health risks—for large-scale, regional projects, and these are applicable to both criteria air pollutants and TACs. Similarly, the two amicus briefs filed by the air districts on the Friant Ranch case (see Appendix 5.3-1) describe two positions regarding CEQA requirements, modeling feasibility, variables, and reliability of results for determining specific health risks associated with criteria air pollutants. The discussions also include the distinction between criteria air pollutant emissions and TACs with respect to health risks. The following summarizes major points about the infeasibility of assessing health risks of criteria air pollutant emissions and TACs associated with implementation of a general plan.

To achieve and maintain air quality standards, the BAAQMD has established numerical emission indicators of significance for regional and localized air quality impacts for both construction and operational phases of a local plan or project. The BAAQMD has established the thresholds based on “scientific and factual data that is contained in the federal and state Clean Air Acts” and recommends “that these thresholds be used by lead agencies in making a determination of significance.” The numerical emission indicators are based on the recognition that the air basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health. The thresholds represent the maximum emissions from a plan or project that are expected not to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard. By analyzing the plan’s emissions against the thresholds, an EIR assesses whether these emissions directly contribute to any regional or local exceedances of the applicable ambient air quality standards and exposure levels.

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BAAQMD currently does not have methodologies that would provide the County with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions.<sup>6</sup> For criteria air pollutants, exceedance of the regional significance thresholds cannot be used to correlate a project to quantifiable health impacts unless emissions are sufficiently high to use a regional model. BAAQMD has not provided methodology to assess the specific correlation between mass emissions generated and their effect on health (see Appendix C: San Joaquin Valley Air Pollution Control District's amicus brief, and South Coast AQMD's amicus brief).

Ozone concentrations depend on a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of particulate matter (PM) and ozone can occur far from sources as a result of regional transport due to wind and topography (e.g., low-level jet stream). Photochemical modeling depends on all emission sources in the entire domain (i.e., modeling grid). Low resolution and spatial averaging produce "noise" and modeling errors that usually exceed individual source contributions. Because of the complexities of predicting ground-level ozone concentrations in relation to the National Ambient Air Quality Standards (AAQS) and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds.

Current models used in CEQA air quality analyses are designed to estimate potential project construction and operation emissions for defined projects. The estimated emissions are compared to significance thresholds, which are keyed to reducing emissions to levels that will not interfere with the region's ability to attain the health-based standards. This serves to protect public health in the overall region, but there is currently no CEQA methodology to determine the impact of emissions (e.g., pounds per day) on future concentration levels (e.g., parts per million or micrograms per cubic meter) in specific geographic areas. CEQA thresholds, therefore, are not specifically tied to potential health outcomes in the region.

The EIR must provide an analysis that is understandable for decision making and public disclosure. Regional-scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation. Additionally, this type of analysis is not feasible at a general plan level because the location of emissions sources and quantity of emissions are not known. However, because cumulative development within the County would exceed the regional significance thresholds, the proposed project could contribute to an increase in health effects in the basin until the attainment standards are met in the Air Basin.

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<sup>6</sup> In April 2019, the Sacramento Metropolitan Air Quality Management District (SMAQMD) published an Interim Recommendation on implementing *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502 ("Friant Ranch") in the review and analysis of proposed projects under CEQA in Sacramento County. Consistent with the expert opinions submitted to the court in Friant Ranch by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and South Coast AQMD, the SMAQMD guidance confirms the absence of an acceptable or reliable quantitative methodology that would correlate the expected criteria air pollutant emissions of projects to likely health consequences for people from project-generated criteria air pollutant emissions. The SMAQMD guidance explains that while it is in the process of developing a methodology to assess these impacts, lead agencies should follow the Friant Court's advice to explain in meaningful detail why this analysis is not yet feasible. Since this interim memorandum SMAQMD has provided methodology to address health impacts. However, a similar analysis is not available for projects within the Bay Area.



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### Impact 5.3-4

Mitigation Measure AQ-3 would reduce require preparation of a construction health risk assessment (HRA) that would identify measures that would reduce DPM and PM<sub>2.5</sub> emissions below the BAAQMD significance thresholds of one million (10E-06) cancer risk, PM<sub>2.5</sub> concentrations exceed 0.3 µg/m<sup>3</sup>, or the noncancer hazard index exceeds 1.0 by requiring use of newer, lower emitting construction equipment, and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, Impact 5.3-4 would be less than significant with mitigation incorporated.

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### 5.4 BIOLOGICAL RESOURCES

This section analyzes impacts that could occur to biological resources due to buildout of the proposed project in the County and provides appropriate mitigation measures to reduce or avoid these impacts.

#### 5.4.1 Environmental Setting

##### 5.4.1.1 REGULATORY BACKGROUND

###### Federal and State Regulations

###### *Endangered Species Act*

The Federal Endangered Species Act (FESA) of 1973, as amended, protects and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. “Take” of endangered species is prohibited under Section 9 of the FESA. “Take” means to “harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” Section 7 of the FESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the FESA requires that critical habitat be designated by the USFWS “to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened.” This provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the FESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans (HCPs) for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

###### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States’ commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

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#### *Clean Water Act, Section 404*

The United States Army Corps of Engineers (Corps) regulates discharge of dredged or fill material into “waters of the United States.”<sup>1</sup> Any filling or dredging within waters of the United States requires a permit, which entails assessment of potential adverse impacts to Corps wetlands and jurisdictional waters and any mitigation measures that the Corps requires. Section 7 consultation with USFWS may be required for impacts to a federally listed species. If cultural resources may be present, Section 106 review may also be required. When a Section 404 permit is required, a Section 401 Water Quality Certification is also required from the Regional Water Quality Control Board (RWQCB).

#### *Clean Water Act, Section 401 and 402*

Section 401(a)(1) of the CWA specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal permitting agency with a certification, issued by the state in which the discharge originates, that any such discharge will comply with the applicable provisions of the CWA. In California, the applicable RWQCB must certify that the project will comply with water quality standards. Permits requiring Section 401 certification include Corps Section 404 permits and National Pollutant Discharge Elimination System (NPDES) permits issued by the Environmental Protection Agency (EPA) under Section 402 of the CWA. NPDES permits are issued by the applicable RWQCB. The County is Region 2 (San Francisco Bay) and Region 5 (Central Valley).

#### *California Fish and Game Code, Section 1602*

Section 1602 of the California Fish and Game Code requires a project proponent to notify the California Department of Fish and Wildlife (CDFW) of any proposed alteration of streambeds, rivers, and lakes. The intent is to protect habitats that are important to fish and wildlife. CDFW may review and place conditions on the project, as part of a Streambed Alteration Agreement (SAA), that address potentially significant adverse impacts within CDFW’s jurisdictional limits.

#### *California Endangered Species Act*

The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA and is administered by CDFW. Its intent is to prohibit take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through a Section 2081 Incidental Take Permit or memorandum of

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<sup>1</sup> “Waters of the United States,” as applied to the jurisdictional limits of the Corps under the Clean Water Act, includes all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the tide; all interstate waters, including interstate wetlands; and all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds whose use, degradation, or destruction could affect interstate or foreign commerce; water impoundments; tributaries of waters; territorial seas; and wetlands adjacent to waters. The terminology used by Section 404 of the Clean Water Act includes “navigable waters,” which is defined at Section 502(7) of the act as “waters of the United States, including the territorial seas.”

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understanding (MOU). In addition, some sensitive mammals and birds are protected by the state as “fully protected species.” California “species of special concern” are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW’s California Natural Diversity Database (CNDDDB), which maintains a record of known and recorded occurrences of sensitive species. Informally-listed taxa are not protected per se, but warrant consideration in the preparation of biological resources assessments.

#### Local Regulations

##### *Contra Costa General Plan*

The following policies, pertaining to biological resources, are found in the Conservation Element:

- **Policy 8-6:** Significant trees, natural vegetation, and wildlife populations generally shall be preserved.
- **Policy 8-7:** Important wildlife habitats which would be disturbed by major development shall be preserved, and corridors for wildlife migration between undeveloped lands shall be retained.
- **Policy 8-8:** Significant ecological resource areas in the County shall be identified and designated for compatible low-intensity land uses. Setback zones shall be established around the resources areas to assist in their protection.
- **Policy 8-9:** Areas determined to contain significant ecological resources, particularly those containing endangered species, shall be maintained in their natural state and carefully regulated to the maximum legal extent. Acquisition of the most ecologically sensitive properties within the County by appropriate agencies shall be encouraged.
- **Policy 8-10:** Any development located or proposed within significant ecological resource areas shall ensure that the resource is protected.
- **Policy 8-11:** The County shall utilize performance criteria and standards which seek to regulate uses in and adjacent to significant ecological resource areas.
- **Policy 8-12:** Natural woodlands shall be preserved to the maximum extent possible in the course of land development.
- **Policy 8-13:** The critical ecological and scenic characteristics of rangelands, woodlands, and wildlands shall be recognized and protected.
- **Policy 8-14:** Development on hillsides shall be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion. Development on open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions.
- **Policy 8-15:** Existing vegetation, both native and non-native, and wildlife habitat areas shall be retained in the major open space areas sufficient for the maintenance of a healthy balance of wildlife populations.
- **Policy 8-21:** The planting of native trees and shrubs shall be encouraged in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native wildlife, and ensure that a maximum number and variety of well-adapted plants are sustained in urban areas.
- **Policy 8-23:** Runoff of pollutants and siltation into marsh and wetland areas from outfalls serving nearby urban development shall be discouraged. Where permitted, development plans shall be designed in such a manner that no such pollutants and siltation will significantly adversely affect the value or

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function of wetlands. In addition, berms, gutters, or other structures should be required at the outer boundary of the buffer zones to divert runoff to sewer systems for transport out of the area.

- **Policy 8-24:** The County shall strive to identify and conserve remaining upland habitat areas which are adjacent to wetlands and are critical to the survival and nesting of wetland species.
- **Policy 8-27:** Seasonal wetlands in grasslands areas of the County shall be identified and protected.
- **Policy 8-28:** Efforts shall be made to identify and protect the County's mature native oak, bay, and buckeye trees.

#### *Contra Costa Municipal Code*

##### ***Chapter 82-1***

Section 82-1.010, Urban Limit Line, establishes an urban limit line to ensure the enforcement of the 65/35 standard set forth in Section 82-1.006 of the County Municipal Code. The urban limit line limits potential urban development in the County to 35 percent of the land in the County and prohibits that County from designating any land located outside the urban limit line for an urban land use.

##### ***Chapter 816-6***

Chapter 816-6, Tree Protection and Preservation, provides for the preservation of certain protected trees in the unincorporated area of the County. Additionally, this Chapter provides for the protection of trees on private property by controlling tree removal while allowing for reasonable enjoyment of private property rights and property development for the following reasons:

1. The County finds it necessary to preserve trees on private property in the interest of the public health, safety and welfare, and to preserve scenic beauty.
2. Trees provide soil stability, improve drainage conditions, provide habitat for wildlife and provide aesthetic beauty and screening for privacy.
3. Trees are a vital part of a visually pleasing, healthy environment for the unincorporated area of this County.

#### *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP)*

Eastern Contra Costa County is a unique region where the Bay Area, Delta, and Central Valley meet. This part of the County is characterized by open space and beautiful vistas. The area retains a rural lifestyle while providing houses, jobs, farms, and ranches for future generations. It features a rich landscape that is home to a number of rare plants and animals. Over 150 rare species occur in the East County area, including the San Joaquin kit fox, California red-legged frog, Alameda whipsnake, western burrowing owl, vernal pool fairy shrimp, and Diablo helianthella.



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Contra Costa County’s population is predicted to grow by 127,000 people by 2025, providing important new housing for the Bay Area’s growing workforce (ECCCHCPA 2006). A significant portion of this growth will occur in East County in habitat for endangered species, setting up a potential conflict between conservation and economic development. The East Contra Costa County HCP/NCCP seeks to avoid such conflict, providing an opportunity to preserve these diverse ecosystems, unique species, and scenic landscapes while clearing regulatory obstacles to continued economic development and growth.

5.4.1.2 EXISTING CONDITIONS

The County has a diverse range of habitats and unique species. Much of the County’s natural environment remains while substantial areas have already been received permanent public protection. There are additional resources which warrant similar public control. The vast majority of privately held lands supporting vegetation and wildlife resources are found within the agricultural areas of the County. Agriculturalists and biological habitats have co-existed for decades in Contra Costa County; therefore, privately preserving resources with public benefit.

The topographic variety of the County, from the summit of Mount Diablo to the San Francisco Bay/Delta estuary complex, combines to form the setting for its range of habitat and wildlife. There are unique biotic resources found within Contra Costa County which have biological and wildlife important. While most of the significant habitat areas are found in unincorporated locations, several important wildlife areas are within city limits. Wetlands are one of the most important habitat resources within the County. Wetlands, especially marshes scattered along the County’s shoreline, have been awarded substantial legal and policy protection.

Table 5.4-1, *Inventory of Significant Ecological Resources Areas of Contra Costa County*, lists the most important unique natural areas in the County.

Table 5.4-1 Inventory of Significant Ecological Resources Areas of Contra Costa County

#	Ecological Resource Area	Inventory
1.	Point Pinole	Tidal and freshwater marshes, mudflat, grassland, eucalyptus plantation, and fishing pier which extends 1/4 mile into San Pablo Bay. Valuable for migrating waterfowl and shorebirds. Habitat for soft-haired bird's beak, California clapper rail and salt marsh harvest mouse, possibly for black rail, Samuel's song sparrow and black-shouldered kite. Plantation serves as resting place for migrating monarch butterflies.
2.	San Pablo Creek & Wildcat Creek Marshes	Tidal marsh and mudflat. Potential for same species as described for Point Pinole.
3.	Brooks Island	Tidal marsh, scrub/brushland and coastal prairie grassland. Important stop for migrating waterfowl including Canada goose. Supports a population of California vole with an uncommon pelage (hair) color variation.
4.	Hoffman Marsh	Tidal marsh habitat for migrating waterfowl and shorebirds, possibly for California clapper rail and salt marsh harvest mouse.
5.	San Pablo Ridge	The grassland areas on clay and clay loam soils on San Pablo Ridge support a population of Santa Cruz Tarweed which was transplanted from a hillside in Pinole.
6.	Wildcat Creek Canyon	Grassy hillsides with riparian woodland along Wildcat Creek. Habitat for ornate shrew, western pond turtle, northern brown skink and possibly for Alameda whipsnake.

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Table 5.4-1 Inventory of Significant Ecological Resources Areas of Contra Costa County

#	Ecological Resource Area	Inventory
7.	Lone Tree Point	Stratified cliff face demonstrates the underlying trend of coastal uplift. Fossiliferous strata contain many marine-life fossils such as clams and oysters.
8.	Sobrante Ridge Manzanita Grove	<b>A unique "island" stand of chaparral that supports two and possibly three species of manzanita, including the Alameda manzanita.</b>
9.	Siesta Valley	Broadleaf evergreen forest, riparian woodland, grassland and scrub/brushland. Habitat for Alameda whipsnake, Berkeley kangaroo rat, northern brown skink, grasshopper sparrow, and ornate shrew. Readily observed geologic features include a faulted syncline with Siesta Formation outcropping in the fold and Moraga basalt forming the upper slopes of the valley. Some fossils of shells and land mammals.
10.	Huckleberry Botanic Regional Preserve	Chaparral and broadleaf evergreen forest in this 130-acre preserve supports Alameda manzanita, western leatherwood, and diverse avifauna.
11.	Redwood Regional Park	Fine example of coast redwood forest. Redwoods were extensively logged in the late 1800s; all existing trees are second-growth.
12.	Flicker Ridge	Concentration of many habitats: grassland, native grassland, scrub/brushland, chaparral, open oak woodland, broadleaf evergreen forest, knobcone pine forest, and agriculture. Includes patches of unique pygmy redwoods, stunted due largely to exposure and soil conditions.
13.	Briones Hills	Grasslands, oak woodland, riparian, and creeks support Mount Diablo fairy lantern, newts, western pond turtle, northern brown skink, ornate shrew, prairie falcon, mountain lion and possible Alameda whipsnake, grasshopper sparrow, golden eagle, badger, ringtail, and bobcat. Mount Diablo fairy lantern and Diablo helianthella are known and suspected to occur here, respectively.
14.	Shoreline between Martinez Waterfront & Concord Naval Weapons Station	Tidal marsh supports salt marsh harvest mouse, California clapper rail and possibly black rail. Ornate shrew, black-shouldered kite and Suisun song sparrow also occur here.
15.	Lime Ridge	Supports Mt. Diablo manzanita, and a buckwheat subspecies which is endemic to Lime Ridge.
16.	Shell Ridge	Open oak woodland and grasslands. Upturned geologic strata contain many marine fossils.
17.	Las Trampas and Rocky Ridges	Large area of rugged terrain, high ridges and steep slopes. Grassland, scrub/brushland, chaparral, rock outcrops, open oak woodland, broadleaf evergreen forest, and riparian woodland. Habitat for Alameda whipsnake, black-chinned sparrow, prairie falcon, golden eagle, ringtail, badger, bobcat, and mountain lion.
18.	Blackhawk Ranch Fossil Locality	Upturned fossiliferous Pliocene strata indicates past climate, flora, and fauna. Diverse fossils include those of streamside trees, marine invertebrates, lizards, cranes, small mammals, carnivores, peccaries, camels, horses, and mastodons. Site was the edge of a salt water basin that extended inland to the Sierra Nevada.
19.	Mt. Diablo	Native grassland, serpentine chaparral, large rock outcrops, riparian woodland, dwarfed woodland, Coulter pine forest, knobcone pine forest, and springs. Many rare, endangered, depleted or otherwise unusual plants and animals, including an isolated population of northern sagebrush lizard, inhabit the mountain.
20.	Nortonville–Somersville	Northernmost limit of Coulter pine and black sage, southernmost limit of common manzanita. Mount <b>Diablo manzanita, Diablo rock rose and Brewer's dwarf flax.</b> Grassland, chaparral, open oak woodland, and Coulter pine forest. Area has been heavily mined for coal.
21.	Bay Point Salt Marsh	This marsh area is a habitat for salt marsh harvest mouse and the California black rail.

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Table 5.4-1 Inventory of Significant Ecological Resources Areas of Contra Costa County

#	Ecological Resource Area	Inventory
22.	Entrapment Zone	The entrapment zone is an area where suspended materials concentrate as a result of mixing by the outgoing freshwater flow above the saltwater wedge. Plankton concentrations are influenced by the location of the entrapment zone, and this in turn affects the location and productivity of fish in the bays and Delta. The location of the entrapment zone between the lower Delta and Suisun Bay varies according to the strength and phase of the tides, and the level of freshwater inflow from the Sacramento and San Joaquin Rivers.
23.	Browns Island and Winter Island	<b>Freshwater and estuarine marshes. Habitat for Contra Costa wallflower, Mason's lilaeposis, Suisun song sparrow, black-shouldered kite, and possibly river otter. Black rail might also occur here.</b>
24.	Mount of Contra Costa Canal	Salt water marsh provides habitat for black-shouldered kite.
25.	Antioch San Dunes	Small and only remaining remnants of riverine dunes, once part of the largest river-laid dunes in the state that stretched ten miles along the southern shore of the San Joaquin River. The remaining dunes support rare and/or endangered plants, at least six endangered and/or endemic insects and the California legless lizard.
26.	Los Vaqueros	This area contains fair densities of native bunchgrasses.
27.	Big Break	This is an emergent marsh supporting the California black rail.
28.	Marsh Creek Riparian Corridor and Marsh Creek Reservoir	These areas provide habitat for a variety of sensitive plant and animal species including: large-flowered fiddleneck, Hoover cryptantha, Mt. Diablo buckwheat, diamond-petaled California poppy, stink bells, Diablo rock-rose, caper-fruited tropidocarpum, San Joaquin kit fox, California tiger salamander, California red-legged frog, and molestan blister beetle.
29.	Alakli Meadows and Northern Claypan Vernal Pools	Rare habitats in Contra Costa County and statewide. A specialized flora and invertebrate fauna are adapted to each habitat.
30.	Los Vaqueros	Area of biological importance because of the presence of historical eagle nests and other outstanding natural features. This area provides habitat for the following species: San Joaquin kit fox, Alameda whipsnake, tricolored blackbird, California red-legged frog, California tiger salamander, western pond turtle, freshwater shrimp. Also contains Alkali Meadows and Northern Claypan Vernal Pools, both of which are considered to be rare statewide.
31.	Bethel Island Wetlands	The Bethel Island planning area supports substantial acreage of seasonal and permanent wetlands. Over a square mile of ruderal wetland/upland also are found on the planning area. These have high values as biological habitat and are considered critical natural resources by the U.S. Army Corps of Engineers and other resource agencies.
32.	Little Franks Tract	This freshwater marsh habitat contains riparian shrub-brush along the levees which supports black-crowned night heron.
33.	Franks Tract	A flooded, formerly levee-encircled delta island. Freshwater marsh and riparian woodland habitats on borders, delta aquatic habitat with good spawning area for fish (striped bass, largemouth bass, white catfish, others). Possible habitat for giant garter snake.
34.	Sand Mound Slough	This area is an example of habitat found on the tule islands in the central and southern Delta. This area contains tules, bulrushes, common reed, rushes, and other marsh vegetation as well as riparian vegetation which provides a valuable habitat for wintering ducks and other waterfowl.

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Table 5.4-1 Inventory of Significant Ecological Resources Areas of Contra Costa County

#	Ecological Resource Area	Inventory
35.	Connection Slough, Quimby Island, Rhode Island, Old River Complex	A diverse mix of upland habitat, agricultural lands, riparian trees and shrub-brush, marsh and tule islands. Excellent wildlife habitat, particularly for raptors, songbirds, and game species. These areas support the rare California hibiscus.
36.	South Bank of Rock Slough	This area supports a small population of the Suisun marsh aster and California hibiscus.
37.	Indian Slough	California hibiscus is found at the confluence of Indian Slough.
38.	Byron Hot Springs	Alkali mud flats, salt marsh and hot mineral springs. A rare snail ( <i>Helminthoglypta</i> spp.) inhabits the area, the site of an old resort-spa now in disrepair. A recently created shallow lake has enhanced the habitat for wildlife. The grassland hills to the west support San Joaquin kit fox.
39.	Eucalyptus Island	A freshwater marsh subject to tidal fluctuation. This area supports a variety of wildlife and is the habitat of the California hibiscus.
40.	Mouth of Pinole Creek	This coastal salt marsh area supports California black rail.
41.	Delta Islands and Peninsula	Additional delta islands in Contra Costa include Jersey Island, Bradford Island and Webb Tract. Veale Tract, which is a peninsula off the mainland, has similar habitat. The undeveloped shoreline and interior sections of these islands and peninsula have the potential for supporting the same species as described for Browns and Bethel Islands and Frank Tracts.

Source: Contra Costa County 2000

Table 5.4-2, *Plant and Wildlife Species of Concern in Contra Costa County*, lists animal and plant species that have been designated as “endangered,” or “threatened” by either the State of California or Federal Government.

Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
<b>Mammals</b>			
Townsend's western big-eared bat <i>Corynorhinus townsendii townsendii</i>	CSC	FSC	Western Bat Working Group High Priority species; high potential for listing
Tule Elk <i>Cervus elaphus nannodes</i>	CSC	-	Concorn Naval Weapons Station
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>	-	FSC	CNDDDB occurrences recorded as extant; IUCN VU/B1 + 2c
Greater western mastiff bat <i>Eumops perotis</i>	CSC	FSC	Western Bat Working Group High Priority species
San Pablo Vole <i>Microtus californicus sanpabloensis</i>	CT	-	Salt marshes; Point Pinole, mouth of San Pablo and Wildcat Creeks
Small-footed myotis <i>Myotis ciliolabrum</i>	-	FSC	Widely distributed; unlikely to be listed; buildings, bridges
Long-eared myotis <i>Myotis evotis</i>	-	FSC	Primarily coniferous forest species

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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Fringed myotis <i>Myotis thysanodes</i>	-	FSC	Western Bat Working Group High Priority species
Long-legged myotis <i>Myotis Volans</i>	-	FSC	Western Bat Working Group High Priority species
Yuma myotis <i>Myotis Yumanensis</i>	-	FSC	Widely distributed; unlikely to be listed; not CSC
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	CSC	FSC	
Riparian woodrat <i>Neotoma fuscipes riparia</i>	-	FE	
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>	-	FSC	
Saltmarsh harvest mouse <i>Reithrodontomys raviventris</i>	SE/FP	FE	Delta marsh
Suisun ornate shrew <i>Sorex ornatus sinuosus</i>	CSC	FSC	Tidal marsh
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	SE	FE	
American badger <i>Taxidea taxus</i>	CSC	-	Briones Hills, Las Trampas and Rock Ridge
San Joaquin kit fox <i>Vulpes macrotus mutica</i>	ST	FE	
<b>Birds</b>			
Tricolored blackbird (nesting colony) <i>Agelaius tricolor</i>	CSC-1	FSC	
Grasshopper sparrow (nesting) <i>Ammodramus savannarum</i>	CSC-2	FSC	
<b>Bell's sage</b> sparrow (nesting) <i>Amphispiza belli belli</i>	CSC	FSC	Confirmed breeding within ECCC
Greater white-fronted goose (tule) <i>Anser albifrons elgasi</i>	CSC-2	-	
Golden eagle (nesting and wintering) <i>Aquila chrysaetos</i>	FP	BGPA	
Great blue heron (rookery) <i>Ardea Herodias</i>	-	-	Observed breeding within ECCC
Short-eared owl (nesting) <i>Asio flammeus</i>	CDC-2	FSC	
Western burrowing owl <i>Athene cunicularia</i>	CSC-1	FSC	
Redhead <i>Aythya americana</i>	CSC-2	-	
American bittern <i>Botaurus lentiginosus</i>	CSC-3	-	Possible breeding rookeries in northeast section of ECCC
Aleutian Canada Goose <i>Branta Canadensis leucopareia</i>	-	FE	Upland grassland sites northwest of the San Pablo Reservoir dam, west County segment (winter months)

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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Bufflehead <i>Bucephala albeola</i>	CSC-3	-	
Ferruginous hawk (wintering) <i>Buteo regalis</i>	CSC	FSC	
<b>Swainson's hawk (nesting)</b> <i>Buteo swainsoni</i>	ST	-	
<b>Costa's hummingbird</b> <i>Calypte costae</i>	CSC	FSC	
<b>Lawrence's goldfinch (nesting)</b> <i>Carudelis lawrencei</i>	-	FSC	Confirmed breeding within ECCC
<b>Swainson's thrush</b> <i>Catharus ustulatus</i>	CSC-2	-	Confirmed breeding within ECCC
Belted kingfisher <i>Ceryle alcyon</i>	CSC-3	-	
<b>Vaux's swift</b> <i>Chaetura vauxi</i>	CSC-2	-	
Mountain plover (wintering) <i>Charadrius montanus</i>	CSC	FPT	
Northern harrier (nesting) <i>Circus cyaneus</i>	CSC-2	-	
Black swift <i>Cypseloides niger</i>	-	FSC	Covered activities not likely to impact
White-tailed kite (nesting) <i>Elanus leucurus</i>	-	FSC	Likely to be delisted from fully protected status when category revised; low potential for listing under state or federal ESA
Little willow flycatcher (nesting) <i>Empidonax trailii brewsteri</i>	SE	-	No records for ECCC
California horned lark <i>Eremophila alpestris</i>	CSC-3	FSC	Confirmed breeding within ECCC
Prairie Falcon <i>Falco mexicanus</i>	CSC	-	Briones Hills, Las Trampas and Rocky Ridge
American peregrine falcon (nesting) <i>Falco peregrinus</i>	SE/FP	D	Few records; covered activities not likely to directly impact
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	CSC-2	FSC	Tidal marsh
Greater sandhill crane (nesting and wintering) <i>Grus canadensis tabida</i>	ST/FP	-	No records for ECCC
Bald eagle (nesting and wintering) <i>Haliaeetus leucocephalus</i>	SE	FPD	Few records; covered activities not likely to directly impact
Loggerhead shrike <i>Lanius ludovicianus</i>	-	FSC	
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST/FP	SC	Delta tidelands
<b>Lewis' woodpecker</b> <i>Melanerpes lewis</i>	-	FSC	

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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Suisun song sparrow <i>Melospiza melodia</i>	CSC-3	FSC	Tidal marsh
Alameda song sparrow <i>Melospiza melodia pusillula</i>	CSC-1	-	Tidal marsh
San Pablo song sparrow <i>Melospiza melodia samuelis</i>	CSC-2	-	Tidal marsh
Long-billed curlew (nesting) <i>Numenius americanus</i>	CSC	FSC	
California brown pelican (nesting colony) <i>Pelecanus occidentalis californicus</i>	SE	-	No records for ECCC HCP/NCCP inventory area
Double-crested cormorant (rookery) <i>Phalacrocorax auratus</i>	CSC	-	Observed breeding within ECCC HCP/NCCP inventory area
White-faced ibis (rookery site) <i>Plegadis chihi</i>	CSC	FSC	
Sora <i>Porzana Carolina</i>	CSC-3	-	Tidal marsh
California clapper rail <i>Rallus longirostris obsoletus</i>	SE/FP	FE	Delta tidelands
Bank swallow (nesting) <i>Riparia riparia</i>	ST	-	Only rare migrants or post-breeding wanderers; no real suitable habitat
Rufos hummingbird <i>Selasphorus rufus</i>	-	FSC	
<b>Allen's</b> hummingbird <i>Selasphorus sasin</i>	-	FSC	
California least tern (nesting colony) <i>Sterna antillarum browni</i>	SE/FP	FE	Delta tidelands
<b>Reptiles</b>			
Silvery legless lizard <i>Anniella pulchra pulchra</i>	CSC	FSC	One record near north border; of CCC
Western pond turtle <i>Clemmys marmorata</i>	CSC	FSC	
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>	ST	FT	
California horned lizard <i>Phrynosoma cornatum frontale</i>	CSC	FSC	
Giant garter snake <i>Thamnophis gigas</i>	ST	FT	Records in delta, suitable habitat within ECCC
San Joaquin whipsnake	CSC	FSC	
<b>Amphibians</b>			
California tiger salamander <i>Ambystoma californiense</i>	CSC	FT	
California red-legged frog <i>Rana aurora draytonii</i>	-	FT	
Foothill yellow-legged frog <i>Rana boylei</i>	CSC	FPT	

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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Western spadefoot toad <i>Scaphiophus hammondi</i>	CSC	FSC	
Fish			
Green sturgeon <i>Acipenser medirostris</i>	-	FSC	Delta riverine
Sacramento perch (within native range) <i>Archoplites interruptus</i>	-	FSC	Delta riverine
Delta smelt <i>Hypomseus transpacificus</i>	ST	FT	Delta riverine and tidal areas
River lamprey <i>Lampetra ayresi</i>	-	FSC	Delta riverine
Central valley steelhead <i>Oncorhynchus mykiss</i>	-	FT	No records or accessible habitat for ECCC HCP/NCCP inventory area. Anecdotal evidence of rainbow trout in upper Marsh Creek watershed; known from occurrences in sloughs and channels adjacent to inventory area.
Central valley spring-run chinook salmon <i>Oncorhynchus tshawytscha</i>	ST	FT	No records or accessible habitat for ECCC HCP/NCCP inventory area
Sacramento River winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>	SE	FE	No records or accessible habitat for ECCC HCP/NCCP inventory area
Central valley fall/late fall-run chinook salmon <i>Oncorhynchus tshawytscha</i>	-	-	Recent observation of Chinook salmon during upstream migration in lower 3 miles of Marsh Creek between mouth at Big Break and the WWTP in Brentwood
Sacramento splittail <i>Pogonichthys macrolepidotus</i>	-	FT	Delta riverine and tidal areas
Longfin smelt <i>Spirinchus thaleichthys</i>	-	FSC	Delta riverine and tidal
Invertebrates			
Ciervo aegialian scarab beetle <i>Aegialia concinna</i>	-	FSC	No records for ECCC
Antioch dunes anthicid beetle <i>Anthicus antiochensis</i>	-	FSC	Antioch dunes
Sacramento anthicid beetle <i>Anthicus sacramento</i>	-	FSC	No records for ECCC
<b>Lange's metalmark butterfly</b> <i>Apodemia mormo langei</i>	-	FE	No records for ECCC
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>	-	FE	
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	-	FT	
Midvalley fairy shrimp <i>Branchinecta mesovalliensis</i>	-	FSC	Likely to be listed when official described
San Joaquin dune beetle <i>Coelus gracilis</i>	-	FSC	No records for ECCC
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	-	FT	



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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Antioch cophuran robberfly <i>Efferia Antioch</i>	-	FSC	Antioch dunes
Antioch efferian robberfly <i>Efferia antiochi</i>	-	FSC	Antioch dunes
Delta green ground beetle <i>Elaphrus viridis</i>	-	FT	No records for ECCC
Bay Checkerspot Butterfly <i>Euphydryas Editha bayensis</i>	FT	-	Morgan Territory area, east County; Antioch area, north-central County
<b>Bridges' Coast</b> Range shoulderband snail <i>Helminthoglypta nickliniana bridgesi</i>	-	FSC	No records for ECCC
<b>Rickersecker's water scavenger beetle</b> <i>Hydrochara rickseckeri</i>	-	FSC	No records for ECCC
Curved-foot hydrotus diving beetle <i>Hygrotus curvipes</i>	-	FSC	No records for ECCC
<b>Middlekauf's sheildback katydid</b> <i>Idiostatus middlekaufi</i>	-	FSC	Antioch dunes
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	-	FE	
California linderiella fairy shrimp <i>Linderiella occidentalis</i>	-	FSC	No records for ECCC
Molestan blister beetle <i>Lytta molesta</i>	-	FSC	2 CNDDS records
<b>Hurd's metapogon robberfly</b> <i>Metapogon hurdi</i>	-	FSC	No records for ECCC
Antioch multilid wasp <i>Myrmosula pacifica</i>	-	FSC	Antioch dunes
Yellow-banded andrenid bee <i>Perdita scituta antiochensis</i>	-	FSC	No records for ECCC
Antioch andrenid bee <i>Perdita scituta antiochensis</i>	-	FSC	Antioch dunes
Antioch sphecid wasp <i>Proceratium californicum</i>	-	FSC	Antioch dunes
Callippe silverspot butterfly <i>Speyeria callippe callippe</i>	-	FE	No records for ECCC
California freshwater shrimp <i>Syncaris pacifica</i>	SE	FE	No records for ECCC
<b>Plants</b>			
Large-flowered fiddleneck <i>Amsinckia grandiflora</i>	SE	FE	All natural populations in Contra Costa County have been extirpated
Alameda Manzanita <i>Arctostaphylos pallida</i>	SE	FSC	Sobrante Ridge, Tilden Regional Park, Huckleberry Botanic Regional Park
Mount Diablo manzanita <i>Arctostaphylos auriculata</i>	1B	-	
Contra Costa County manzanita <i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	1B	-	All Contra Costa County occurrences in Mt. Diablo SP or EBRPD

5. Environmental Analysis  
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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Suisun Marsh aster <i>Aster lentus</i>	1B	-	Tidal marsh
<b>Ferris' milkvetch</b> <i>Astragalus tener</i> ssp. <i>ferrisiae</i>	1B	-	No records from Contra Costa County
Alkali milkvetch <i>Astragalus tener</i> ssp. <i>tener</i>	1B	-	Historic occurrence; insufficient data to determine whether plant still exists in HCP/NCCP inventory area
Heartscale <i>Atriplex coronate</i>	1B	-	Reported occurrences are misidentified; are actually crownscale
Brittlescale <i>Atriplex depressa</i>	1B	-	
San Joaquin spearscale <i>Atriplex joaquiniana</i>	1B	-	
Big tarplant <i>Blepharizonia plumosa</i>	1B	-	
Mount Diablo fairy lantern <i>Calochortus pulchellus</i>	1B	-	
Butte County morning-glory <i>Calystegia atriplicifolia</i> ssp. <i>buttensis</i>	1B	-	Reported occurrence in Contra Costa County is probably misidentification
Bristly sedge <i>Carex comosa</i>	1B	-	Tidal marsh
<b>Congdon's spikeweed</b> <i>Centromadia parryi</i> ssp. <i>congdonii</i>	1B	-	
<b>Soft bird's-beak</b> <i>Cordylanthus mollis mollis</i>	SR	FE	Tidal marsh
<b>Mount Diablo bird's-beak</b> <i>Cordylanthus nidularius</i>	SR	-	Only known occurrence in Mt. Diablo SP
Hospital Canyon larkspur <i>Delphinium californicum</i> ssp. <i>interius</i>	1B	-	All Contra Costa County occurrences in Mount Diablo SP
Recurved larkspur <i>Delphinium recurvatum</i>	1B	-	
Round-leaved filaree <i>Erodium macrophyllum</i>	1B		
Western Leatherwood <i>Dirca occidentalis</i>		CSC	West County: East Bay Hills, Briones Valley
Dwarf downingia <i>Downingia pusilla</i>	1B	-	No records from Contra Costa County
Mount Diablo buckwheat <i>Eriogonum truncatum</i>	1A	-	Presumed to be extinct
Delta button-celery <i>Eryngium racemosum</i>	SE	-	Delta wetlands
Contra Costa wallflower <i>Erysimum capitatum angustatum</i>	SE	FE	Occurrences area in Antioch Dunes NWR
Diamond-petaled poppy <i>Eschscholzia rhombipetala</i>	1B	-	

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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Stinkbells <i>Fritillaria agrestis</i>	SCS	-	Woodland and grasslands
Fragrant fritillary <i>Fritillaria liliacea</i>	1B	-	
Diablo heliathella <i>Helianthella castanea</i>	1B	-	
<b>Brewer's swarf flax</b> <i>Hesperolinon breweri</i>	1B	-	All known Contra Costa County occurrences in Mount Diablo SP, EBRPD, or CCWD lands, but may occur outside these areas
California hibiscus <i>Hibiscus lasiocarpus</i>	1B	-	Delta wetlands
Santa Cruz Tarplant <i>Holocarpha macradenia</i>	SE	-	West County: and Wildcat Canyon Regional Park contains a relocated population
Carquinez goldenbush <i>Isocoma arguta</i>	1B	-	
Contra Costa goldfields <i>Lasthenia conjugens</i>	-	FE	All ECCC inventory area populations are extirpated
Delta tule pea <i>Lathyrus jepsonii</i> ssp. <i>jepsonii</i>	1B	-	Delta wetlands
<b>Mason's lilaeopsis</b> <i>Lilaeopsis masonii</i>	1B	-	Delta wetlands
Delta mudwort <i>Limosella subulate</i>	1B	-	Delta wetlands
Showy madia <i>Madia radiata</i>	1B	-	Historic occurrence; insufficient data to determine whether plant still exists in County
<b>Hall's bush mallow</b> <i>Malacothamnus hallii</i>	1B	-	All Contra Costa County occurrences in Mount Diablo SP
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	1B	-	
Little mousetail <i>Myosurus minimus</i> ssp. <i>apus</i>	1B	-	Reported to occur in County, but insufficient information.
Adobe navarretia <i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	-	-	
Colusa grass <i>Neostaphia colusana</i>	SE	FT	No records from Contra Costa County
Antioch dunes evening primrose <i>Oenothera deltoides howelli</i>	SE	FE	Populations planted or in Antioch Dunes NWR
Mount Diablo phacelia <i>Phacelia phacelioides</i>	1B	-	All Contra Costa County occurrences in Mount Diablo SP
Bearded popcorn-flower <i>Plagiobothrys hystricukus</i>	1A	-	No record of species in Contra Costa County
Rock sanicle <i>Sanicula saxitilis</i>	SR	-	All Contra Costa County occurrences in Mount Diablo SP

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Table 5.4-2 Plant and Wildlife Species of Concern in Contra Costa County

Name	Status <sup>1</sup>		Reported Locations
	State	Federal	
Marsh skullcap <i>Scutellaria galericulata</i>	2	-	Occurrences are in Delta
Blue skullcap <i>Scutellaria lateriflora</i>	2	-	Occurrences are in Delta
Rayless ragwort <i>Senecio aphanactis</i>	2	-	Historic occurrences; insufficient data to determine whether plant still exists in County
Uncommon Jewel Flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	SE	-	Serpentine chaparral
Livermore tarplant <i>Deinandra bacigalupi</i>	1B	-	No records from Contra Costa County
Most-beautiful jewelflower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	1B	-	All Contra Costa County occurrences in Mount Diablo SP
Mount Diablo jewelflower <i>Streptanthus hispidus</i>	1B	-	All Contra Costa County occurrences in Mount Diablo SP
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	1A	-	Historic occurrences; insufficient data to determine whether plant still exists in HCP/NCCP inventory area

Source: Contra Costa County 2000

<sup>1</sup> State:

FP – Fully Protected; SE – State listed as endangered; ST – State listed as threatened; CSC – California special concern species; CSC-1 – Bird species of special concern (BSSC), First priority; CSC-2 – BSSC, Second Priority; CSC-3 – BSSC, Third priority; CSC (no number) Former CDFG California Special concern species, replaced by BSSC list; SR – State Rare (plants)

Federal:

FE – Federally endangered; FT – Federally threatened; FPT – Federally proposed for threatened listing; FPD – Federally proposed for delisting; FD – Federally delisted; FSC – Federal special concern species

California Native Plant Society Ranking

1A – Presumed extinct in California

1B – Rare or endangered in California and elsewhere

2 – Rare or endangered in California, more common elsewhere

### 5.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- B-1 Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

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- B-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- B-3 Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- B-4 Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- B-6 Conflict with the provisions of an adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 5.4.3 Proposed Housing Element Policies

There are no applicable proposed Housing Element policies pertaining to biological resources.

### 5.4.4 Environmental Impacts

#### 5.4.4.1 DISCUSSION OF NO BIOLOGICAL RESOURCES IMPACTS

All of the impacts would be less than significant or potentially significant.

#### 5.4.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.4-1: Development of the proposed project could impact sensitive species in the County.  
[Threshold B-1]

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The proposed project could result in adverse effects, either directly or indirectly, on special-status plant and animal species and critical habitat. Any future development in areas that are currently undeveloped could result in direct loss of sensitive plants or wildlife. Where there are direct impacts to special-status species, indirect impacts would also occur. Indirect impact may include habitat modification, increased human/wildlife interactions, habitat fragmentation, encroachment by exotic weeds, and area-wide changes in surface water flows and general hydrology due to development of previously undeveloped areas.

As shown in Table 5.4-1 and Table 5.4-2, numerous special-status species occurrences are known to occur in the County. Even with adherence to the General Plan policies and compliance with state and federal laws, future development projects could require more detailed evaluations of biological resources and formation of mitigation measures by a qualified biologist. Implementation of Mitigation Measures BIO-1 and BIO-2

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### BIOLOGICAL RESOURCES

would protect special status species but it is uncertain as to whether changes in project design or mitigation would reduce impacts to a less than significant level. As such, impacts would be significant and unavoidable.

***Level of Significance Before Mitigation:*** Impact 5.4-1 would be potentially significant.

#### *Mitigation Measures*

BIO 1 Prior to the issuance of a building permit, any project that involves the removal of habitat must consider if any special status species (e.g., Threatened or Endangered species, CNPS List 1B and 2 plants, or species protected under Section 15380 of CEQA) are potentially present on the project site and nearby vicinity, and if the project impacts could be considered significant by the County. If potential habitat is present in an area, focused surveys shall be conducted prior to construction activities in order to document the presence or absence of a species on the project site and nearby vicinity. Botanical surveys shall be conducted during the appropriate blooming period for a species. If no special status species are found on the project site or nearby vicinity, no additional action is warranted, with the exception of projects subject to the East Contra Costa County HCP/NCCP where subsequent actions are required even if no special status species are found onsite. If special status species are found, appropriate mitigation would be required in coordination with the County, consistent with its performance criteria of mitigating lost habitat at a ratio no less than one to one (one acre restored for every acre impacted), or as required by the ECCC HCP/NCCP or the wildlife agencies. Projects shall be required to implement the mitigation plan through a Mitigation Monitoring and Reporting Program.

BIO-2 Prior to issuance of the first action and/or permit which would allow for site disturbance (e.g., grading permit), a detailed mitigation plan shall be prepared, and take permits shall be obtained, by a qualified biologist for approval by the County, the USFWS, and CDFW shall include: (1) the responsibilities and qualifications of personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements. Projects shall be required to implement the mitigation plan as outlined within the Plan.

Any permanent impacts to sensitive natural communities shall be mitigated for at a 3:1 ratio by acreage and temporary impacts shall be restored on-site at a 1:1 ratio by acreage. If on-site mitigation is infeasible, habitat shall be compensated by the permanent protection of habitat at the same ratio through a conservation easement and through the preparation and funding of a long-term management plan. Oak trees shall be replaced at the following ratios:

- 3:1 replacement for trees 5 to 8 inches diameter at breast height (DBH)
- 5:1 replacement for trees greater than 8 inches to 16 inches DBH
- 10:1 replacement for trees greater than 16-inch DBH, which are considered old-growth oaks

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Habitat compensation shall also be required for wetland and stream impacts. The project shall obtain permits from the Regional Water Quality Control Board and Army Corps of Engineers pursuant to the Clean Water Act, and the California Department of Fish and Wildlife pursuant to Section 1602 of the Fish and Game Code.

***Level of Significance After Mitigation:*** Impact 5.4-1 would be significant and unavoidable.

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Impact 5.4-2: Development of the proposed project could impact sensitive natural communities, including wetland and riparian habitats. [Thresholds B-2 and B-3]

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The County includes various wetland and riparian habitats. Wetlands, especially marshes scattered along the County's shoreline, have been awarded substantial legal and policy protection. Riparian habitats can be found in Wildcat Creek, Siesta Valley, Briones Hills, Las Trampas and Rocky Ridges, among other places. Channels, creeks, bays, and reservoirs can be found through the County.

As indicated in Table 5.4-1 and Table 5.4-2, there are several species that are found in wetland and riparian habitats. The General Plan policies, as well as Mitigation Measures BIO-1 and BIO-2 would prevent impacts on special status species by requiring pre-construction surveys and obtaining take permits from appropriate agencies. Mitigation Measure BIO-3 would require a connectivity evaluation for future projects. Compliance with these mitigation measures would ensure no net loss of waters of the United States or waters of the state. Consequently, impacts on sensitive natural communities would be less than significant with mitigation incorporated.

***Level of Significance Before Mitigation:*** Impact 5.4-2 would be potentially significant.

### *Mitigation Measures*

See Mitigation Measures BIO-1 and BIO-2

BIO-3 Prior to the issuance of a building permit, the County shall require a habitat connectivity/wildlife corridor evaluation for future development that may impact existing connectivity areas and wildlife linkages. This evaluation shall be conducted by a qualified biologist. The results of the evaluation shall be incorporated into the project's biological report required in Mitigation Measure BIO-1. The evaluation shall also identify project design features that would reduce potential impacts and maintain habitat and wildlife movement. To this end, the County shall incorporate the following measures, to the extent practicable, for projects impacting wildlife movement corridors:

- Adhere to low density zoning standards
- Encourage clustering of development
- Avoid known sensitive biological resources and sensitive natural communities
- Provide shielded lighting adjacent to sensitive habitat areas

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- Encourage development plans that maximize wildlife movement
- Provide buffers between development and wetland/riparian areas
- Protect wetland/riparian areas through regulatory agency permitting process
- Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries.
- Encourage preservation of native habitat on the remainder of developed parcels
- Minimize road/roadway development to help prevent loss of habitat due to roadkill and habitat loss
- Use native, drought-resistant plant species in landscape design
- Encourage participation in local/regional recreational trail design efforts

***Level of Significance After Mitigation:*** Impact 5.4-2 would be less than significant with mitigation incorporated.

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Impact 5.4-3: Development pursuant to the proposed project could adversely impact wildlife movement in and surrounding the County. [Threshold B-4]

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As the County has large areas of open space lands and water bodies scattered throughout, these areas may provide wildlife movement corridors. A number of bird species are known to occur within the County (see Table 5.4-2). Under the proposed project, these birds could be impacted due to future development and removal of vegetation that could be used for nesting. The Migratory Bird Treaty Act administered by the USFWS governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations. In addition, California law, particularly relevant statutes in the Fish and Game Code, provide protections for birds and their active nests by prohibiting the:

- Take of a bird, mammal, fish, reptile, or amphibian (Fish and Game Code §2000)
- Take, possess, or needlessly destroy the nest or eggs of any bird (§3503)
- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks, and eagles) or the nests or eggs of such birds (§3503.5)
- Take or possess any of the 13 fully protected bird species listed in §3511
- Take any nongame bird (i.e., bird that is naturally occurring in California that is not game bird, migratory game bird, or fully protected bird) (§3800)
- Take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such bird, except as provided by rules or regulations adopted by the Secretary of the Interior under the Migratory Bird Treaty Act (§ 3513)



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- Take, import, export, possess, purchase, or sell any bird (or products of a bird) listed as an endangered or threatened species under the California Endangered Species Act unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW (§§ 2050 et seq.).

Development in existing open space and undeveloped areas of the County could result in habitat fragmentation and constrain wildlife movement. Additionally, development under the proposed project would comply with the policies of the General Plan pertaining to the protection of wildlife which would reduce impacts. In addition, to avoid conflicts with the MBTA, Mitigation Measures BIO-3 and BIO-4 would reduce potentially significant impacts to less than significant.

***Level of Significance Before Mitigation:*** Impact 5.4-3 would be potentially significant.

### *Mitigation Measures*

See Mitigation Measure BIO-3, above.

BIO-4 Construction activities involving vegetation removal shall be conducted between September 16 and March 14. If construction occurs inside the peak nesting season (between March 15 and September 15), a preconstruction survey (or possibly multiple surveys) by a qualified biologist is required prior to construction activities to identify any active nesting locations. If the biologist does not find any active nests within the project site, the construction work shall be allowed to proceed. If the biologist finds an active nest within the project site and determined that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest, and the size of the buffer zone shall depend on the affected species and the type of construction activity. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if any) that have been approved by a biological monitor shall take place within the buffer zone until the nest is vacated. The biologist shall serve as a construction monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the preconstruction survey and any subsequent monitoring shall be provided to the CDFW, USFWS, and the County.

***Level of Significance After Mitigation:*** Impact 5.4-3 would be less than significant with mitigation incorporated.

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Impact 5.4-4: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, adopted habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. [Thresholds B-5 and B-6]

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The East Contra Costa County HCP/NCCP seeks to avoid conflict between conservation and economic development by providing an opportunity to preserve the County's diverse ecosystems, unique species, and scenic landscapes while clearing regulatory obstacles to continued economic development and growth. Additionally, the County has Urban Limit Line standards (Chapter 82-1 of the Municipal Code) which state

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that urban development in the County is limited to 35 percent of the County land area and the remaining 65 percent is to remain for non-urban uses. Furthermore, Chapter 816-6 of the Municipal Code provides for the preservation of certain protected trees in the County on public and private property.

In addition to compliance with the East Contra Costa County HCP/NCCP, the Urban Limit Line standards, and the Tree Preservation Ordinance, future development under the proposed project would be required to comply with the policies of the General Plan that protect sensitive biological resources. Therefore, future development under the proposed project would be required to comply with applicable policies and plans governing biological resources in the County, and impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.4-4 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.4-4 would be less than significant.

### 5.4.5 Cumulative Impacts

The area considered for cumulative impacts on biological resources is the County. Future development under the proposed project could impact sensitive species directly and/or indirectly through impacts on those species' habitats. These projects would be required to comply with existing laws and regulations protecting biological resources.

Any development under the proposed project may result in impacts to biological resources. While compliance with future project-specific mitigation would reduce potential impacts on biological resources, it is uncertain if all impacts can be reduced to less than significant. Therefore, the project impact to biological resources is considered cumulatively considerable.

### 5.4.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: Impact 5.4-4.

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.4-1: The proposed project could impact special-status species.
- Impact 5.4-2: The proposed project could impact wetland and riparian habitats.
- Impact 5.4-3: The proposed project could impact wildlife movement.

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### 5.4.7 Mitigation Measures

#### Impact 5.4-1

BIO 1 Prior to the issuance of a building permit, any project that involves the removal of habitat must consider if any special status species (e.g., Threatened or Endangered species, CNPS List 1B and 2 plants, or species protected under Section 15380 of CEQA) are potentially present on the project site, and if the project impacts could be considered significant by the County. If potential habitat is present in an area, focused surveys shall be conducted prior to construction activities in order to document the presence or absence of a species on the project site. Botanical surveys shall be conducted during the appropriate blooming period for a species. If no special status species are found on the project site, no additional action is warranted, with the exception of projects subject to the East Contra Costa County HCP/NCCP where subsequent actions are required even if no special status species are found onsite. If special status species are found, appropriate mitigation would be required in coordination with the County, consistent with its performance criteria of mitigating lost habitat at a ratio no less than one to one (one acre restored for every acre impacted), or as required by the ECCC HCP/NCCP or the wildlife agencies).

BIO-2 Prior to issuance of the first action and/or permit which would allow for site disturbance (e.g., grading permit), a detailed mitigation plan shall be prepared, and take permits shall be obtained, by a qualified biologist for approval by the County, the USFWS, and CDFW shall include: (1) the responsibilities and qualifications of personnel to implement and supervise the plan; (2) site selection; (3) site preparation and planting implementation; (4) a schedule; (5) maintenance plan/guidelines; (6) a monitoring plan; and (7) long-term preservation requirements.

#### Impact 5.4-2

See Mitigation Measures BIO-1 and BIO-2.

BIO-3 Prior to the issuance of a building permit, the County shall require a habitat connectivity/wildlife corridor evaluation for future development that may impact existing connectivity areas and wildlife linkages. The results of the evaluation shall be incorporated into the project's biological report required in Mitigation Measure BIO-1. The evaluation shall also identify project design features that would reduce potential impacts and maintain habitat and wildlife movement. To this end, the county shall incorporate the following measures, to the extent practicable, for projects impacting wildlife movement corridors:

- Adhere to low density zoning standards
- Encourage clustering of development
- Avoid known sensitive biological resources

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- Provide shielded lighting adjacent to sensitive habitat areas
- Encourage development plans that maximize wildlife movement
- Provide buffers between development and wetland/riparian areas
- Protect wetland/riparian areas through regulatory agency permitting process
- Encourage wildlife-passable fence designs (e.g., 3-strand barbless wire fence) on property boundaries.
- Encourage preservation of native habitat on the underground remainder of developed parcels
- Minimize road/roadway development to help prevent loss of habitat due to roadkill and habitat loss
- Use native, drought-resistant plant species in landscape design
- Encourage participation in local/regional recreational trail design efforts

#### Impact 5.4-3

See Mitigation Measure BIO-3.

BIO-4 Construction activities involving vegetation removal shall be conducted between September 16 and March 14. If construction occurs inside the peak nesting season (between March 15 and September 15), a preconstruction survey (or possibly multiple surveys) by a qualified biologist is recommended prior to construction activities to identify any active nesting locations. If the biologist does not find any active nests within the project site, the construction work shall be allowed to proceed. If the biologist finds an active nest within the project site and determined that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest, and the size of the buffer zone shall depend on the affected species and the type of construction activity. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if any) that have been approved by a biological monitor shall take place within the buffer zone until the nest is vacated. The biologist shall serve as a construction monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the preconstruction survey and any subsequent monitoring shall be provided to the CDFW, USFWS, and the County.

#### 5.4.8 Level of Significance After Mitigation

##### Impact 5.4-1

Implementation of Mitigation Measures BIO-1 and BIO-2 would protect special status species, but it is uncertain as to whether changes in project design or mitigation would reduce impacts to a less than significant level. As such, impacts would be **significant and unavoidable**.

## 5. Environmental Analysis BIOLOGICAL RESOURCES

### Impact 5.4-2

Implementation of Mitigation Measures BIO-1 through BIO-3 would reduce impacts to less than significant.

### Impact 5.4-3

Implementation of Mitigation Measures BIO-3 and BIO-4 would reduce impacts to less than significant.

## 5. Environmental Analysis

### BIOLOGICAL RESOURCES

#### 5.4.9 References

Contra Costa County. 2000. Conservation Element, Contra Costa County General Plan.  
<https://www.contracosta.ca.gov/4732/General-Plan>.

East Contra Costa County Habitat Conservation Plan Association (ECCCHCPA). 2006, October. The Final East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan.  
<https://www.cocohcp.org/DocumentCenter/View/93/Habitat-Conservation-Plan--Natural-Community-Conservation-Plan-Overview-Booklet-PDF>.

## 5. Environmental Analysis

### 5.5 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

Cultural resources comprise archaeological and historical resources. Archaeology studies human artifacts, such as places, objects, and settlements that reflect group or individual religious, cultural, or everyday activities. Historical resources include sites, structures, objects, or places that are at least 50 years old and are significant for their engineering, architecture, cultural use or association, etc. In California, historic resources cover human activities over the past 12,000 years. Cultural resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. Tribal cultural resources pertain to those of Native American tribes. This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed project to impact cultural resources and tribal cultural resources in Contra Costa County.

#### 5.5.1 Environmental Setting

##### 5.5.1.1 REGULATORY BACKGROUND

###### Federal Regulations

###### *National Historic Preservation Act*

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. The act authorized the National Register of Historic Places, which lists districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties. Section 106 Review ensures that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

###### *Archaeological Resources Protection Act*

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

###### *Native American Graves Protection and Repatriation Act*

NAGPRA is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

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### CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

#### State Regulations

##### *California Public Resources Code*

Archaeological, paleontological, and historical sites are protected under a wide variety of state policies and regulations in the California Public Resources Code (PRC). In addition, cultural and paleontological resources are recognized as nonrenewable resources and receive protection under the PRC and CEQA.

California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the NAHC. It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

##### *California Health and Safety Code*

California Health and Safety Code Section 7050.5 requires that if human remains are discovered at a project site, disturbance of the site shall halt and remain halted until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe the human remains are those of Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

##### *California Register of Historic Resources*

The California Register of Historic Resources is the state version of the National Register of Historic Resources program. It was enacted in 1992 and became official January 1, 1993. The California Register was established to serve as an authoritative guide to the state's significant historical and archaeological resources. Resources that may be eligible for listing include buildings, sites, structures, objects, and historic districts. According to subsection (c) of the PRC Section 5024.1, a resource may be listed as a historical resource in the California Register if it meets any of the four National Register criteria.

##### *California Senate Bill 18*

Existing law provides limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious sites, ceremonial sites, shrines, burial ground, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

Senate Bill was signed into law in September 2004 and went into effect on March 1, 2005. It places new requirements upon local governments for developments within or near “traditional tribal cultural places” (TTCP). Per SB 18, the law requires local jurisdictions to provide opportunities for involvement of California Native American tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Final Guidelines recommend that the NAHC provide written information as soon as possible but no later than 30 days after receiving a request to inform the lead agency if the proposed project is determined



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### CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

to be in proximity to a TTCP and another 90 days for tribes to respond to a local government if they want to consult to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by the NAHC who have requested consultation, or it may not.

SB 18 is triggered before the adoption, revision, amendment, or update of a city's or county's general plan. Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, the Final Tribal Guidelines advises that SB 18 requirements extend to specific plans as well, because state planning law requires local governments to use the same process for amendment or adoption of specific plans as general plans (defined in Government Code § 65453). In addition, SB 18 provides a new definition of TTCP requiring a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies, or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies (previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities). SB 18 law also amended Civil Code Section 815.3 and adds California Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

#### *Assembly Bill 52*

AB 52 took effect July 1, 2015, and requires inclusion of a new section in CEQA documents titled Tribal Cultural Resources, which includes heritage sites. Under AB 52, a tribal cultural resource is defined as similar to tribal cultural places under SB 18—sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. Or the lead agency, supported by substantial evidence, chooses at its discretion to treat the resources as a tribal cultural resource.

Similar to SB 18, AB 52 requires consultation with tribes at an early stage to determine whether the project would have an adverse impact on the TCR and define mitigation to protect them. Per AB 52, within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it. The tribe then has 30 days of receiving the notification to respond if it wishes to engage in consultation. The lead agency must initiate consultation within 30 days of receiving the request from the tribe. Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a tribal cultural resource, or a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached. Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on tribal cultural resources and discuss feasible alternatives or mitigation that avoid or lessen the impact.

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### CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

#### Local Regulations

##### *Contra Costa County General Plan*

The following policies, which pertain to historic and cultural resources, are included in the Open Space Element:

- **Policy 9-28:** Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership.
- **Policy 9-29:** Buildings or structures that have visual merit and historic value shall be protected.
- **Policy 9-30:** Development surrounding areas of historic significance shall have compatible and high-quality design in order to protect and enhance the historic quality of the area.
- **Policy 9-31:** Within the Southeast County area, applicants for subdivision or land use permits to allow non-residential uses shall provide information to the County on the nature and extent of the archeological resources that exist in the area. The County Planning Agency shall be responsible for determining the balance between multiple use of the land and protection of resources.

#### 5.5.1.2 EXISTING CONDITIONS

A systematic archaeological survey has not been conducted for Contra Costa County. There are, however, approximately 600 archaeological sites within the county which have been recorded with the Northwest Information Center at Sonoma State University. Identification of these archaeological sites is largely the result of sporadic surveys conducted in association with development proposals. Large areas of the county that have been retained in agriculture have never been surveyed and may yield prehistoric settlement patterns.

Substantial areas within Southeast County have been identified by various governmental agencies and knowledgeable individuals as containing unique biological habitats, scenic values, and significant archaeological resources. Specifically, on land west of Vasco Road, wind has created caves in sandstone cliffs overlooking the San Joaquin Valley. These caves were used by some of the county's earliest inhabitants, and valuable Native American artifacts have been discovered. In particular, well-preserved pictographs (Native American paintings) have been discovered in the caves, as well as numerous middens in the adjacent areas.

Both public and private stewardship of the resources onsite shall be considered as long as the protection is long-term and guaranteed in some manner. The acquisition of lands in these areas by East Bay Regional Park District (EBRPD), and acquisition of watershed lands by Contra Costa Water District (CCWD), will aid in the permanent protection of some of these archaeological resources.

Due to the fragile nature of some of these resources, public access to the areas should be limited or restricted in some cases.

A historic resources inventory was compiled in 1976 by the County in coordination with the local historical societies. While the historic resources inventory is not considered to be a comprehensive listing of the County's historic resources, it is a major starting point for the protection of these resources.

## 5. Environmental Analysis CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

There are 12 housing sites within a ¼ mile of two National Historic Places/Landmarks—Memorial Hall and William T. Hendrick House.

### 5.5.2 Thresholds of Significance

CEQA Guidelines Section 15064.5 provides direction on determining significance of impacts to archaeological and historical resources. Generally, a resource shall be considered “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated the with lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1; 14 CCR § 4852)

The fact that a resource is not listed in the California Register of Historical Resources, not determined to be eligible for listing, or not included in a local register of historical resources does not preclude a lead agency from determining that it may be a historical resource.

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- C-1 Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
- C-2 Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
- C-3 Disturb any human remains, including those interred outside of dedicated cemeteries.
- TCR-1 Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
  - i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
  - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

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### CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

#### 5.5.3 Proposed Housing Element Policies

There are no applicable proposed Housing Element policies pertaining to cultural resources and tribal cultural resources.

#### 5.5.4 Environmental Impacts

##### 5.5.4.1 DISCUSSION OF NO CULTURAL AND TRIBAL CULTURAL RESOURCES IMPACTS

All of the impacts would be potentially significant.

##### 5.5.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.5-1: Development of the project could impact an identified historic resource. [Threshold C-1]

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There are 12 housing sites within a ¼ mile of two National Historic Places/Landmarks—Memorial Hall and William T. Hendrick House. However, as development would not occur on these sites, these historic resources would not be impacted.

Structures on the proposed sites which are 50 year or older could have the potential to be designated as a historic resource pursuant to Section 15064.5. Future development under the proposed project could adversely impact historic resources through changes to accommodate adaptive use, removal, or reconstruction. Currently known or future historic sites or resources listed in the national, California, or local registers maintained by the County would be protected through state and federal regulations restricting alteration, relocation, and demolition of historical resources. Compliance with the state and federal regulations are intended to ensure that development would not result in adverse impacts to identified historic and cultural resources, however it is always a potential. Furthermore, housing construction under recent legislation such as SB 35, AB 2011, and SB 6 cannot result in the demolition of historic structures. Regulations provide a process for recognizing historic buildings and places, though they do not prevent the reuse or modification of them. As such, impacts would be potentially significant.

***Level of Significance Before Mitigation:*** Impact 5.5-1 would be potentially significant.

#### *Mitigation Measures*

CUL-1 Prior to construction activities, the future project applicant shall retain a qualified historian to perform a historic resources analysis of the structures onsite. If the structures are found to be historically significant, the historian shall document the structures using the Historic American Building Survey (HABS) Level III standards as a guideline for recording the buildings through a compilation of photographs, drawings, and written description to record the historic resource:

- **Written Data:** The history or the property and description of the historic resource shall be prepared.
- **Drawings:** A sketch plan of the interior floorplan of the building shall be prepared.

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- **Photographs:** Large-format photographs and negatives shall be produced to capture interior and exterior views of the structure. At least two large format pictures shall be taken to show the building's setting in context and in relationship to its location. The photographs and negatives must be created using archival stable paper and processing procedures.
- **Document:** The HABS Level III document must be produced on archival-quality paper, and all large format photographs and negatives labeled to HABS standards. A digital version of the HABS document shall be prepared with the hard copy. The final HABS LEVEL III document shall be donated to the Contra Costa County Historical Society and/or other responsible repository within the region.

**Level of Significance After Mitigation:** Impact 5.5-1 would be significant and unavoidable.

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Impact 5.5-2: Development of the project could impact archaeological resources. [Threshold C-2]

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Implementation of the proposed project could result in a substantial adverse change in the significance of an archaeological resource, as well as the potential disturbance of currently undiscovered archaeological resources on future development sites. Therefore, this impact is potentially significant.

**Level of Significance Before Mitigation:** Impact 5.5-2 would be potentially significant.

### *Mitigation Measures*

CUL-2 Prior to construction activities, the future project applicant shall retain a qualified archaeologist to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. If cultural resources are discovered during ground disturbing activities, all ground disturbance activities within 50 feet of the find shall be halted until a meeting is convened between the developer, archaeologist, tribal representatives, and the Director of the Conservation and Development Department. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representatives, developer, and archaeologist, a decision shall be made, with the concurrence of the Director of the Conservation and Development Department, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.

**Level of Significance After Mitigation:** Impact 5.5-2 would be less than significant.

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Impact 5.5-3: Grading activities could potentially disturb human remains. [Threshold C-3]

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In the unlikely event that human remains are discovered during grading or construction activities within these sites, compliance with State law (Health and Safety Code § 7050.5) (HSC § 7050.5) would be required. These requirements are imposed on any construction activity in which human remains are detected, and include the following provisions:

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- There shall be no further excavation or disturbance of the site or nearby area reasonably suspected to overlie adjacent human remains until:
  - The County coroner is contacted to determine that no investigation of the cause of death is required; and
  - If the coroner determines the remains to be Native American:
    - The coroner shall contact the Native American Heritage Commission within 24 hours;
    - The NAHC shall identify the person or person it believes to be most likely descended from the deceased Native American;
    - The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of which appropriate dignity the human remains and any associated grave goods as provided in Public Resources Code § 5097.98 (PRC § 5097.98); or
  - Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further and future subsurface disturbance pursuant to PRC § 5097.98(e).
    - The NAHC is unable to identify a most likely descendant.
    - The most likely descendant is identified by the NAHC, fails to make a recommendation within 48 hours of being granted access to the site; or
    - The landowner or his authorized representative reject the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

Without mitigation measures, impacts would be potentially significant.

***Level of Significance Before Mitigation:*** Impact 5.5-3 would be potentially significant.

#### *Mitigation Measures*

- CUL-3 It is understood by all parties that unless otherwise required by law, the site of any burial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254(r), and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).
- CUL-4 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to the origin. Further, pursuant to Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the County Coroner determined the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the “most likely

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descendant.” The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

***Level of Significance After Mitigation:*** Impact 5.5-3 would be less than significant.

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Impact 5.5-4: The proposed project could cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or a resource determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. [Threshold TCR-1]

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In accordance with AB 52 and SB 18 requirements, the County sent invitation letters to representatives of the Native American contacts provided by the NAHC on January 15, 2021, formally inviting tribes to consult with the County on the upcoming General Plan Update. Some of the land use changes proposed with the General Plan update will help meet the RHNA needs of the Housing Element will be implemented.

The Confederated Villages of Lisjan Nation Tribe requested consultation and consulted with the County in November of 2021 regarding the draft goals, policies and actions of the General Plan Update. During this process, the Lisjan Tribe provided comments and edits for the General Plan in addition to mitigation measures that have been incorporated into the proposed project as mitigation measures TCR-5 through TCR-9. No further consultation was requested from the Tribe.

Future development could include ground disturbing activities that may have sensitive tribal cultural resources. Grading and construction activities of undeveloped areas or redevelopment that requires more intensive soil excavation than needed for the existing development could potentially cause disturbance to tribal cultural resources by potentially unearthing previously unknown/unrecorded tribal cultural resources.

Mitigation measures TCR-1 through TCR-4 require tribal monitoring at all potentially sensitive project sites, and the cultural resources agreement will include a process for the disposition of any finds associated with the project. The County will work with the tribe to address any artifacts unearthed during construction in accordance with the mitigation measures. By working with the tribe and following the mitigation measures, impacts to tribal cultural resources will be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.5-4 would be potentially significant.

### *Mitigation Measures*

TCR-1 Prior to the issuance of grading permits for projects on previously undisturbed sites or as directed by the County, future project applicants are required to enter into a cultural resources’ treatment agreement with the culturally affiliated tribe. This agreement will address the treatment and disposition of cultural resources and human remains that may be impacted as a result of the development of a project on a Housing Element site, as well as provisions for tribal monitors. The applicant must provide a copy of the cultural resources treatment agreement to the County prior to issuance of a grading permit. If cultural resources are discovered during the project

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construction, all work in the area shall cease and a qualified archaeologist and representatives of the culturally affiliated tribe shall be retained by the project sponsor to investigate the find and make recommendations as to treatment and mitigation.

- TCR-2 A qualified archaeological monitor will be present project sites that require ground disturbance of previously undisturbed land or as required by the County and will have the authority to stop and redirect grading activities, in consultation with the culturally affiliated tribe and their designated monitors, to evaluate the significance of any archaeological resources discovered on the property.
- TCR-3 Tribal monitors from the culturally affiliated tribe shall be allowed to monitor all grading, excavation, and groundbreaking activities, including archaeological surveys, testing, and studies, for applicable projects, including projects on previously undisturbed sites or as directed by the County. All monitoring activities are to be compensated by the project applicant.
- TCR-4 The landowner agrees to relinquish ownership of all cultural resources, including all archaeological artifacts that are found on the project site and project vicinity, to the culturally affiliated tribe for proper treatment and disposition.

***Level of Significance After Mitigation:*** Impact 5.5-4 would be less than significant.

#### 5.5.5 Cumulative Impacts

The cumulative setting associated with the proposed project includes approved, proposed, planned, and other reasonably foreseeable projects and development in the County. Developments and planned land uses, including future development pursuant to the proposed project would cumulatively contribute to impacts to know and unknown cultural and tribal cultural resources in the area. As with the proposed project, each related cumulative project would be required to comply with AB 52, PRC Section 21083.2(i), and HSC § 7050.5 which addresses accidental discoveries of archaeological site and resources, including tribal cultural resources, as well as human remains. The mitigation measures indicated in this Section would apply to future development in the County. Therefore, any discoveries of cultural or tribal cultural resources caused by the proposed project or related projects would be mitigated to a less than significant level. However, demolition of historic structures cannot be mitigated, and as such, impacts would be cumulatively considerable.

#### 5.5.6 Level of Significance Before Mitigation

Without mitigation, all impacts would be **potentially significant**:

#### 5.5.7 Mitigation Measures

##### Impact 5.5-1

- CUL-1 Prior to construction activities, the future project applicant shall retain a qualified historian to perform a historic resources analysis of the structures onsite. If the structures are found to be historically significant, the historian shall document the structures using the Historic American



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Building Survey (HABS) Level III standards as a guideline for recording the buildings through a compilation of photographs, drawings, and written description to record the historic resource:

- **Written Data:** The history or the property and description of the historic resource shall be prepared.
- **Drawings:** A sketch plan of the interior floorplan of the building shall be prepared.
- **Photographs:** Large-format photographs and negatives shall be produced to capture interior and exterior views of the structure. At least two large format pictures shall be taken to show the building's setting in context and in relationship to its location. The photographs and negatives must be created using archival stable paper and processing procedures.
- **Document:** The HABS Level III document must be produced on archival-quality paper, and all large format photographs and negatives labeled to HABS standards. A digital version of the HABS document shall be prepared with the hard copy. The final HABS LEVEL III document shall be donated to the Contra Costa County Historical Society and/or other responsible repository within the region.

### Impact 5.5-2

CUL-2 Prior to construction activities, the future project applicant shall retain a qualified archaeologist to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. If cultural resources are discovered during ground disturbing activities, all ground disturbance activities within 50 feet of the find shall be halted until a meeting is convened between the developer, archaeologist, tribal representatives, and the Director of the Conservation and Development Department. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representatives, developer, and archaeologist, a decision shall be made, with the concurrence of the Director of the Conservation and Development Department, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.

### Impact 5.5-3

CUL-3 It is understood by all parties that unless otherwise required by law, the site of any burial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254(r), and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254(r).

CUL-4 If human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made the necessary findings as to the origin. Further, pursuant to Public Resources Code Section 5097.98(b) remains shall be left in

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### CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

place and free from disturbance until a final decision as to the treatment and disposition has been made. If the County Coroner determined the remains to be Native American, the Native American Heritage Commission shall be contacted within the period specified by law (24 hours). Subsequently, the Native American Heritage Commission shall identify the “most likely descendant.” The most likely descendant shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

#### Impact 5.5-4

- TCR-1 Prior to the issuance of grading permits for projects on previously undisturbed sites or as directed by the County, future project applicants are required to enter into a cultural resources’ treatment agreement with the culturally affiliated tribe. This agreement will address the treatment and disposition of cultural resources and human remains that may be impacted as a result of the development of a project on a Housing Element site, as well as provisions for tribal monitors. The applicant must provide a copy of the cultural resources treatment agreement to the County prior to issuance of a grading permit. If cultural resources are discovered during the project construction, all work in the area shall cease and a qualified archaeologist and representatives of the culturally affiliated tribe shall be retained by the project sponsor to investigate the find and make recommendations as to treatment and mitigation.
- TCR-2 A qualified archaeological monitor will be present project sites that require ground disturbance of previously undisturbed land or as required by the County and will have the authority to stop and redirect grading activities, in consultation with the culturally affiliated tribe and their designated monitors, to evaluate the significance of any archaeological resources discovered on the property.
- TCR-3 Tribal monitors from the culturally affiliated tribe shall be allowed to monitor all grading, excavation, and groundbreaking activities, including archaeological surveys, testing, and studies, for applicable projects, including projects on previously undisturbed sites or as directed by the County. All monitoring activities are to be compensated by the project applicant.
- TCR-4 The landowner agrees to relinquish ownership of all cultural resources, including all archaeological artifacts that are found on the project site and project vicinity, to the culturally affiliated tribe for proper treatment and disposition.

#### 5.5.8 Level of Significance After Mitigation

The mitigation measures would reduce potential impacts to cultural and tribal cultural resources to a level that is less than significant, with the exception of historic resources. As indicated in Impact 5.5-1, demolition of historical structures would be **significant and unavoidable**.

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### 5.6 ENERGY

This chapter describes the potential energy impacts associated with the adoption and implementation of the Housing Element (proposed project). This chapter describes the regulatory framework and existing conditions, identifies criteria used to determine impact significance, provides an analysis of the potential energy impacts, and identifies Housing Element policies and feasible mitigation measures that could mitigate any potentially significant impacts.

#### 5.6.1 Environmental Setting

Section 21100(b)(3) of CEQA requires that an EIR include a detailed statement setting for the mitigation measures proposed to minimize significant effects on the environment, including but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy. Appendix F of the State CEQA Guidelines states that, in order to ensure that energy implications are considered in project decisions, an EIR should include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

In accordance with Appendix F and G of the State CEQA Guidelines, this EIR includes relevant information and analyses that address the energy implications of the proposed project and summarize its anticipated energy needs, impacts, and conservation measures. Information found herein, as well as related aspects of the proposed project's energy implications, are discussed in greater detail elsewhere in this EIR, including Section 5.3, *Air Quality*, 5.8, *Greenhouse Gas Emissions*, and 5.16, *Transportation*.

##### 5.6.1.1 REGULATORY BACKGROUND

###### Federal Regulations

###### *Federal Energy Policy and Conservation Act*

The Energy Policy and Conservation Act of 1975 was established in response to the 1973 oil crisis. The act created the Strategic Petroleum Reserve, established vehicle fuel economy standards, and prohibited the export of U.S. crude oil (with a few limited exceptions). It also created Corporate Average Fuel Economy (CAFE) standards for passenger cars starting in model year 1978. The CAFE Standards are updated periodically to account for changes in vehicle technologies, driver behavior, and/or driving conditions.

The federal government issued new CAFE standards in 2012 for model years 2017 to 2025 that required a fleet average of 54.5 miles per gallon (MPG) for model year 2025. However, on March 30, 2020, the United States Environmental Protection Agency (USEPA) finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021–2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

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On December 21, 2021, under direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration repealed Safer Affordable Fuel Efficient Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, on March 31, 2022, the National Highway Traffic Safety Administration finalized new fuel standards in response to EO 13990. Fuel efficiency under the standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which would be a 10 MPG increase relative to model year 2021 (NHTSA 2022).

#### *Energy Independence and Security Act of 2007*

The Energy Independence and Security Act of 2007 (Public Law 110-140) seeks to provide the nation with greater energy independence and security by increasing the production of clean renewable fuels; improving vehicle fuel economy; and increasing the efficiency of products, buildings, and vehicles. The Act sets increased Corporate Average Fuel Economy Standards; the Renewable Fuel Standard; appliance energy efficiency standards; building energy efficiency standards; and accelerated research and development tasks on renewable energy sources (e.g., solar energy, geothermal energy, and marine and hydrokinetic renewable energy technologies), carbon capture, and sequestration (USEPA 2022).

#### *Energy Policy Act of 2005*

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. This Act includes tax incentives for energy conservation improvements in commercial and residential buildings, fossil fuel production and clean coal facilities, and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers.

#### *National Energy Policy*

Established in 2001 by the National Energy Policy Development Group, the National Energy Policy is designed to help the private sector and state and local governments promote dependable, affordable, and environmentally sound production and distribution of energy for the future. Key issues addressed by the energy policy are energy conservation, repair and expansion of energy infrastructure, and ways of increasing energy supplies while protecting the environment.

#### *Natural Gas Pipeline Safety Act of 1968*

The Natural Gas Pipeline Safety Act of 1968 authorizes the United States Department of Transportation to regulate pipeline transportation of flammable, toxic, or corrosive natural gas and other gases as well as the transportation and storage of liquefied natural gas. The Pipeline and Hazardous Materials Safety Administration within the Department of Transportation develops and enforces regulations for the safe, reliable, and environmentally sound operation of the nation's 2.6-million-mile pipeline transportation system.

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#### State Regulations

##### *Warren-Alquist Act*

Established in 1974, the Warren-Alquist Act created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's unsustainable growing demand for energy resources. The CEC's core responsibilities include advancing State energy policy, encouraging energy efficiency, certifying thermal power plants, investing in energy innovation, developing renewable energy, transforming transportation, and preparing for energy emergencies. The Warren-Alquist Act is updated annually to address current energy needs and issues, and its latest edition was in January 2022.

##### *California Public Utilities Commission*

The California Public Utilities Commission (CPUC) adopted the Long-Term Energy Efficiency Strategic Plan (LTEESP) in September 2008 and adopted the 2011 Update in Fall of 2010. Overall, the LTEESP provides a framework for energy efficiency in California through the year 2020 and beyond. It articulates a long-term vision, as well as goals for each economic sector, identifying specific near-term, mid-term, and long-term strategies to assist in achieving these goals. This Plan sets forth the following four goals, known as Big Bold Energy Efficiency Strategies, to achieve significant reductions in energy demand (CPUC 2011):

- All new residential construction in California will be zero net energy by 2020<sup>1</sup>;
- All new commercial construction in California will be zero net energy by 2030;
- Heating, ventilation and air conditioning commonly referred to as "HVAC" will be transformed to ensure that its energy performance is optimal for California's climate; and
- All eligible low-income customers will be given the opportunity to participate in the low-income energy efficiency program by 2020.

With respect to the commercial sector, the Long-Term Energy Efficiency Strategic Plan notes that commercial buildings, which include schools, hospitals, and public buildings, consume more electricity than any other end-use sector in California. The commercial sector's five billion-plus square feet of space accounts for 38 percent of the State's power use and over 25 percent of natural gas consumption. Lighting, cooling, refrigeration, and ventilation account for 75 percent of all commercial electric use, while space heating, water heating, and cooking account for over 90 percent of gas use. In 2006, office, retail, and schools and colleges were in the top five facility types for electricity and gas consumption, accounting for approximately 10 percent of State's electricity and gas use (CPUC 2011).

The CPUC and CEC have adopted the following goals to achieve zero net energy (ZNE) levels by 2030 in the commercial sector:

- **Goal 1.** New construction will increasingly embrace zero net energy performance (including clean, distributed generation), reaching 100 percent penetration of new starts in 2030.

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<sup>1</sup> Zero net energy buildings are buildings that the total amount of energy used by the building on an annual basis is equal to or less than the amount of renewable energy created on the site.

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- **Goal 2.** 50 percent of existing buildings will be retrofit to zero net energy by 2030 through achievement of deep levels of energy efficiency and with the addition of clean distributed generation.

#### *Renewable Portfolio Standard*

##### *Senate Bills 1078, 107, X1-2, and Executive Order S-14-08*

The California Renewables Portfolio Standard (RPS) Program was established in 2002 under Senate Bill (SB) 1078 (Sher) and 107 (Simitian). The RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase the use of eligible renewable energy resources to 33 percent of total procurement by 2020. Initially under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the State's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). The CPUC is required to provide quarterly progress reports on progress toward RPS goals. This has accelerated the development of renewable energy projects throughout the State. For year 2020, the three largest retail energy utilities provided an average of 43 percent of its supplies from renewable energy sources. Community choice aggregators provided an average of 41 percent of its supplies from renewable sources (CPUC 2021).

##### *Senate Bill 350*

Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

##### *Senate Bill 100*

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirement of 45 percent renewable energy by 2027 with the requirement of 50 percent by 2026 and also raises California's RPS requirements for 2050 from 50 percent to 60 percent. SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. The bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the Bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resources shuffling to achieve the 100 percent carbon-free electricity target.

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#### *Appliance Efficiency Regulations*

California's Appliance Efficiency Regulations contain energy performance, energy design, water performance, and water design standards for appliances (including refrigerators, ice makers, vending machines, freezers, water heaters, fans, boilers, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings) that are sold or offered for sale in California (California Code of Regulations Title 20, Parts 1600–1608). These standards are updated regularly to allow consideration of new energy efficiency technologies and methods (CEC 2022a).

#### *Title 24, Part 6, Energy Efficiency Standards*

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resource Conservation and Development Commission (now the California Energy Commission or CEC) in June 1977 and most recently revised in 2016 (California Code of Regulations Title 24, Part 6). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

The 2019 Building Energy Efficiency Standards, which were adopted on May 9, 2018, went into effect starting January 1, 2020. The 2019 Standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; and 4) nonresidential lighting requirements (CEC 2018b). Under the 2019 Standards, nonresidential buildings would be 30 percent more energy efficient compared to the 2016 Standards, and single-family homes would be 7 percent more energy efficient (CEC 2018a). When accounting for the electricity generated by solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 Standards (CEC 2018a).

Furthermore, on August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023. The 2022 standards will require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021a).

#### *Title 24, Part 11, Green Building Standards*

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (California Code of Regulations Title 24, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. It includes

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mandatory requirements for new residential and nonresidential buildings throughout California. CALGreen is intended to: 1) reduce GHG emissions from buildings; 2) promote environmentally responsible, cost-effective, healthier places to live and work; 3) reduce energy and water consumption; and 4) respond to the directives by the governor. The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2019. The 2019 Standards became effective on January 1, 2020.

Overall, the code is established to reduce construction waste, make buildings more efficient in the use of materials and energy, and reduce environmental impacts during and after construction. CALGreen contains requirements for construction site selection; stormwater control during construction; construction waste reduction; indoor water use reduction; materials selection; natural resource conservation; site irrigation conservation; and more. It provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. CALGreen also requires building commissioning, which is a process for verifying that all building systems (e.g., heating and cooling equipment and lighting systems) are functioning at their maximum efficiency (CBSC 2019).

#### *Assembly Bill 1493*

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I Standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles. In January 2012, the California Air Resources Board approved the Pavley Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions (CARB 2017).

#### *Title 13, Chapter 9, Article 4.8, Section 2449*

Section 2449 of the California Code of Regulations, Title 13, Chapter 9, Article 4.8 was adopted on May 2, 2008 that limits non-essential idling of fleets to no more than five consecutive minutes at any location. This idling restriction applies to all vehicles in California with a diesel-fueled or alternative diesel-fueled off-road engine, unless a waiver provides sufficient justification that such idling is necessary.

#### *Senate Bill 375*

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles



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traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Association of Bay Area Governments (ABAG) is the MPO for the Bay Area region, which includes the County of Contra Costa. Pursuant to the recommendations of the Regional Transportation Advisory Committee (RTAC), CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

#### *Executive Order N-79-20*

On September 23, 2020, Executive Order N-79-20 was issued, which sets a time frame for the transition to zero-emissions (ZE) passenger vehicles and trucks in addition to off-road equipment. It directs CARB to develop and propose the following:

- Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs (zero-emission vehicles) sold in the California toward the target of 100 percent of in-state sales by 2035.
- Medium- and heavy-duty vehicle regulations requiring increasing volumes of new ZE trucks and buses sold and operated in California toward the target of 100 percent of the fleet transitioning to ZEVs by 2045 everywhere feasible, and for all drayage trucks to be ZE by 2035.

Strategies to achieve 100 percent zero emissions from all off-road vehicles and equipment operations in California by 2035, in cooperation with other State agencies, the EPA, and local air districts.

#### Regional Regulations

##### *Plan Bay Area 2050*

Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted *Plan Bay Area 2050* on October 21, 2021 (ABAG/MTC 2021a). *Plan Bay Area 2050* provides transportation and environmental strategies to continue to meet the regional transportation-related GHG reduction goals of SB 375. Under the *Plan Bay Area 2050* strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented (ABAG/MTC 2021a).

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the *Plan Bay Area* land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and

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associated GHG emissions reductions. In Contra Costa County, several PDAs have been designated in the unincorporated portion of the County (ABAG/MTC 2021b).

#### Local Regulations

##### *Contra Costa County Ordinance Code*

Chapter 718-12, Solar Energy Systems, of the Contra Costa County Ordinance Code requires a building permit to install a solar energy system, and all applications will be processed in accordance with Government Code Section 658650.5. The County has an expedited, streamlined permitting process that applies for small residential rooftop solar energy systems, as described in Section 718-14.004, Review of Applications for Small Residential Rooftop Solar Energy Systems, of the Ordinance Code.

Ordinance No. 2022-02, All-Electric Ordinance (New Construction), amends the 2019 California Energy Code to require the following building types to be all-electric:

- Residential (including single-family and multi-family buildings)
- Detached Accessory Dwelling Units
- Hotel
- Office
- Retail

Section 74-4.006, Amendments to CGBSC, of the Ordinance Code states that the 2019 California Green Building Standards Code (CGBSC) is amended by the changes, additions, and deletions set forth in this Chapter of the Ordinance Code, and that states that for any new multifamily dwelling other than a dwelling type specified in Section 4.106.4.1, if residential parking is provided, 10 percent of the total number of parking spaces at the dwelling site shall be electric vehicle charging spaces.

##### *Climate Action Plan*

Contra Costa County is updating its Climate Action Plan which outlines the actions the County will take to address climate change. The updated Climate Action Plan is still being prepared and will be completed in late 2022. However, as stated in the current Climate Action Plan (2015), the County's Climate Action Plan demonstrates Contra Costa County's commitment to addressing the challenges of climate change by reducing local GHG emissions while improving community health (Contra Costa County 2015). The Climate Action Plan identifies how the County will achieve the AB 32 GHG emissions reduction target of 15 percent baseline levels by the year 2020, in addition to supporting other public health, energy efficiency, water conservation, and air quality goals identified in the County's General Plan. In addition to reducing GHG emissions, the current Climate Action Plan include actions that improve public health and result in additional benefits to the community such as lower energy bills and enhanced quality of life.

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#### 5.6.1.2 EXISTING CONDITIONS

##### Electricity and Natural Gas

Electricity is quantified using kilowatts (kW) and kilowatt-hours (kWh). A kW is a measure of 1,000 watts of electrical power and a kWh is a measure of electrical energy equivalent to a power consumption of 1,000 watts for one hour. The kWh is commonly used as a billing unit for energy delivered to consumers by electric utilities. According to the CEC's "Tracking Progress" regarding statewide energy demand, total electric energy usage in California was 277,764 gigawatt hours in 2021 (CEC 2021b). A gigawatt is equal to one million kilowatts.

##### Energy Providers

###### *MCE*

As of April 2018, the majority of Contra Costa County residents (Concord, Danville, Martinez, Moraga, Oakley, Pinole, Pittsburg, San Ramon, Walnut Creek, Lafayette, Richmond, San Pablo, El Cerrito, and Unincorporated Contra Costa County) are buying electricity from MCE, a not-for-profit clean energy provider (Contra Costa County 2022). On March 24, 2020, the Board of Supervisors voted to go Deep Green 100 percent renewable (all power which customers buy comes from 100 percent non-polluting wind and solar power) with MCE for the majority of the County's accounts. Sources of electricity sold by MCE under the Deep Green 100 percent renewable plan in 2019, the latest year for which data are available, were (MCE 2020):

- 100 percent renewable, consisting of solar and wind

Customers also have the option of selecting MCE's Light Green, which provides 60 percent renewable electricity. Conversely, customers have the option to opt-out of MCE renewable energy sources and receive their energy service from PG&E. PG&E is responsible for maintaining transmission lines, handling customer billing, and responding to new service requests and emergencies. MCE determines the power source or electric generation, while Pacific Gas and Electric Company (PG&E) continues to deliver the electricity, maintain power lines, provide repairs, and send customers a monthly bill within the MCE service area.

###### *Pacific Gas and Electric Company*

###### *Electricity*

PG&E is a publicly traded utility company that generates, purchases, and transmits energy under contract with the CPUC. Its service territory is 70,000 square miles in area, roughly extending north to south from Eureka to Bakersfield, and east to west from the Sierra Nevada range to the Pacific Ocean. The electricity distribution system of PG&E consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2022a). PG&E owns and maintains above and below ground networks of electric and gas transmission and distribution facilities throughout the County.

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PG&E electricity is generated by a combination of sources such as coal-fired power plants, nuclear power plants, and hydro-electric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants or “solar farms.” “The Grid,” or bulk electric grid, is a network of high-voltage transmission lines, linked to power plants within the PG&E system. The distribution system, comprised of lower voltage secondary lines, is at the street and neighborhood level, and consists of overhead or underground distribution lines, transformers, and individual service “drops” that connect to the individual customer.

#### Natural Gas

PG&E gas transmission pipeline systems serve approximately 4.5 million gas customers in northern and central California (PG&E 2022a). The system is operated under an inspection and monitoring program. The system operates in real time on a 24-hour basis, and includes leak inspections, surveys, and patrols of the pipelines. PG&E also adopted Pipeline 2020 program, which aims to modernize critical pipeline infrastructure, expand the use of automatic or remotely operated shut-off valves, catalyze development of next-generation inspection technologies, develop industry-leading best practices, and enhance public safety partnerships with local communities, public officials, and first responders. Total natural gas consumption in PG&E’s service area was 453,301,216,610 kilo-BTU (KBTU) for 2020 (CEC 2022b).

#### Existing Energy Infrastructure in Contra Costa

The existing electricity and natural gas use demand in Contra Costa County is shown in Table 5.6-1, *Estimated Existing Electricity and Natural Gas Demand*.

Table 5.6-1 Estimated Existing Electricity and Natural Gas Demand

Land Use	Electricity Usage (kWh per year)	Natural Gas Usage (Therms per year)
Residential	293,561,300	30,100,640
Total	293,561,300	30,100,640

Source:

<sup>1</sup> Electricity total makes use of a five-year (2016–2020) annual electricity consumption average based on data provided by PG&E and MCE.

#### Existing Transportation Fuels

Table 5.6-2, *Existing Operation-Related Annual Fuel Usage*, shows the fuel usage associated with vehicle miles traveled (VMT) currently generated under existing baseline conditions based on fuel usage data obtained from EMFAC2021, Version 1.0.1, and VMT data provided by Fehr and Peers (see Appendix H, *Transportation Data*, of this Draft EIR). VMT is based on vehicle trips beginning and ending in the County boundaries and from external/internal trips (i.e., trips that either begin or end in the County).

Table 5.6-2 Existing Operation-Related Annual Fuel Usage

	Gas		Diesel		Compressed Natural Gas		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	Gallons	VMT	kWh
Existing Baseline	1,055,664,330	46,231,305	62,129,682	7,412,023	1,070,505	213,066	18,046,572	49,474,598

Source: EMFAC2021, version 1.0.1.

Note: VMTs based on daily VMT provided by Fehr and Peers. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

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### 5.6.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- E-1 Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
- E-2 Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.
- E-3 In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact with respect to energy.

The analysis also utilizes considerations identified in Appendix F of the CEQA Guidelines, as appropriate, to assist in answering the Appendix G questions. The factors to evaluate energy impacts under Threshold (a) include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.
- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

### 5.6.3 Proposed Housing Element Policies

The following proposed Housing Element policies pertain to energy:

- **Policy HE-P1.1:** Assist low-income homeowners in maintaining and improving residential properties through housing rehabilitation and energy-efficiency assistance programs. Promote increased awareness among property owners and residents of the importance of property maintenance to neighborhood quality.
- **Policy HE-A1.2:** Continue to offer the free weatherization program for extremely-low, very-low and low-income homeowners. The County DCD offers a free weatherization program for extremely low-, very low-, and low-income homeowners and renters. The program provides resources for minor home repairs and energy improvements, including attic insulation, weather stripping, pipe wrapping, furnace filters, shower heads, heaters/ovens, ceiling fans, door bottoms, etc. In addition, the program provides assistance to lower utility bills for lower-income households.

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- **Policy HE-P2.2:** Encourage and promote the production of housing in close proximity to public transportation and services.
- **Policy HE-P8.1:** Participate in State and Bay Area regional efforts to reduce energy consumption.
- **Policy HE-P8.3:** Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

### 5.6.4 Environmental Impacts

#### 5.6.4.1 METHODOLOGY

This energy evaluation was prepared in accordance with the requirements of CEQA to determine if significant energy impacts are likely to occur in conjunction with future development in the unincorporated County. The energy usage inventory and forecast are based on data compiled for the Climate Action Plan (CAP) Update and is included as Appendix 5.3-1 to the DEIR.

The following is a summary of the assumptions used for the County's energy analysis:

- **On-Road Transportation.** Fuel use was based on Origin-Destination Method VMT provided by Fehr and Peers in the unincorporated County (see Section 5.17, *Transportation*), and modeled using CARB's EMFAC2021 v.1.0.1 web database and calendar year 2019 (existing) and 2030 fuel usage rates.
- **Energy (Natural Gas and Electricity).** Emissions associated with natural gas and electricity use for residential land uses in the County were modeled based on data provided by PG&E and MCE as part of the CAP Update (Appendix 5.3-1). Forecasts are adjusted for increases in population in the County based on the with state actions energy forecast conducted for CAP Update.

#### 5.6.4.2 DISCUSSION OF NO ENERGY IMPACTS

All impacts in this chapter would be less than significant.

#### 5.6.4.3 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.6-1: Implementation of the proposed project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

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#### Short-Term Construction Impacts

Development projects constructed under the proposed project would create temporary demands for electricity. Natural gas is not generally required to power construction equipment, and therefore is not anticipated during construction phases. Electricity use would fluctuate according to the phase of construction. Additionally, it is anticipated that most electric-powered construction equipment would be hand tools (e.g., power drills, table saws, compressors) and lighting, which would result in minimal electricity usage during construction activities.

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Development projects would also temporarily increase demands for energy associated with transportation. Transportation energy use depends on the type and number of trips, VMT, fuel efficiency of vehicles, and travel mode. Energy use during construction would come from the transport and use of construction equipment, delivery vehicles and haul trucks, and construction employee vehicles that would use diesel fuel or gasoline. The use of energy resources by these vehicles would fluctuate according to the phase of construction and would be temporary. It is anticipated that most off-road construction equipment, such as those used during demolition and grading, would be gas or diesel powered. In addition, all operation of construction equipment would cease upon completion of project construction. Furthermore, the construction contractors would be required to minimize nonessential idling of construction equipment during construction in accordance with the California Code of Regulations Title 13, Chapter 9, Article 4.8, Section 2449. Such required practices would limit wasteful and unnecessary energy consumption. Also, future projects within County would be similar to projects currently in development within Contra Costa County. Overall, there would be no unusual project characteristics anticipated that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in other parts of California. Therefore, short-term construction activities that occur as a result of implementation of the proposed project would not result in inefficient, wasteful, or unnecessary fuel consumption.

Long-Term Impacts During Operation

Operation of potential future development accommodated under the proposed project would create additional demands for electricity and natural gas compared to existing conditions. Operational use of electricity and natural gas would include heating, cooling, and ventilation of buildings; water heating; operation of electrical systems; use of on-site equipment and appliances; lighting; and charging electric vehicles. Land uses accommodated under the proposed project would also result in additional demands for transportation fuels (e.g., gasoline, diesel, compressed natural gas, and electricity) associated with on-road vehicles.

*Nontransportation Energy*

Electrical service to the County is provided by PG&E and MCE through connections to existing off-site electrical lines and new on-site infrastructure. As shown in Table 5.6-3, *Year 2030 Forecast Electricity Consumption*, by year 2030, electricity use in Contra Costa County would increase by 13,207,240 kWh/year, or approximately 5 percent, from existing conditions.

Table 5.6-3 Year 2030 Forecast Electricity Consumption

Area	Electricity Usage, kWh per year (Subtotal)		
	Existing Baseline <sup>1</sup>	Year 2030 Forecast <sup>2</sup>	Net Change
Residential	293,561,300	306,768,540	13,207,240
Total	293,561,300	306,768,540	13,207,240

<sup>1</sup> Electricity usage is provided by PG&E and MCE.

<sup>2</sup> Residential energy forecasts are adjusted for increases in housing in the County and do account for reductions due to increase in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

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As shown in Table 5.6-4, *Year 2030 Forecast Natural Gas Consumption*, existing natural gas use in the County totals 30,100,640 therms annually. By 2030, natural gas use in the County would increase by 3,472,100 therms annually, or approximately 12 percent, from existing conditions to a total of 33,572,740 therms per year.

Table 5.6-4 Year 2030 Forecast Natural Gas Consumption

Area	Natural Gas Usage, therms per year (Subtotal)		
	Existing Baseline <sup>1</sup>	Year 2030 Forecast <sup>2</sup>	Net Change
Residential	30,100,640	33,572,740	3,472,100
Total	30,100,640	33,572,740	3,472,100

<sup>1</sup> Natural gas usage data provided by PG&E.

<sup>2</sup> Residential energy forecasts are adjusted for increases in housing and employment, respectively, in the County and do account for reductions due to increase in energy efficiency from compliance with the Building Energy Efficiency Standards and CALGreen.

While the electricity and natural gas demand for the County would increase compared to existing conditions, developments accommodated under the proposed project would be required to comply with the current and future updates to the Building Energy Efficiency Standards and CALGreen, which would contribute in reducing the energy demands shown in Tables 5.6-3 and 5.6-4. New and replacement buildings in compliance with these standards would generally have greater energy efficiency than existing buildings. It is anticipated that each update to the Building Energy Efficiency Standards and CALGreen will result in greater building energy efficiency and move closer toward buildings achieving zero net energy.

In addition to the Building Energy Efficiency Standards and CALGreen, the Housing Element Update includes a policy to increase energy efficiency and reduce wasteful, inefficient use of energy resources.

- **Policy HE-P8.1:** Participate in State and Bay Area regional efforts to reduce energy consumption.

Encouraging sustainable and energy-efficient building practices and using more renewable energy strategies will further reduce energy consumption within the County and move closer toward achieving zero net energy.

#### *Transportation Energy*

The growth accommodated under the proposed project would consume transportation energy from the use of motor vehicles (e.g., gasoline, diesel, compressed natural gas, and electricity). Table 5.6-5, *Operation-Related Annual Fuel Usage: Net Change from Existing*, shows the net change in VMT, fuel usage, and fuel efficiency under forecast year 2030 proposed project conditions from existing baseline year 2019 conditions.



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Table 5.6-5 Operation-Related Annual Fuel Usage: Net Change from Existing

Fuel Type	Existing Baseline Year 2019	Project Year 2030	Net Change from Existing Baseline
<b>Gasoline</b>			
VMT <sup>2</sup>	1,055,664,330	1,102,368,153	46,703,823
Gallons	46,231,305	40,495,738	-5,735,567
Miles Per Gallon	22.83	27.22	4.39
<b>Diesel</b>			
VMT <sup>2</sup>	62,129,682	60,792,834	-1,336,848
Gallons	7,412,023	6,743,626	-668,397
Miles Per Gallon	8.38	9.01	0.63
<b>Compressed Natural Gas</b>			
VMT <sup>2</sup>	1,070,505	1,787,084	716,579
Gallons	213,066	326,431	113,365
Miles Per Gallon	5.02	5.47	0.45
<b>Electricity</b>			
VMT <sup>2</sup>	18,046,572	96,131,689	78,085,117
kWh	49,474,598	232,376,171	182,901,573
Miles Per kWh	0.36	0.41	0.05
<b>Total VMT</b>	<b>1,136,911,089</b>	<b>1,261,079,760</b>	<b>124,168,671</b>

Source: EMFAC2021 Version 1.0.1.

Notes:

<sup>1</sup> Based on daily VMT provided by Fehr and Peers. VMT per year based on a conversion of VMT x 347 days per year to account for less travel on weekend, consistent with CARB statewide GHG emissions inventory methodology (CARB 2008).

As shown in Table 5.6-5, when compared to existing baseline year 2019 conditions, the proposed project would result in an increase in VMT for gasoline-, compressed natural gas-, and electric-powered vehicles, but not for diesel-powered vehicles. Although annual VMT would increase for gasoline-powered vehicles by 46,703,823 miles, gasoline fuel usage would decrease. The decrease in fuel usage for gasoline-powered vehicles and large increase in VMT and fuel usage for electric-powered vehicles are primarily based on the assumption in EMFAC that a greater mix of light-duty automobiles would be electric-powered in future years based on regulatory (e.g., Advanced Clean Cars) and consumer trends.

The overall VMT as shown in the table would be primarily attributable to the overall growth associated with the proposed project compared to existing conditions. As discussed in Chapter 5.14, *Population and Housing*, the proposed project would induce population and housing growth due to RHNA requirement to identify development sites for potential housing. While the land use amendments and zoning ordinance revisions would indirectly induce growth, the provisions of the housing units are much needed and mandated by the State. Therefore, the proposed project would not exceed the growth projections in SCAG's RTP/SCS growth forecasts for this region. Additionally, fuel efficiency of vehicles under year 2030 conditions would improve compared to existing baseline year. The improvement in fuel efficiency would be attributable to regulatory compliance (e.g., CAFE standards), resulting in new cars that are more fuel efficient and the attrition of older, less fuel-efficient vehicles. The CAFE standards are not directly applicable to residents or land use development projects, but to car manufacturers. Thus, residents of Contra Costa County do not have direct control in determining the fuel efficiency of vehicles manufactured and that are made available. However,

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compliance with the CAFE standards by car manufacturers would ensure that vehicles produced in future years have greater fuel efficiency and would generally result in an overall benefit of reducing fuel usage by providing the population of the County more fuel-efficient vehicle options. Furthermore, while the demand in electricity would increase under the proposed project, in conjunction with the regulatory (i.e., Renewables Portfolio Standard, SB 350, and SB 100) and general trend toward increasing the supply and production of energy from renewable sources, it is anticipated that a greater share of electricity used to power electric vehicles would be from renewable sources in future years (e.g., individual photovoltaic systems, purchased electricity from PG&E, and/or purchased electricity from MCE that is generated from renewable sources).

In addition to regulatory compliance that would contribute to more fuel-efficient vehicles and less demand in fuels, the Housing Element Update includes policies that will contribute to minimizing overall VMT, and thus fuel usage associated with the Unincorporated County. The following Housing Element Update policy focus on minimizing VMT through land use and transportation planning efforts that work in conjunction including:

- **Policy HE-P2.2:** Encourage and promote the production of housing in close proximity to public transportation and services.

Collectively, the policies and action listed above would minimize overall VMT, and thus fuel usage associated with potential future development in Contra Costa County. Furthermore, the proposed project would locate infill development of housing units to meet the housing needs within Contra Costa region, thus contributing to reduced energy use from the transportation sector. Therefore, this could result in shorter distances traveled between where people work and live and to amenities.

#### *Summary*

Overall, compliance with federal, State, and local regulations (e.g., Building Energy Efficiency Standards, CALGreen, Renewables Portfolio Standard, and CAFE standards) would increase building energy efficiency and vehicle fuel efficiency. Compliance would also reduce building energy demand and transportation-related fuel usage in the future. Additionally, the proposed project includes policies related to land use and transportation planning, energy efficiency, promotion of housing near public and active transit, and renewable energy generation that will contribute to minimizing building and transportation-related energy demands overall. Implementation of proposed policies under the proposed project in conjunction with and complementary to regulatory requirements, would ensure that energy demand associated with housing growth under the proposed project would not be inefficient, wasteful, or unnecessary. Therefore, energy impacts associated with implementation and operation of land uses accommodated under the following proposed project would be less than significant and no mitigation measures are required.

***Level of Significance Before Mitigation:*** Impact 5.6-1 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.6-1 would be less than significant.

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Impact 5.6-2: Implementation of the proposed project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

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California Renewables Portfolio Standard Program

The state’s electricity grid is transitioning to renewable energy under California’s RPS Program. Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. In general, California has RPS requirements of 33 percent renewable energy by 2020 (SB X1-2), 40 percent by 2024 (SB 350), 50 percent by 2026 (SB 100), 60 percent by 2030 (SB 100), and 100 percent by 2045 (SB 100). SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. The statewide RPS requirements do not directly apply to individual development projects, but to utilities and energy providers such as PG&E, whose compliance with RPS requirements would contribute to the State of California objective of transitioning to renewable energy. In addition, the Board of Supervisors voted to go Deep Green 100 percent renewable (all power which customers buy comes from 100 percent non-polluting wind and solar power) with MCE for the majority of the County’s accounts. Even if customers in the County were to opt-out of the Deep Green program, and therefore receive all their electricity from PG&E, 33 percent of PG&E’s electricity is generated from renewable energy since 2017 (PG&E 2022b). By 2030, PG&E is set to meet the State’s new 60 percent renewable energy mandate set forth in SB 100.

The land uses accommodated under the proposed project would be required to comply with the current and future iterations of the Building Energy Efficiency Standards and CALGreen. Furthermore, as described for impact discussion 5.6-1, the proposed project includes Housing Element policies which would support the statewide goal of transitioning the electricity grid to renewable sources. The net increase in energy demand associated with implementation of the proposed project would be within the service capabilities of MCE and PG&E and would not impede their ability to implement California’s renewable energy goals. Therefore, implementation of the proposed project would not conflict with or obstruct implementation of California’s Renewables Portfolio Standard program, and impact would be less than significant and no mitigation measures are required.

**Level of Significance Before Mitigation:** Impact 5.6-2 would be less than significant.

*Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.6-2 would be less than significant.

5.6.5 Cumulative Impacts

Cumulative impacts would occur if a series of actions lead to a wasteful, inefficient, or unnecessary consumption of energy resources or a conflict with or obstruction of a State or local plan for renewable energy and energy efficiency. All the development projects within the vicinity of the County are within the service areas of MCE and PG&E. These projects would result in a long-term increase in operational energy

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demand for electricity and natural gas use associated with population and housing growth. In addition, construction activities would require the use of energy for purposes such as the operation of construction equipment and tools, and construction of development projects may overlap. However, all projects developed within the MCE and PG&E service area would implement the requirements of the Building and Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6) and the California Green Building Code (California Code of Regulations, Title 24, Part 11). Furthermore, new buildings would use new energy-efficient appliances and equipment, pursuant to the Appliance Efficiency Regulations.

Future housing development would also increase annual fuel consumption and VMT within the County. However, vehicles would be subject to the USEPA CAFE standards for vehicular fuel efficiency, and average corporate fuel economy continues to increase as a result of State and federal laws, including the Advanced Clean Cars II (ACC II) standards. Furthermore, as listed in impact discussion 5.6-2, the proposed project includes policies that would contribute toward minimizing inefficient, wasteful, or unnecessary transportation energy consumption. These policies as well as the other Housing Element Update policies listed in impact discussion 5.6-1 would ensure compliance with State, regional, or local plans for renewable energy. Therefore, the proposed project would not result in a cumulatively considerable impact to energy and cumulative impacts would be less than significant and no mitigation measures are required.

#### 5.6.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant: 5.6-1 and 5.6-2.

#### 5.6.7 Mitigation Measures

No mitigation measures are required.

#### 5.6.8 Level of Significance After Mitigation

Impact would be less than significant.

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### 5.7 GEOLOGY AND SOILS

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the 2023-2031 Contra Costa County Housing Element Update (HEU) to impact geological and soil resources, paleontological resources, or unique geologic features in the County.

#### 5.7.1 Environmental Setting

##### 5.7.1.1 REGULATORY BACKGROUND

###### State Regulations

###### *Alquist-Priolo Earthquake Fault Zoning Act*

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to protect structures for human occupancy from the hazard of surface faulting. In accordance with the act, the State Geologist has established regulatory zones—called earthquake fault zones—around the surface traces of active faults and has published maps showing these zones. Buildings for human occupancy cannot be constructed across surface traces of faults that are determined to be active. Because many active faults are complex and consist of more than one branch that may experience ground surface rupture, earthquake fault zones extend approximately 200 to 500 feet on either side of the mapped fault trace.

###### *Seismic Hazards Mapping Act*

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits. The CGS Guidelines for Evaluating and Mitigating Seismic Hazards (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards (CGS 2008). Contra Costa County is intersected by multiple faults which are discussed in detail in Section 5.7.1.2, *Existing Conditions* of this chapter. Additionally, the eastern portion of Contra Costa County contains land mapped in liquefaction hazard and landslide hazard zones.

###### *California Building Code*

The State of California provides minimum standards for building design through the California Building Code (CBC [California Code of Regulations, Title 24]). The CBC is based on the Uniform Building Code (UBC), which is used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis) and has been modified for conditions in California. State regulations and engineering standards related to geology, soils, and seismic activity in the UBC are reflected in the CBC requirements. Through the CBC, the State of California provides a minimum standard for building design and construction. The 2022 California Building Code (CBC) became effective on January 1, 2023.

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The CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control. Contra Costa enforces the CBC through its Ordinance Code. The County Building Code (Contra Costa County Ordinance Code, Division 72) incorporates the CBC, including recent changes.

#### *California General Plan Law*

State law (Government Code Section 65302) requires cities to adopt a comprehensive long-term general plan that includes a safety element. The safety element is intended to provide guidance for protecting the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence; liquefaction; other seismic hazards identified by Public Resources Code Sections 2691 et. seq.; and other geologic hazards known to the legislative body. The safety element must also include mapping of known seismic and geologic hazards from the California Geological Survey and a series of responsive goals, policies, and implementation programs to improve public safety.

#### *Public Resources Code Section 5097.5 and Section 30244*

State requirements for management of paleontological resources are included in Public Resources Code (PRC) Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts on paleontological resources from developments on public (state, county, city, district) lands.

#### *Paleontological Assessment Standards*

CEQA also directs agencies to assess whether a project would have an adverse effect on unique paleontological resources. The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources. Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. The SVP has helped define the value of paleontological resources and, in particular, indicates that geologic units of high paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e., are represented in institutional collections). Only invertebrate fossils that provide new information on existing flora or fauna or on the age of a rock unit would be considered significant. Geologic units of low paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.



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#### Local Regulations

##### *Contra Costa County Local Hazard Mitigation Plan*

The Local Hazard Mitigation Plan (LHMP) serves to reduce injury, loss of life, property damage, and loss of services from natural disasters. This LHMP provides a comprehensive analysis of the natural and human-caused hazards that threaten the County, with a focus on mitigation, allowing the County to remain eligible to receive additional federal and state funding to assist with emergency response and recovery, as permitted by the federal Disaster Mitigation Act of 2000 and California Government Code Sections 8685.9 and 65302.6; and it complements the efforts undertaken by the Safety Element. The LHMP complies with all requirements set forth under the federal Disaster Mitigation Act of 2000 and received approval from the Federal Emergency Management Agency (FEMA) in 2021. Contra Costa County updated its LHMP in 2017.

##### *Contra Costa General Plan*

The following are the policies listed in the current Safety Element of the General Plan that address geologic hazards. The labels of the goals and policies below correspond to those used in Chapter 10, *Safety Element* from pages 10-18 through 10-23.

##### ***Seismic and Ground Failure Hazards***

- **Policy 10-1:** Contra Costa County, as part of an area with high seismicity, shall recognize that a severe earthquake hazard exists and shall reflect this recognition in its development review and other programs.
- **Policy 10-2:** Significant land use decisions (General Plan amendment, rezoning, etc.) shall be based on a thorough evaluation of geologic-seismic and soils conditions and risk.
- **Policy 10-3:** Because the region is seismically active, structures for human occupancy shall be designed to perform satisfactorily under earthquake conditions.
- **Policy 10-4:** In areas prone to severe levels of damage from ground shaking (i.e., Zone IV on Map 10-4 on Chapter 10 page 10-13), where the risks to life and investments are sufficiently high, geologic-seismic and soils studies shall be required as a precondition for authorizing public or private construction.
- **Policy 10-5:** Staff review of applications for development permits and other entitlements, and review of applications to other agencies which are referred to the County, shall include appropriate recommendations for seismic strengthening and detailing to meet the latest adopted seismic design criteria.
- **Policy 10-8:** Ground conditions shall be a primary consideration in the selection of land use and in the design of development projects.
- **Policy 10-9:** In areas susceptible to high damage from ground shaking (i.e., Zone IV on Map 10-4), geologic-seismic and soils studies shall be required prior to the authorization of major land developments and significant structures (public or private).
- **Policy 10-12:** Prohibit construction of structures for human occupancy, and structures whose loss would affect the public safety or the provision of needed services, over the trace of an active fault.

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- **Policy 10-13:** In areas where active or inactive earthquake faults have been identified, the location and/or design of any proposed buildings, facilities, or other development shall be modified to mitigate possible danger from fault rupture or creep.
- **Policy 10-14:** Preparation of a geologic report shall be required as a prerequisite before authorization of public capital expenditures or private development projects in areas of known or suspected faulting.
- **Policy 10-18:** This General Plan shall discourage urban or suburban development in areas susceptible to high liquefaction dangers and where appropriate subject to the policies in 10-20 below, unless satisfactory mitigation measures can be provided, while recognizing that there are low intensity uses such as water related recreation and agricultural uses that are appropriate in such areas. (For the Bethel Island Area, the adopted specific plan policies will apply.)
- **Policy 10-19:** To the extent practicable, the construction of critical facilities, structures involving high occupancies, and public facilities shall not be sited in areas identified as having a high liquefaction potential, or in areas underlain by deposits classified as having a high liquefaction potential.
- **Policy 10-20:** Any structures permitted in areas of high liquefaction danger shall be sited, designed and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.
- **Policy 10-21:** Approvals to allow the construction of public and private development projects in areas of high liquefaction potential shall be contingent on geologic and engineering studies which define and delineate potentially hazardous geologic and/or soils conditions, recommend means of mitigating these adverse conditions; and on proper implementation of the mitigation measures.
- **Policy 10-22:** Slope stability shall be a primary consideration in the ability of land to be developed or designated for urban uses.
- **Policy 10-23:** Slope stability shall be given careful scrutiny in the design of developments and structures, and in the adoption of conditions of approval and required mitigation measures.
- **Policy 10-24:** Proposed extensions of urban or suburban land uses into areas characterized by slopes over 15 percent and/or generally unstable land shall be evaluated with regard to the safety hazard prior to the issuance of any discretionary approvals. Development on very steep open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions.
- **Policy 10-25:** Subdivision of rural lands outside planned urban areas down to the allowed minimum parcel size shall be discouraged, if the parcels are within, or only accessible through, geologically unstable areas.
- **Policy 10-26:** Approvals of public and private development projects in areas subject to slope failures shall be contingent on geologic and engineering studies which define and delineate potentially hazardous conditions and recommend adequate mitigation.
- **Policy 10-30:** Development shall be precluded in areas when landslides cannot be adequately repaired.

#### *Subsidence*

- **Policy 10-48:** Low density development of lands subject to subsidence shall take into account and fully mitigate the potential impacts of flooding based on the best currently available techniques.

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- **Policy 10-49:** Any development approvals for areas subject to subsidence shall include conditions which account for the need to support Delta reclamation and irrigation districts, and to strengthen weak and low levees prior to development.

While the County's current General Plan does not include any policies that specifically address paleontological resources, it does include the following goals and policies from the Open Space Element that address the protection and preservation of historic and archaeological resources in the County.

### *Historic and Cultural Resources*

- **Goal 9-G:** To identify and preserve important archaeological and historic resources within the county.
- **Policy 9-28:** Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership.
- **Policy 9-31:** Within the Southeast County area, applicants for subdivision or land use permits to allow non-residential uses shall provide information to the County on the nature and extent of the archeological resources that exist in the area. The County Planning Agency shall be responsible for determining the balance between multiple use of the land and protection of resources.

The following policies are contained within in the Conservation Element and Open Space Element address soil resources.

- **Conservation Element Policy 8-67:** Lands having a prevailing slope above 26 percent shall require adequate special erosion control and construction techniques.
- **Conservation Element Policy 8-68:** Lands having a high erosion potential as identified in the Soil Survey shall require adequate erosion control methods for agricultural and other uses.
- **Open Space Policy 9-11:** High-quality engineering of slopes shall be required to avoid soil erosion, downstream flooding, slope failure, loss of vegetative cover, high maintenance costs, property damage, and damage to visual quality. Particularly vulnerable areas should be avoided for urban development. Slopes of 26 percent or more should generally be protected and are generally not desirable for conventional cut-and-fill pad development. Development on open hillsides and significant ridgelines shall be restricted.

### *Contra Costa Ordinance Code*

#### ***Division 74- Building Code***

Contra Costa County Ordinance Code Chapter 74-2.002 adopts the 2022 California Building Code (CBC), with amendments, as the County's Building Code (Ordinance No. 2022-35). As such, all new construction within the County is required to adhere to its seismic safety standards. The County of Contra Costa Department of Conservation and Development is responsible for the administration and enforcement of the CBC.

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#### ***Division 716- Grading***

Ordinance Code Division 716 contains the County's grading ordinance, which sets forth regulations for control of excavation, grading, earthwork construction, including fills or embankments and related work. Section 716-4.202 requires that a grading permit be obtained for property on which a subdivision is proposed, such as the Project, and that such a permit shall not be issued until reviewed by the Public Works Department for compliance with the requirements of Title 9, Subdivisions. Section 716-2.418, Critically Expansive Soil or Other Soil Problems, states that critically expansive soil or other soil problems shall be tested by acceptable procedures to provide data suitable for making adequate designs for the improvements. Article 716-8.8, Erosion Control Planting, additionally requires that the surface of all erodible cut slopes more than five feet in height and fill slopes more than three feet in height are protected against erosion by planting with grass or ground cover plants.

#### ***Section 94-4.420- Soil Report***

As indicated in Title 9, Section 94-4.420, Soil Report, a preliminary soil investigation report is required and must be reviewed by a building inspector or designated representative. The report shall indicate the presence of any critically expansive soils or any other soil problems which, if not corrected, may lead to defects in structures, building, or other improvements. If the report indicates such soil problems, it shall further report on an investigation of each lot of the subdivision, including recommended corrective action which is likely to prevent structural damage to each building, structure, or improvement to be constructed. The recommended actions and procedures contained in the report shall also become a condition of approval and shall be incorporated in the development of the subdivision.

#### ***Section 82-1.016 - Hillside Protection***

Development on open hillsides and significant ridgelines throughout the county shall be restricted and hillsides with a grade of twenty-six percent or greater shall be protected through implementing zoning measures and other appropriate actions.

### 5.7.1.2 EXISTING CONDITIONS

#### *Regional Geology*

The primary bedrock in Contra Costa County includes sedimentary rocks, volcanic rock intrusions and alluvial deposits. Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of marine sandstone intermixed with siltstone and shale, and marine sandstone and shale overlain by soft non-marine units. Unconsolidated alluvial deposits, artificial fill and estuarine deposits underlie the coastal areas along the San Pablo Bay, Carquinez Straight and Suisun Bay. Landslides in the region typically occur in weak, easily weathered bedrock on relatively steep slopes. Bedrock geology for the area is not entirely mapped. Lack of detailed mapping in most cases precludes determining specific site stability without a site investigation. However, it may be valid to conclude varying degrees of relative risk based on general mapping of rock units when averaged over time (Contra Costa 2018a).

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### GEOLOGY AND SOILS

Two distinct depositional environments exist in Contra Costa County. Since much of the county is mountainous with steep, rugged topography, a sequence of alluvial fan and fan-delta deposits have developed in most of the western part of the county. The second environment is a combination of eolian dune and river delta deposits in the San Joaquin Valley in eastern Contra Costa County (Contra Costa 2018a).

#### *Soils*

Contra Costa County is in California's Central Coast Range, with northwest trending mountain ranges and valleys. Alluvium, terrace deposits and bay mud, primarily composed of sand, silt, clay and gravel, are prevalent in the lowlands. The intermountain valleys and foothills contain alluvial soils and terrace deposits. In the east, north and northwest parts of the county, the soils generally consist of bay muds. Mapping units and maps presented in the Natural Resources Conservation Service's soil survey for this region describe the prevailing soils and include information about parent rock materials, soil depth, erosion, and slope. Contra Costa County's soils may be classified into three general categories:

- **Lowland Soil Associations**—Six characteristic Lowland Soil associations range from nearly level to strongly sloping landscapes. They also range from somewhat excessively drained to poorly drained soils typically found in valley fill, low terraces, basins, floodplains and on alluvial fans. Lowland soils are also slowly permeable, highly expansive and corrosive, with slight erosion hazards. They make up 25 percent of the soils in Contra Costa County.
- **Tidal Flat-Delta-Marsh Lowland Associations**—Three Tidal Flat-Delta-Marsh Lowland soil associations are described as being poorly drained on level land within deltas, floodplains, saltwater marshes and tidal flats. Formed in mineral alluvium and from the remains of hydrophytic plants, these soils are clay loam, muck, silty clay and clay. Tidal Flat-Delta-Marsh Lowland soils make up 10 percent of the county's soils. Soils of these associations are highly expansive due to the clay content and are highly corrosive.
- **Upland Soil Associations**—Five Upland Soil groups make up 64 percent of Contra Costa County's soils. Upland soils are located on level terraces or steep mountain uplands and range from being moderately well drained to excessively drained. These soils range from loams to clays and form in weakly consolidated alluvial sediments, weathered sedimentary rock interbeds and some igneous rock. Upland soils are typically highly expansive and corrosive, with slow to moderate permeability.

Soils have varying levels of susceptibility to erosion, but each soil type benefits from conservation management techniques to prevent erosion. Soil erosion in Contra Costa County occurs as a result of intensive land use, wind and water erosion. Erosion may be most severe where urbanization, development, recreational activities, logging and agricultural practices take place. Extreme rainfall events, lack of vegetative cover, fragile soils and steep slopes combine to accelerate erosion. Wind erosion is the primary factor for soil losses in the river delta areas. Agricultural crops are subject to the erosive forces of water and hillside grazing pastures have been strained by reduced root structure due to years of drought conditions. The conversion of agricultural lands to housing and other development may cause exposed soils to become susceptible to erosion. With proper drainage and landscaping techniques, these altered soils may return to pre-construction stability.

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Expansive soils contain clay and silt that expand in volume in response to increased water content and shrink in volume upon drying. Expansive soils are a geologic hazard, because an increase in soil volume can exert forces on structures and, thus, damage building foundations, walls, and floors. Much of the soil in the County is considered expansive (Contra Costa 2018a). Section 94-4.420 of the Contra Costa Ordinance Code requires that a preliminary soil investigation report be prepared for a project. If soil instability issues arise, a report including the recommended corrective actions taken to prevent structural damage to building, structures or improvement must also be submitted.

#### *Faults*

Contra Costa County is in a region of high seismicity with numerous local faults. The primary seismic hazard for the county is potential ground shaking from these faults, especially the Hayward, Calaveras North, Concord-Green Valley, Mount Diablo, and Greenville faults, which are further described below. The location of these faults can be seen in Figure 5.7-1 - *Regional Fault Map*. The following information was compiled by the County in its Local Hazard Mitigation Plan 2017 update.

#### ***Calaveras (North Central)***

The Calaveras (North Central) Fault is a major branch of the San Andreas Fault, located east of the Hayward Fault. It extends 76 miles from the San Andreas Fault near Hollister to Danville at its northern end. The Calaveras Fault is one of the most geologically active and complex faults in the Bay Area (Contra Costa 2018a). The probability of experiencing a Magnitude 6.7 or greater earthquake along the Calaveras Fault in the next 30 years is 26 percent.

#### ***Concord-Green Valley***

The Concord-Green Valley Fault, named for being located under the City of Concord, is connected to the main Green Valley Fault. The fault extends approximately 11 miles east of West Napa Fault, from Mount Diablo to the Carquinez Strait. It is considered to be under high stress and has a 16 percent probability of experiencing a Magnitude 6.7 or greater earthquake in the next 30 years.

#### ***Greenville***

The Greenville Fault is in the eastern Bay Area in Contra Costa and Alameda Counties. This dextral strike-slip fault zone borders the eastern side of Livermore Valley and is considered to be part of the larger San Andreas fault system in the central Coast Ranges. The fault zone extends from northwest of Livermore Valley along the Marsh Creek and Clayton faults toward Clayton Valley.

#### ***Hayward Fault***

The Hayward Fault is an approximately 45-mile-long fault that runs through densely populated areas on the East Bay, parallel to the San Andreas Fault. The Hayward Fault extends through some of the Bay Area's most populated areas, including San Jose, Oakland, and Berkeley. The Hayward Fault is a right-lateral slip fault. The Hayward Fault is increasingly becoming a hazard priority throughout the Bay Area because of its increased chance for activity and its intersection with highly populated areas and critical infrastructure. The probability of experiencing a Magnitude 6.7 or greater earthquake along the Hayward Fault in the next 30

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years is 33 percent. An earthquake of this magnitude has regional implications for the entire Bay Area, as the Hayward Fault crosses transportation and resource infrastructure, such as multiple highways and the Hetch-Hetchy Aqueduct.

#### ***Mount Diablo***

The Mount Diablo thrust fault is in the vicinity of Mount Diablo in Contra Costa County. The fault lies between the Calaveras Fault, the Greenville Fault, and the Concord Fault, all right-lateral strike slip faults, and appears to transfer movement from the Calaveras and Greenville Faults to the Concord Fault, while continuing to uplift Mount Diablo.

#### *Earthquakes*

The Bay region lies within the active boundary between the Pacific and the North American tectonic plates. The Pacific Plate is constantly moving northwest past the North American Plate at a rate of about 2 inches per year (Contra Costa 2018a). Earthquakes in the San Francisco Bay region result from strain energy constantly accumulating across the region because of the motion of the Pacific Plate relative to the North American Plate. The San Andreas Fault, on which earthquakes of magnitude 7.8 and 7.9 have occurred in the past, including the 1906 San Francisco earthquake, is the fastest slipping fault along the plate boundary.

The County has been subjected to numerous seismic events, originating both on faults within the County and in other parts of the region. Six major Bay Area earthquakes have occurred since 1800 that impacted the County, and at least two of the faults that produced them run through or into the County. Contra Costa County was included in one FEMA major disaster/emergency declaration for the Loma Prieta Earthquake, which occurred in October 1989 (Contra Costa 2018a).

#### *Secondary Hazards*

Landslides are often caused as a result of earthquakes. River valleys are vulnerable to slope failure, often as a result of loss of cohesion in clay-rich soils. Soil liquefaction occurs when water-saturated sands, silts or gravelly soils are shaken so violently that the individual grains lose contact with one another and float freely in the water, turning the ground into a pudding-like liquid. Building and road foundations lose load-bearing strength and may sink into what was previously solid ground. Unless properly secured, hazardous materials can be released, causing significant damage to the environment and people (Contra Costa 2018a).

There are estimated to be 369,779 people living on soils with moderate to very high liquefaction potential in the County. This is about 32 percent of the total population. This includes 24,921 households on soils with high or very high liquefaction potential. Figure 5.7-2, *Liquefaction Hazard Zones*, shows these CGS mapped liquefaction hazard zones in the County. Additionally, according to the Contra Costa Local Hazard Mitigation Plan (LHMP), 72.9 percent of land designated for residential use in the County is mapped in a high or very high liquefaction susceptibility area.

The Contra Costa County General Plan (Conservation Policy 8-67 and Open Space Policy 9-11) reports that major slope areas in excess of 26 percent are “not readily developable” and “undevelopable,” because of the cost and engineering difficulties of grading steep slopes as well as their inherent unsuitability. Figure 10-6 of

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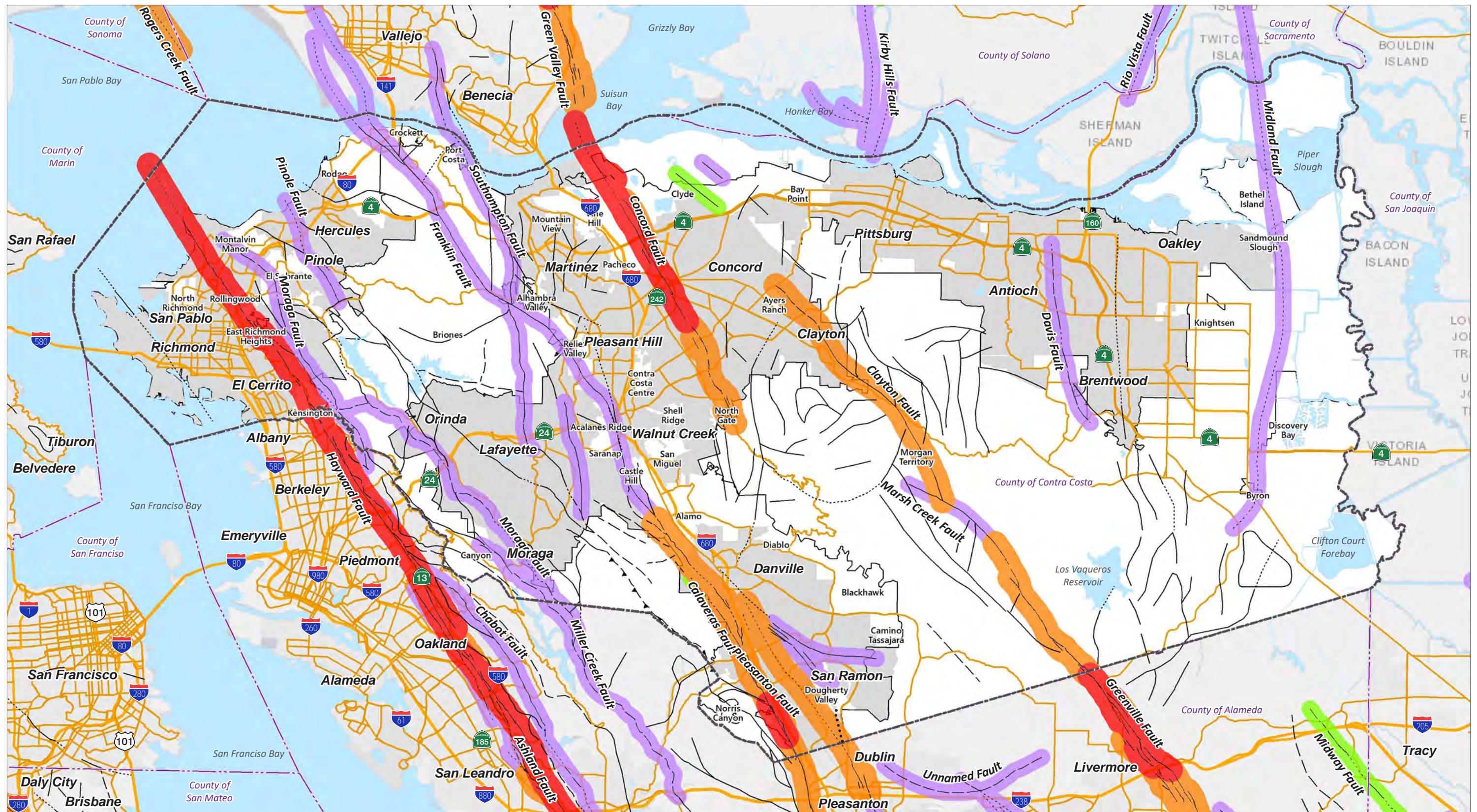
the General Plan shows that areas with mapped landslide hazards in Contra Costa County. Figure 5.7-3, *Landslide Susceptibility Areas*, shows the sites in the Housing Element sites inventory that are within areas of mapped landslide hazard, as defined by the California Geological Survey. The LHMP estimates that 166,205 people currently live in areas of “moderate landslide risk” of landslides, 221,672 people live in “high landslide risk” areas, and 1,900 people live in areas of “very high landslide” risk.

#### *Paleontological Sensitivity*

In the Bay Area, fossilized plants, animals and microorganisms occur primarily in marine and non-marine (fluvial) sedimentary rock. The potential to preserve fossils in a particular rock formation depends on the depositional environment in which it was formed. For example, fast moving currents that form deposits of gravel and cobbles are less likely to preserve the remains of organisms than gently flowing currents that deposit mud and silt. Thus, the most fossil-bearing geologic units in the County occur in rocks that formed in relic marine environments such as inland embayments, coastal areas, and extensive inland bays. There are a total of 2,577 fossil localities in Contra Costa County according to the UC Museum of Paleontology Localities database. Most of these are invertebrate, however 261 of these are vertebrates (UCMP 2022).

Additionally, approximately 600 archaeological sites have been identified within the County according to the Northwest Information Center at Sonoma State University (Contra Costa 2005). According to the County, identification of these archaeological sites is largely the result of sporadic surveys conducted in association with development proposals. Large areas of the county that have been retained in agriculture have never been surveyed and may yield prehistoric settlement patterns. Figure 9-2 in the County’s General Plan shows the archaeologically sensitive areas.





Source: Conservation.ca.gov, 2009



- Contra Costa County Boundary
- - - County Boundary
- Urban Limit Line

- Incorporated Communities
- Uncorporated County Areas

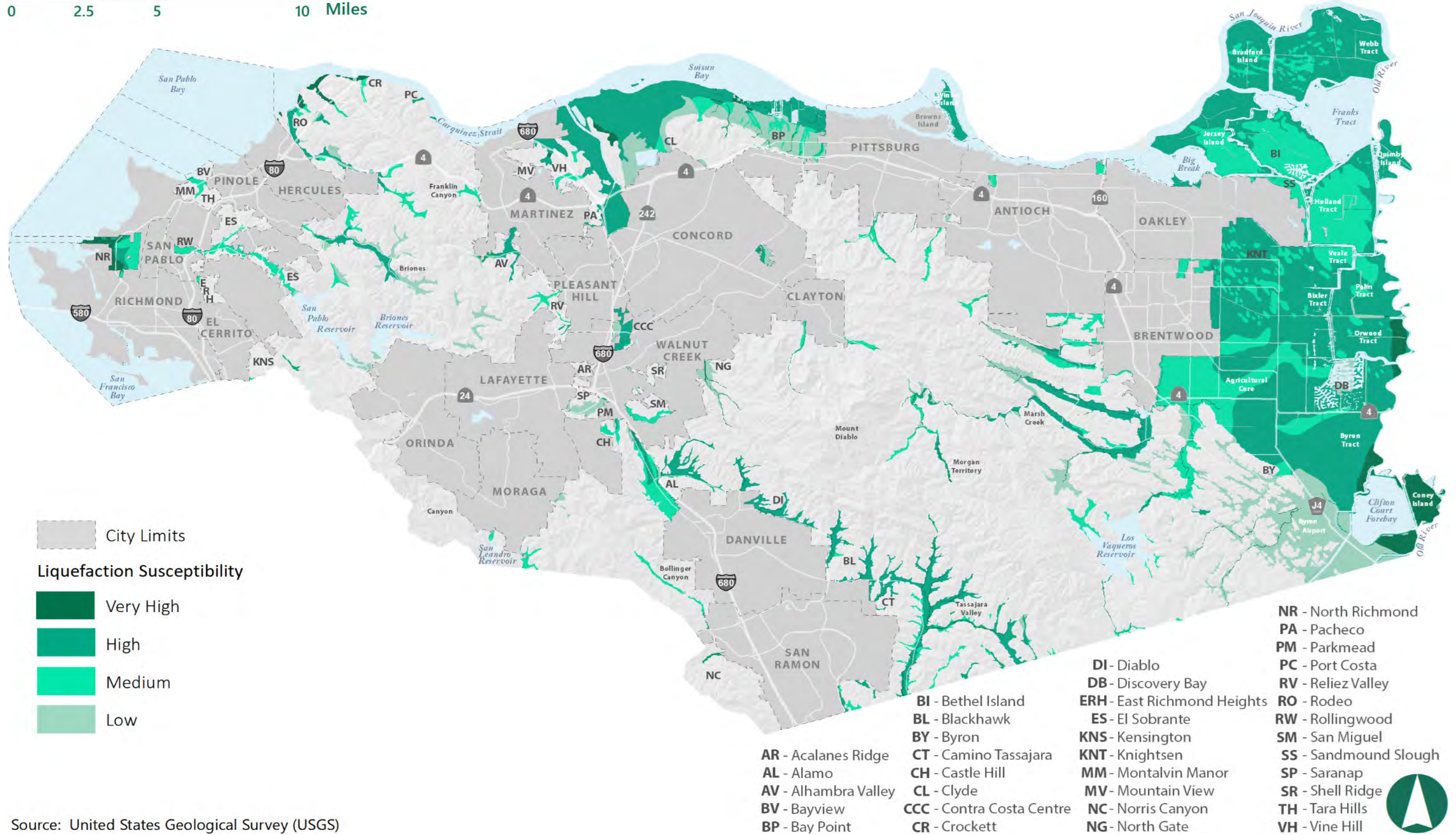
**Recency of Movement**

- Historic
- Late Quaternary
- Quaternary
- Fault (Certain)
- - Fault (Approximate)
- Fault (Concealed)

Figure 5.7-1  
 Regional Fault Map

HOUSING ELEMENT

0 2.5 5 10 Miles



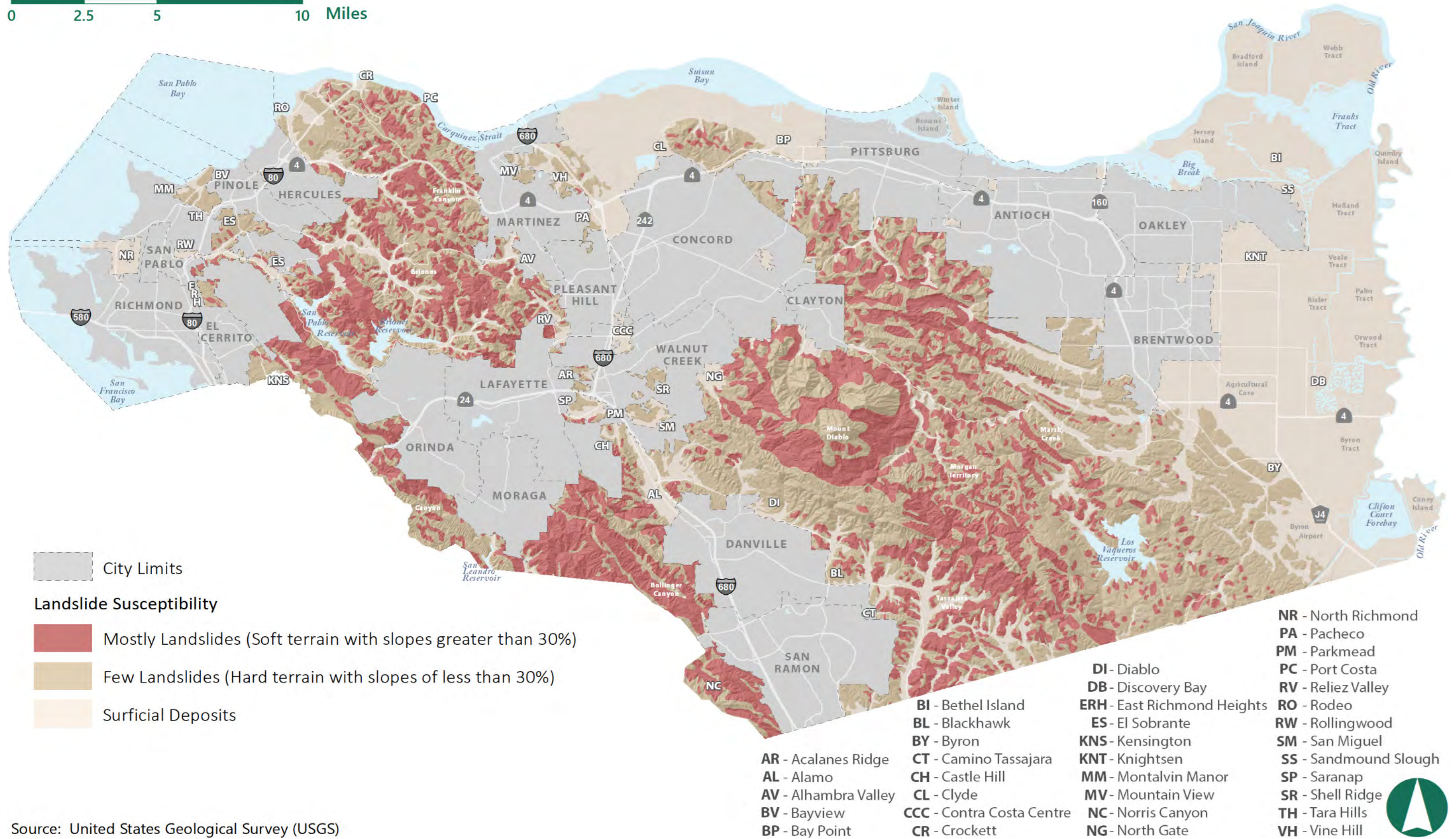
Source: United States Geological Survey (USGS)



Figure 5.7-2  
Liquefaction Hazard Zones

HOUSING ELEMENT

0 2.5 5 10 Miles



Source: United States Geological Survey (USGS)



Figure 5.7-3  
Landslide Susceptibility Zones

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### 5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- G-1 Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42.)
  - ii) Strong seismic ground shaking.
  - iii) Seismic-related ground failure, including liquefaction.
  - iv) Landslides.
- G-2 Result in substantial soil erosion or the loss of topsoil.
- G-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- G-4 Be located on expansive soil, as defined in Table 18-1B of the Uniform building Code (1994), creating substantial direct or indirect risks to life or property.
- G-5 Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.
- G-6 Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

### 5.7.3 Proposed Housing Element Policies

The following proposed Housing Element policy is applicable to geologic hazards:

- **Policy HE-P8.3:** Locate below market-rate housing developments outside of mapped hazard zones as identified in the Health and Safety Element.

### 5.7.4 Environmental Impacts

#### 5.7.4.1 DISCUSSION OF GEOLOGY AND SOILS RESOURCES THRESHOLDS WITH NO IMPACTS

All of the impacts would be less than significant or potentially significant.

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### 5.7.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

---

Impact 5.7-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides, mudslides, or other similar hazards. [Threshold G-1i, G-1ii, G-1iii and G-1iv)]

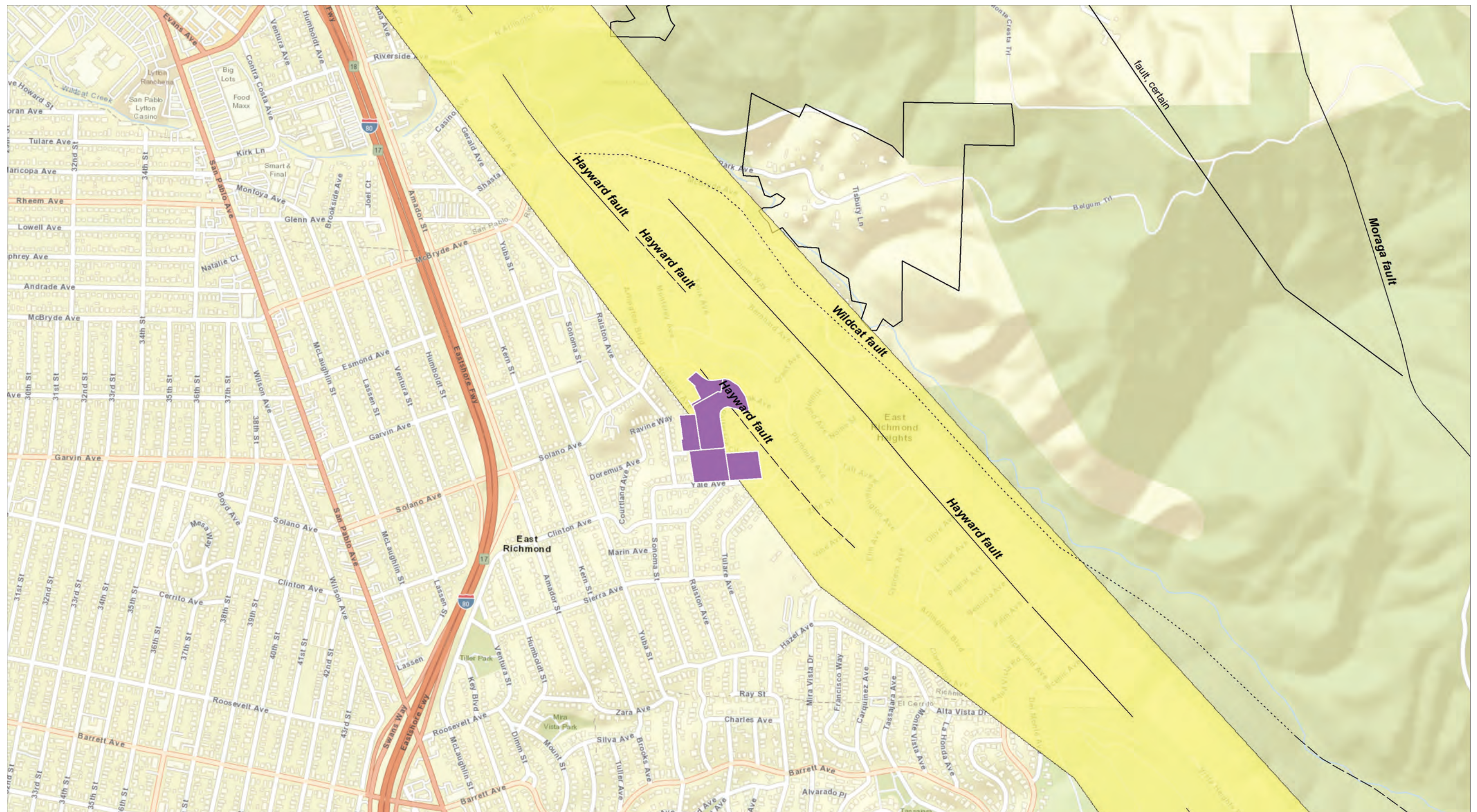
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As part of the Housing Element Update (HEU), the County is proposing to potentially redesignate and rezone 648 acres of land to accommodate its Regional Housing Needs Allocation. These proposed sites are listed in Tables 3-3, 3-4, and 3-5 in Chapter 3, *Project Description*. While the HEU is a policy document that is not anticipated to produce environmental impacts, the redesignating/rezoning of parcels as part of the HEU and subsequent General Plan Update would allow some parcels within the County to be developed with more residential density than was previously allowed in the County, including in areas of known seismic hazard.

#### Surface Rupture of a Fault

Approximately 9.6 acres included in the proposed HEU's sites inventory are located in Alquist-Priolo Earthquake Fault Zones (CGS 2021). These include five parcels in the East Richmond Heights community that are located within the fault zone boundary of the Hayward Fault. Two of these parcels on Arlington Boulevard overlie an inferred fault trace, as seen on Figure 5.7-4 *East Richmond Heights Fault Hazard*. These parcels are currently designated for public/semi-public uses but would be redesignated under the HEU and subsequent General Plan Update as Mixed Use (MU) which would allow a maximum of up to 276 units to be built across the five parcels.

As required by the Alquist-Priolo Act Fault Zoning Act, the approval of projects within Earthquake Fault Zones must be in accordance with the policies and criteria established by the Surface Mining and Geology Board (SMGB) (CPRC, Division 2, Chapter 7.5, Section 2623 (a)). SMGB regulations require that fault investigation reports be prepared by a professional geologist registered in the State of California (CCR, Title 14, Division 2, Chapter 8.1.3, Section 3603 (d)). Additionally, the Seismic Hazards Mapping Act requires projects for human-occupancy that are within mapped fault zones to obtain a site-specific geotechnical report prior to the issuance of individual grading permits and each new development would be required to retain a licensed geotechnical engineer to design new structures to withstand probable seismically induced ground shaking. General Plan Safety Element Policy 10-14 also requires geotechnical reports for all sites in areas of suspected faulting. Development on these parcels would also be regulated by Safety Element Policy 10-12 which prohibits the development of structures for human occupancy on active fault traces. Safety Element Policy 10-13 requires the design and location of buildings on or near fault traces to be modified in order to mitigate risk. Additionally, Housing Element Policy HE-P8.3 calls for locating all below market-rate developments outside of mapped hazard zones identified in the County's Health and Safety Element, which would include fault zones.



Source: Conservation.ca.gov, 2009



— Urban Limit Line

— Alquist-Priolo Earthquake Fault Hazard Zone

— Contra Costa Housing Element Sites

Figure 5.7-4  
East Richmond Heights Fault Hazard

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Furthermore, all new development in California is subject to the seismic design criteria of the California Building Code (CBC), which requires that all improvements be constructed to withstand anticipated ground shaking from regional fault sources. The CBC standards require all new developments to be designed consistent with a site specific, design-level geotechnical report, which would be fully compliant with the seismic recommendations of a California-registered professional geotechnical engineer. Adherence to the applicable CBC requirements, the Alquist-Priolo Fault Zoning Act, and the Seismic Hazards Mapping Act would ensure that the HEU's implementation would not directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Compliance with state and local regulations would therefore mitigate impacts due to rupture of known fault to less than significant.

#### Ground Shaking

Due the location and underlying geology of Contra Costa County, all future development under the HEU would likely be subject to strong seismic ground shaking. Several policies in the current Safety Element help to mitigate impacts from ground shaking. Policy 10-1 requires that the severe earthquake hazard in the County is recognized, and that this recognition is reflected in the County's development review and other programs. Policy 10-2 requires that significant land use decisions be based on a thorough evaluation of geologic-seismic and soils conditions. Policy 10-3 requires structures for human occupancy to be designed to perform satisfactorily under earthquake conditions. Policy 10-4 requires geologic-seismic and soil studies as a precondition for authorizing public or private construction in areas prone to sever ground shaking. Policy 10-9 similarly requires geologic and seismic reports to be submitted prior to major land developments in areas prone to ground shaking. Additionally, all future residential development would be required to conform to CBC requirements/standards established to prevent significant damage due to ground shaking during seismic events. Adhering to these requirements would make impacts associated with ground shaking less than significant.

#### Liquefaction

As shown on Figure 5.7-2, several areas of the County are susceptible to liquefaction hazards. These areas include locations with housing sites that could potentially be redesignated and/or rezoned as part of the HEU to accommodate residential development or increased residential densities. General Plan Safety Element policies 10-18, 10-19, 10-20, and 10-21 address development in areas prone to liquefaction hazards and help to mitigate the risks posed by liquefaction. Policy 10-18 discourages urban and suburban development in liquefaction-prone areas; Policy 10-19 requires, to the extent practicable, that structures intended for high occupancy are not sited in areas with high liquefaction potential; Policy 10-20 requires that structures in areas of high liquefaction potential are designed to minimize the risk of damage due to liquefaction; and Policy 10-21 states that approval of development projects in areas of high liquefaction potential are contingent on the submittal of all necessary geologic and engineering studies. Housing Element Policy HE-P8.3 would also help to mitigate risk for potential below market-rate developments. Additionally, all future residential development would be required to conform to CBC requirements/standards established to prevent significant damage due to ground shaking during seismic events. Therefore, impacts associated with liquefaction would be considered less than significant.

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### Landslides

As shown on Figure 5.7-3, large areas of the County with hill terrain are susceptible to landslides including areas with housing sites. The County restricts development on open hillsides and ridgelines and generally prohibits development on hillsides above a 26 percent grade, as referenced in Section 82-1.016, *Hillside Protection* of the County's code. Compliance with CBC requirements, including implementation of recommendations provided in site-specific geotechnical reports would reduce or avoid impacts related to landslides. Safety Element policies 10-22, 10-23, 10-24, 10-25, 10-26, 10-30 address and help to mitigate impacts to landslides and unstable geologic conditions on residential development. For example, Policy 10-22 requires that slope stability be a primary consideration for urban development. Policy 10-24 requires urban/suburban development on slopes over 15 percent be evaluated prior to approval. Furthermore, Housing Element Policy HE-P8.3 would also help to mitigate risk for potential below-market rate developments. Implementation of the HEU would not directly or indirectly result in adverse effects related to landslides, and the impact would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.7-1 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.7-1 would be less than significant.

---

Impact 5.7-2: Development under the proposed project would not result in substantial soil erosion or the loss of topsoil. [Threshold G-2]

---

Development of the sites included within the proposed HEU sites inventory would involve soil disturbance, construction, and operation of developed land uses that could be subject to unstable soils conditions. However, as previously noted, the HEU is a policy-level document and does not include any development proposals or development entitlements that would directly result in the construction or expansion of any new residential development.

Any new development that would require the disturbance of one or more acres during construction would be subject to the requirements of the National Pollutant Discharge and Elimination System (NPDES) General Permit for Stormwater Discharge Associated with Construction and Land Disturbance Activities (Construction General Permit). The NPDES permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which would include Best Management Practices (BMPs) designed to control and reduce soil erosion. The BMPs may include dewatering procedures, storm water runoff quality control measures, watering for dust control, and the construction of silt fences, as needed.

Both state and local regulations would effectively mitigate construction stormwater runoff impacts from development under the HEU. Contra Costa Ordinance Code Section 716-4.202 requires standard erosion control practices to be implemented for all construction. Conservation Element Policies 8-67 and 8-68 require the development of sites with either a slope above 26 percent or high erosion potential identified in

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the soil survey to include erosion control measures. Open Space Element Policy 9-11 similarly requires high-quality engineering of slopes to avoid soil erosion and states that development on open hillsides shall be restricted. Implementation of these state and local requirements would effectively ensure that future projects would not violate any water quality standards or waste discharge requirements from construction activities, and impacts would be less than significant.

**Level of Significance Before Mitigation:** Impact 5.7-2 would be less than significant.

*Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.7-2 would be less than significant.

---

Impact 5.7-3: Development under the proposed project would not subject people or structures to hazards from unstable soil conditions. [Thresholds G-3 and G-4]

---

Future residential development on unstable or expansive soils could create substantial risks to life or property and result in adverse impact such as on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. Figure 5.7-2 shows the areas of the County with mapped liquefaction hazard. Several sites in the HEU inventory are located in areas that experience liquefaction. Figure 10-8 in Chapter 10, Safety Element, of the current General Plan shows the areas in the County that have experienced subsidence which includes areas with proposed Housing Element inventory sites. The proposed HEU includes sites that could be redesignated and rezoned in areas of the County subject to these hazards. However, compliance with the CBC; General Plan Safety Element Policies 10-5, 10-8, 10-18, 10-21, 10-48, and 10-49; Ordinance Code Section 94-4.420, which requires the preparation of a preliminary soil report to accompany a tentative parcel for a subdivision as well as section 716-2.418 of the code, which requires soil investigation for all development, would identify potential for hazards related to soil conditions on individual development sites so the project can be designed to reflect site-specific geologic and soils conditions and prevent risks due to lateral spreading, subsidence, liquefaction, or collapse. Housing Element Policy HE-P8.3 would also help to mitigate risk for potential below-market rate developments. Therefore, impacts will be less than significant.

**Level of Significance Before Mitigation:** Impact 5.7-3 would be less than significant.

*Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.7-3 would be less than significant.

---

Impact 5.7-4: Development under the proposed project would connect to existing sewer lines or comply with state and local regulations for on-site septic tanks. [Threshold G-5].

---

Most new development would connect to existing sewer lines, and on-site septic tanks and alternative wastewater disposal systems would be rare, if allowed at all.

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Any new development that would include the utilization of a septic tank or alternative wastewater disposal system, would be regulated by the Contra Costa Health Services Environmental Health Division. Obtaining a permit would be required prior to the construction of any septic tank or alternative wastewater disposal system, and each system would be constructed within the parameters of the State Water Resources Control Board (SWRCB) Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (SWRCB 2012), as well as the Contra Costa County Health Officer Regulations for Sewage Collection and Disposal (Contra Costa 2018b). As this procedure would be required prior to construction of any and all septic tanks and alternative wastewater disposal systems, all new developments would be subject to these state and local requirements. Proper soils are essential for installation and maintenance of septic tank and alternative wastewater disposal systems; compliance with these state and local requirements would ensure that impacts related to adequate soils for supporting such systems is less than significant.

***Level of Significance Before Mitigation:*** Impact 5.7-4 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.7-4 would be less than significant.

---

Impact 5.7-5: Development under the proposed project could directly or indirectly destroy a unique paleontological resource or unique geologic feature. [Threshold G-6]

---

Contra Costa County is underlain by a number of distinct geologic rock units (i.e., formations) with varying paleontological sensitivities. According to the United States Geological Survey (USGS), 24 percent of the County is underlain by quaternary alluvium and marine deposits of the Pleistocene to Holocene eras which generally have lower paleontological sensitivity due their young age (USGS 2022). Additionally, 18 percent of the County is underlain by Plio-Pleistocene and Pliocene loosely consolidated deposits, 15 percent by Miocene marine rocks, and 14 percent by upper cretaceous marine rocks (USGS 2022). These geologic units typically have higher paleontological sensitivity based on their rock type which is primarily sandstone and shale.

The HEU sites that are proposed to be redesignated/rezoned would contain varying levels of paleontological sensitivity and would require site-specific investigations by a professional paleontologist to determine the potential of such resources to be present on site. Excavations could occur in association with development of these sites that could affect paleontological resources buried at greater depths. Therefore, it is possible that project-related ground-disturbing activities could uncover previously unknown paleontological resources within or adjacent to the sites included in the County's Housing Element sites inventory. Unanticipated and accidental paleontological discoveries during project implementation have the potential to affect significant paleontological resources. However, implementation of Mitigation Measures GEO-1 and GEO-2 would require site-specific analysis of paleontological resources and would reduce potential impacts to paleontological resources to less than significant.

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***Level of Significance Before Mitigation:*** Impact 5.7-5 would be potentially significant.

### *Mitigation Measures*

GEO-1 Prior to issuance of a grading permit for any future project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed geologic deposits, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to:

- 1) a paleontological records search,
- 2) geologic map review, and
- 3) peer-reviewed scientific literature review.

If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to:

- 1) preconstruction worker awareness training,
- 2) paleontological resource monitoring, and
- 3) salvage of significant paleontological resources.

GEO-2 In the event of any fossil discovery, regardless of depth or geologic formation, ground disturbing activities shall halt within a 50-foot radius of the find until its significance can be determined by a qualified paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology. The repository shall be identified, and a curatorial arrangement shall be signed prior to collection of the fossils.

***Level of Significance After Mitigation:*** Impact 5.7-5 would be less than significant.

## 5. Environmental Analysis GEOLOGY AND SOILS

### 5.7.5 Cumulative Impacts

#### Geology and Soils

Geological impacts tend to be site-specific rather than cumulative in nature. For example, seismic events may damage or destroy a building on a project site, but the construction of a development project on one site would not cause any adjacent parcels to become more susceptible to seismic events, nor can a project affect local geology in such a manner as to increase risks regionally.

The proposed project could allow for increased residential densities on 376 parcels across the County to meet its 6<sup>th</sup> cycle 2023-2031 RHNA target of 7,610 units. All new development in the County would have to comply with the CBC, which requires stringent earthquake-resistant design parameters and common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. Furthermore, any development involving clearing, grading, or excavation that causes soil disturbance of 1 or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, is subject to NPDES Storm Water Construction General Permit provisions. These requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development by requiring an approved stormwater pollution prevention plan that provides a schedule for the implementation and maintenance of erosion control measures and a description of erosion control practices, including appropriate design details and a time schedule.

Implementation of NPDES requirements and CBC standards as discussed under Impacts 5.7-1 through 5.7-3 above would reduce cumulative impacts associated with geology and soils throughout the region. Furthermore, site-specific review, including geotechnical reports, required by Contra Costa County and compliance with existing regulatory requirements and General Plan policies would reduce the proposed project's contribution to cumulative impacts to less than cumulatively considerable.

#### Paleontological Resources

The geographic scope of cumulative impacts to paleontological resources includes the planning areas and adjacent areas where deposits with a high potential to contain paleontological resources could be disturbed. If there are potential paleontological resources that extend across areas of ground disturbance of the potential HEU projects and cumulative projects, the projects could result in the loss of paleontological resources, which is a potentially significant impact. However, with implementation of Mitigation Measures GEO-1 and GEO-2, implementation of the HEU would effectively avoid the potential loss of paleontological resources in the event of inadvertent discovery during construction. Therefore, while implementation of cumulative projects could have a significant effect related to paleontological resources, the project's contribution to such effect would be less than cumulatively considerable.

### 5.7.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.7-1, 5.7-2, 5.7-3 and 5.7-4.

## 5. Environmental Analysis GEOLOGY AND SOILS

Without mitigation, this impact would be **potentially significant**:

- Impact 5.7-5: The proposed project could impact paleontological resources

### 5.7.7 Mitigation Measures

#### Impact 5.7-5

GEO-1 Prior to issuance of a grading permit for any project that requires ground disturbance (i.e., excavation, grading, trenching, etc.) to depths of 6 or more feet in previously undisturbed geologic deposits, the project will undergo a CEQA-level analysis to determine the potential for a project to encounter significant paleontological resources, based on a review of site-specific geology and the extent of ground disturbance associated with each project. The analysis shall include, but would not be limited to:

- 1) a paleontological records search,
- 2) geologic map review, and
- 3) peer-reviewed scientific literature review.

If it is determined that a site has the potential to disturb or destroy significant paleontological resources, a professional paleontologist (meeting the Society of Vertebrate Paleontology [SVP] standards), will be retained to recommend appropriate mitigation to reduce or avoid significant impacts to paleontological resources, based on project-specific information. Such measures could include, but would not be limited to:

- 1) preconstruction worker awareness training,
- 2) paleontological resource monitoring, and
- 3) salvage of significant paleontological resources.

GEO-2 In the event of any fossil discovery, regardless of depth or geologic formation, ground disturbing activities shall halt within a 50-foot radius of the find until its significance can be determined by a qualified paleontologist. Significant fossils shall be recovered, prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a designated paleontological curation facility in accordance with the standards of the Society of Vertebrate Paleontology. The repository shall be identified, and a curatorial arrangement shall be signed prior to collection of the fossils.

### 5.7.8 Level of Significance After Mitigation

#### Impact 5.4-5

Implementation of Mitigation Measure GEO-1 would reduce impacts to less than significant.

## 5. Environmental Analysis

### GEOLOGY AND SOILS

#### 5.7.9 References

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## 5. Environmental Analysis

### 5.8 GREENHOUSE GAS EMISSIONS

This section evaluates the potential for the buildout of the proposed project in the County to impact greenhouse gas (GHG) emissions in a local and regional context. Because no single project is large enough to result in a measurable increase in global concentrations of GHG, climate change impacts of a project are considered on a cumulative basis. This evaluation is based on the modeled using the California Air Resources Board's (CARB) Emissions Factor Model (EMFAC2021 version 1.0.1), the Off-Road Emissions Factor Model (OFFROAD2021 version 1.0.1), energy use provided by Pacific Gas and Electric (PGE), solid waste disposal from CARB, and water use and wastewater generation from California Energy Commission (CEC). GHG emissions modeling is based on emissions inventory and forecast being prepared for the Climate Action Plan (CAP) included in Appendix 5.3-1, *Air Quality and Greenhouse Gas Emissions Data*, of this Draft Environmental Impact Report (EIR).

#### Terminology

- **Greenhouse gases (GHG).** Gases in the atmosphere that absorb infrared light, thereby retaining heat in the atmosphere and contributing to a greenhouse effect.
- **Global warming potential (GWP).** Metric used to describe how much heat a molecule of a greenhouse gas absorbs relative to a molecule of carbon dioxide (CO<sub>2</sub>) over a given period of time (20, 100, and 500 years). CO<sub>2</sub> has a GWP of 1.
- **Carbon dioxide-equivalent (CO<sub>2</sub>e).** The standard unit to measure the amount of greenhouse gases in terms of the amount of CO<sub>2</sub> that would cause the same amount of warming. CO<sub>2</sub>e is based on the GWP ratios between the various GHGs relative to CO<sub>2</sub>.
- **MTCO<sub>2</sub>e.** Metric ton of CO<sub>2</sub>e.
- **MMTCO<sub>2</sub>e.** Million metric tons of CO<sub>2</sub>e.

#### 5.8.1 Environmental Setting

##### 5.8.1.1 GREENHOUSE GASES AND CLIMATE CHANGE

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed in the 20th and 21st centuries. Other GHGs identified by the IPCC that contributes to global warming to a lesser extent are nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).<sup>1,2</sup> The major GHGs applicable to the proposed project are briefly described.

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<sup>1</sup> Water vapor (H<sub>2</sub>O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals); however, water vapor is not considered a pollutant because it is considered part of the feedback loop rather than a primary cause of change.

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### GREENHOUSE GAS EMISSIONS

- **Carbon dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 5.8-1, *GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>*. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under the IPCC Fifth Assessment Report (AR5), GWP values for CH<sub>4</sub>, 10 MT of CH<sub>4</sub> would be equivalent to 280 MT of CO<sub>2</sub>.

Table 5.8-1 GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>

GHGs	Second Assessment Report Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>	Fourth Assessment Report Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>	Fifth Assessment Report Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>
Carbon Dioxide (CO <sub>2</sub> )	1	1	1
Methane (CH <sub>4</sub> ) <sup>2</sup>	21	25	28
Nitrous Oxide (N <sub>2</sub> O)	310	298	265

Source: IPCC 1995, 2007, 2013.

Notes: The IPCC published updated GWP values in its Fifth Assessment Report (AR5) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO<sub>2</sub>. However, GWP values identified in AR4 are used by BAAQMD to maintain consistency in statewide GHG emissions modeling. In addition, the 2017 Scoping Plan Update was based on the GWP values in AR4.

<sup>1</sup> Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.

<sup>2</sup> The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO<sub>2</sub> is not included.

### Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The recent Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC)

<sup>2</sup> Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. The share of black carbon emissions from transportation is dropping rapidly and is expected to continue to do so between now and 2030 as a result of California's air quality programs. The remaining black carbon emissions will come largely from woodstoves/fireplaces, off-road applications, and industrial/commercial combustion (CARB 2022). However, state and national GHG inventories do not include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

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### GREENHOUSE GAS EMISSIONS

summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of CO<sub>2</sub> have increased by 50 percent since the industrial revolution and continue to increase at a rate of two parts per million each year. By the 2030s, and no later than 2040, the world will exceed 1.5°C warming (CARB 2022). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. Human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in the frequency of warm spells and heat waves over most land areas.
- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

#### Potential Climate Change Impacts for California

There is at least a greater than 50 percent likelihood that global warming will reach or exceed 1.5°C in the near-term, even for the very low GHG emissions scenario (IPCC 2022). Climate change is already impacting California and will continue to affect it for the foreseeable future. For example, the average temperature in most areas of California is already 1°F higher than historical levels, and some areas have seen average increases in excess of 2°F (CalOES 2020). The California Fourth Climate Change Assessment identifies the following climate change impacts under a business-as-usual scenario:

- Annual average daily high temperatures in California are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages. Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier seasonal conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter rainy season.

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### GREENHOUSE GAS EMISSIONS

- High heat increases the risk of death from cardiovascular, respiratory, cerebrovascular, and other diseases.
- Droughts are likely to become more frequent and persistent through 2100<sup>3</sup>.
- Climate change is projected to increase the strength of the most intense precipitation and storm events affecting California.
- Mountain ranges in California are already seeing a reduction in the percentage of precipitation falling as snow. Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt. California's water storage system is designed with the expectation that snow will stay frozen for many months, and that as it melts, it will be stored in a series of reservoirs and dams, many of which are used to generate electricity. Changing waterfall patterns therefore impact both water supply and electricity supply.
- Marine layer clouds are projected to decrease, though more research is needed to better understand their sensitivity to climate change.
- Extreme wildfires (i.e., fires larger than 10,000 hectares or 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century. Drought and reduced water supplies can increase wildfire risk.
- Exposure to wildfire smoke is linked to increased incidence of respiratory illness.
- Sea level rise is expected to continue to increase erosion of beaches, cliffs, and bluffs. (CalOES 2020).

Global climate change risks to California are shown in Table 5.8-2, *Summary of GHG Emissions Risks to California*, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

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<sup>3</sup> Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, and with unprecedented dry years in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018).

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Table 5.8-2 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels Deaths due to extreme heat
Water Resources Impacts	Decreasing Sierra Nevada snowpack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea-level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pests and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006, 2009; CCCC 2012; CNRA 2014; CalEOS 2020

5.8.1.2 REGULATORY BACKGROUND

Federal Regulations

The US Environmental Protection Agency (USEPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009a).

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To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding (USEPA 2009b). The finding identified emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, according to guidance by the BAAQMD, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

#### *US Mandatory Report Rule for GHGs (2009)*

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO<sub>2</sub>e per year are required to submit an annual report.

#### *Update to Corporate Average Fuel Economy Standards (2017 to 2026)*

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (MPG) in 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and greenhouse gas (GHG) emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG for model year 2026 vehicles (85 Federal Register 24174 (April 30, 2020)).

On December 21, 2021, under the direction of Executive Order (EO) 13990 issued by President Biden, the National Highway Traffic Safety Administration (NHTSA) repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. In addition, the National Highway Traffic Safety Administration (NHTSA) announced new proposed fuel standards on March 31, 2022. Fuel efficiency under the new standards proposed will increase 8 percent annually for model years 2024 to 2025 and 10 percent annual for model year 2026. Overall, the new CAFE standards require a fleet average of 49 MPG for passenger vehicles and light trucks for model year 2026, which would be a 10 MPG increase relative to model year 2021 (NHTSA 2022).

#### State Regulations

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05, EO B-30-15, EO B-55-18, Assembly Bill 32 (AB 32), AB 1279, Senate Bill 32 (SB 32), and SB 375.

#### *Executive Order S-03-05*

EO S-03-05 was signed June 1, 2005, and set the following GHG reduction targets for the state:

- 2000 levels by 2010

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### GREENHOUSE GAS EMISSIONS

- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

#### *Assembly Bill 32, the Global Warming Solutions Act (2006)*

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

#### *Executive Order B-30-15*

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions in the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, *Safeguarding California*, in order to ensure climate change is accounted for in state planning and investment decisions.

#### *Senate Bill 32 and Assembly Bill 197*

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the executive order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

#### ***2017 Climate Change Scoping Plan Update***

EO B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, which outlined potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan established a new emissions limit of 260 MMTCO<sub>2e</sub> for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including an enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and toxic air contaminants emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

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- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE buses and trucks.
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZE trucks.
- Implementing the Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute to potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits (CARB 2017b).

#### *Executive Order B-55-18*

Executive Order B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO<sub>2e</sub> from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

#### ***2022 Climate Change Scoping Plan Update***

CARB released the Draft 2022 Scoping Plan on May 10, 2022. The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time. The measures in the Scoping Plan would achieve 80 percent below 1990 levels by 2050. Final adoption of the 2022 Scoping Plan is anticipated in late fall 2022 (CARB 2022).



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CARB’s 2022 Scoping Plan identifies strategies that would be most impactful at the local level for ensuring substantial progress towards the State’s carbon neutrality goals (see Table 5.8-3, *Priority Strategies for Local Government Climate Action Plans*).

Table 5.8-3 Priority Strategies for Local Government Climate Action Plans

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV).
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as permit streamlining, infrastructure siting, consumer education, or preferential parking policies).
VMT Reduction	Reduce or eliminate minimum parking standards in new developments,
	Adopt and implement Complete Streets policies and investments, consistent with general plan circulation element requirements,
	Increase public access to shared clean mobility options (such as planning for and investing in electric shuttles, bike share, car share, transit).
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, and compact infill development (such as increasing allowable density of the neighborhood).
	Preserve natural and working lands.
Building Decarbonization	Adopt policies and incentive programs to implement energy efficiency retrofits (such as weatherization, lighting upgrades, replacing energy intensive appliances and equipment with more efficient systems, etc.).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings.
	Adopt policies and incentive programs to reduce electrical loads from equipment plugged into outlets (such as purchasing Energy Star equipment for municipal buildings, occupancy sensors, smart power strips, equipment controllers, etc.).
	Facilitate deployment of renewable energy production and distribution and energy storage.

Source: CARB 2022

For CEQA projects for proposed land use developments, CARB recommends demonstrating that they are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

- At least 20 percent of the units are affordable to lower-income residents;
- Result in no net loss of existing affordable units;
- Utilize existing infill sites that are surrounded by urban uses, and reuse or redevelop previously developed, underutilized land presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer);
- Include transit-supportive densities (minimum of 20 residential dwelling units/acre), or are in proximity to existing transit (within ½ mile), or satisfy more detailed and stringent criteria specified in the region’s Sustainable Communities Strategy (SCS), for “SCS consistency” that would go further to reduce emissions;
- Do not result in the loss or conversion of the State’s natural and working lands;

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- Use all electric appliances, without any natural gas connections, and would not use propane or other fossil fuels for space heating, water heating, or indoor cooking;<sup>4</sup>
- Provide EV charging infrastructure at least in accordance with the California Green Building Standards Code (CalGreen) Tier 2 standards; and
- Relax parking requirements by:
  - Eliminating parking requirements or including maximum allowable parking ratios.
  - Providing residential parking supply at a ratio of <1 parking space per unit.
  - Unbundling residential parking costs from costs to rent or lease. (CARB 2022)

The second approach to project-level alignment with State climate goals is net zero GHG emissions. The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted (CARB 2022).

#### *Assembly Bill 1279*

Assembly Bill 1279, signed by Governor Newsom in September 2022, codifies the carbon neutrality targets of EO B-55-18 for year 2045 and sets a new legislative target for year 2045 of 85 percent below 1990 levels. SB 1279 also requires CARB to update the Scoping Plan to address these new targets.

#### *Senate Bill 375*

SB 375, the Sustainable Communities and Climate Protection Act, was adopted in 2008 to connect the GHG emissions reduction targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). Metropolitan Transportation Commission (MTC) is the MPO for the Bay region, which includes Napa, Marin, San Francisco, and Contra Costa counties. Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target.

#### ***2017 Update to the SB 375 Targets***

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018, which became effective in October 2018. CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional

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<sup>4</sup> Ordinance No. 2022-02 of the Contra Costa County Ordinance Code requires all new construction residential uses, including detached accessory dwelling units, to be all-electric.

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and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks compared to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translates into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted sustainable communities strategies (SCS). As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 MMTCO<sub>2e</sub> in 2035 compared to the current targets (CARB 2018).

#### *Transportation Sector Specific Regulations*

##### ***Assembly Bill 1493***

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the previous discussion in federal regulations under "Update to Corporate Average Fuel Economy Standards [2017 to 2026].") In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

##### ***Executive Order S-01-07***

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. EO S-01-07 set a declining standard for GHG emissions measured in CO<sub>2e</sub> gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applied to refiners, blenders, producers, and importers of transportation fuels, and used market-based mechanisms to allow these providers to choose the most economically feasible methods for reducing emissions during the "fuel cycle."

##### ***Executive Order B-16-2012***

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). EO B-16-2012 also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are

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ZE by 2015 and at least 25 percent by 2020. The executive order also established a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

#### ***Executive Order N-79-20***

On September 23, 2020, Governor Newsom signed EO N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The EO's goal for the state is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

#### *Renewables Portfolio: Carbon Neutrality Regulations*

#### ***Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08***

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. EO S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production decreases indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

#### ***Senate Bill 350***

Senate Bill 350 (de Leon) was signed into law in September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

#### ***Senate Bill 100***

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consists of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

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#### ***Senate Bill 1020***

SB 1020 was signed into law on September 16, 2022. SB 1020 provides interim RPS targets (90 percent renewable energy by 2035 and 95 percent renewable energy by 2040) and requires renewable energy and zero-carbon resources to reach 100 percent clean electricity by 2045.

#### *Energy Efficiency Regulations*

##### ***California Building Code: Building Energy Efficiency Standards***

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for the consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018, and went into effect on January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require the installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to the exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings are 30 percent more energy efficient than under the 2016 standards, and single-family homes are 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

Furthermore, on August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

##### ***California Building Code: CALGreen***

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>5</sup> The mandatory

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<sup>5</sup> The green building standards became mandatory in the 2010 edition of the code.

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provisions of CALGreen became effective January 1, 2011, and were last updated in 2019. The 2019 CALGreen standards became effective on January 1, 2020.

#### ***2006 Appliance Efficiency Regulations***

The 2006 Appliance Efficiency Regulations (20 CCR Sections 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as “business as usual,” they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

#### *Solid Waste Diversion Regulations*

#### ***AB 939: Integrated Waste Management Act of 1989***

California’s Integrated Waste Management Act of 1989 (AB 939, Public Resources Code Section 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the Act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

#### ***AB 341***

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

#### ***AB 1327***

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code Section 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### ***AB 1826***

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

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#### *Water Efficiency Regulations*

##### ***SBX7-7***

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of a 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

##### ***AB 1881: Water Conservation in Landscaping Act***

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves, to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

#### *Short-Lived Climate Pollutant Reduction Strategy*

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during the incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills. On March 14, 2017, CARB adopted the Short-Lived Climate Pollutant Reduction Strategy, which identifies the state’s approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

#### Regional

##### *Plan Bay Area: Strategy for a Sustainable Region*

Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) adopted Plan Bay Area 2050 on October 21, 2021 (ABAG/MTC 2021). Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional transportation-related GHG

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reduction goals of SB 375. Under the Plan Bay Area 2050 strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70 percent for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from over 50 percent in 2015 to 36 percent in 2050. GHG emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19-percent reduction in per-capita emissions by 2035 — but only if all strategies are implemented (ABAG/MTC 2021).

To achieve MTC's/ABAG's sustainable vision for the Bay Area, the Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Priority Development Areas (PDAs). PDAs are transit-oriented, infill development opportunity areas within existing communities. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth to outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, VMT, and associated GHG emissions reductions. Parts of the unincorporated Contra Costa County lies within identified PDAs (MTC 2021b).

#### *Bay Area Clean Air Plan*

BAAQMD adopted the 2017 *Clean Air Plan, Spare the Air, Cool the Climate* (Clean Air Plan) on April 19, 2017. The 2017 Clean Air Plan also lays the groundwork for reducing GHG emissions in the Bay Area to meet the state's 2030 GHG reduction target and 2050 GHG reduction goal. It also includes a vision for the Bay Area in a post-carbon year 2050 that encompasses the following:

- Construct buildings that are energy efficient and powered by renewable energy.
- Walk, bicycle, and use public transit for the majority of trips and use electric-powered autonomous public transit fleets.
- Incubate and produce clean energy technologies.
- Live a low-carbon lifestyle by purchasing low-carbon foods and goods in addition to recycling and putting organic waste to productive use.

A comprehensive multipollutant control strategy has been developed to be implemented in the next three to five years to address public health and climate change and to set a pathway to achieve the 2050 vision. The control strategy includes 85 control measures to reduce emissions of ozone, particulate matter, toxic air contaminants, and GHG from a full range of emission sources. These control measures cover the following sectors: (1) stationary (industrial) sources; (2) transportation; (3) energy; (4) agriculture; (5) natural and working lands; (6) waste management; (7) water; and (8) super-GHG pollutants. Overall, the proposed control strategy is based on the following key priorities:

- Reduce emissions of criteria air pollutants and toxic air contaminants from all key sources.
- Reduce emissions of “super-GHGs,” such as methane, black carbon, and fluorinated gases.



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- Decrease demand for fossil fuels (gasoline, diesel, and natural gas).
  - Increase efficiency of the energy and transportation systems.
  - Reduce demand for vehicle travel and high-carbon goods and services.
- Decarbonize the energy system.
  - Make the electricity supply carbon-free.
  - Electrify the transportation and building sectors.

### *Bay Area Commuter Benefits Program*

Under Air District Regulation 14, Model Source Emissions Reduction Measures, Rule 1, Bay Area Commuter Benefits Program, employers with 50 or more full-time employees within the BAAQMD are required to register and offer commuter benefits to employees. In partnership with the BAAQMD and the MTC, the rule's purpose is to improve air quality, reduce GHG emissions, and decrease the Bay Area's traffic congestion by encouraging employees to use alternative commute modes, such as transit, vanpool, carpool, bicycling, and walking. The benefits program allows employees to choose from one of four commuter benefit options, including a pre-tax benefit, employer-provided subsidy, employer-provided transit, and alternative commute benefit.

### Local

#### *Contra Costa County Ordinance Code*

Ordinance No. 2022-02, All-Electric Ordinance (New Construction), amends the 2019 California Energy Code to require the following building types to be all-electric:

- Residential (including single-family and multi-family buildings)
- Detached Accessory Dwelling Units
- Hotel
- Office
- Retail

#### *Contra Costa County Commuter Benefit Program*

The County provides full-time or part-time (over 20 hours per week) employees commuter benefits to cover work related, public transportation expenses such as ferry, train and bus fees, and parking expenses.

#### *Contra Costa County Climate Action Plan*

Contra Costa County is updating its Climate Action Plan which outlines the actions the County will take to address climate change. As stated in the current Climate Action Plan (2015), the County's Climate Action Plan demonstrates Contra Costa County's commitment to addressing the challenges of climate change by reducing local GHG emissions while improving community health (Contra Costa County 2015). The Climate Action Plan identifies how the County will achieve the AB 32 GHG emissions reduction target of 15 percent

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baseline levels by the year 2020, in addition to supporting other public health, energy efficiency, water conservation, and air quality goals identified in the County's General Plan.

#### *Contra Costa Transportation Authority Congestion Management Plan*

The Contra Costa Transportation Authority prepares and adopts a Congestion Management Program (CMP) for Contra Costa every two years. The 2021 CMP is the 15<sup>th</sup> biennial update of the CMP (CCTA 2021). The CMP provides a roadmap to reduce congestion, improve mobility, and increase overall sustainability of the transportation system in the county. The 2021 update also document changes in the use of level of service (LOS) as a finding of significant impact in CEQA under Senate Bill 743. Consistent with State law, and the MTC's Regional Transportation Plan the CMP contains the following components: traffic LOS standards, performance element to evaluate current and future multi-modal system performances, seven-year capital improvement program (CIP), program to analyze the impacts of land use decisions, and a travel demand element to promote more transportation alternatives.

#### *Contra Costa Countywide Transportation Plan*

The Countywide Transportation Plan (CTP) is intended to carry out the following Countywide transportation goals:

- Enhance the movement of people and goods on highways and arterial roads.
- Manage the impacts of growth to sustain Contra Costa's economy and preserve its environment.
- Provide and expand safe, convenient, and affordable alternatives to the single-occupant vehicle; and
- Maintain the transportation system.

The CTP incorporates five sub-regional Action Plans for Routes of Regional Significance (Action Plans). This is one of the primary vehicles for implementing achieving the Measure J Growth Management Program's goal of reducing the cumulative impacts of growth. The Action Plans also fulfill a key requirement of CCTA's Congestion Management Program. This is a State mandated program for evaluating the impact of land use decisions on the regional transportation system and establishing performance measures. Each Action Plan contains these components:

- Long range assumptions about future land uses based on local general plans and travel demand based on household and job growth.
- Regional transportation objectives that can be measured and timed.
- Specific actions to be implemented by each jurisdiction.
- A process for consultation on environmental documents.
- A procedure for reviewing the impacts of local General Plan amendments that could affect the transportation objectives.
- A schedule for reviewing and updating the Action Plans.

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### *Contra Costa County Active Transportation Plan*

The Contra Costa County Active Transportation Plan (ATP) provides a comprehensive look at the needs and opportunities to improve bicycling and walking throughout the unincorporated areas of the County. The plan outlines investments in new bicycle facilities, upgraded crossings, enhanced trail connections, and improved walkways. The ATP was adopted by the County on March 29, 2022 (Contra Costa 2022).

### *Contra Costa County Transportation Analysis Guidelines*

The Contra Costa County Transportation Analysis Guidelines (“TAG” or “Guidelines”) are provided to aid in the preparation of traffic analysis for project applicants and staff in light of the passage of SB 743. The purpose of this document is to establish a uniform approach, methodology, and tool set to evaluate the impacts of land use decisions and related transportation projects on the County transportation system. This is a “living document” and will be updated periodically to reflect newly acquired data and relevant policies. The Guidelines proposes VMT screening criteria and potential VMT mitigation measures when the transportation analysis identified a significant impact including:

- Modify project design features and/or land uses to reduce project trips or reduce trip length.
- Moving the proposed development to a more travel-efficient area (i.e., area with access to high quality transit, or other transportation solutions that reduce the length/number of trips).
- Look for other measures to reduce trip lengths or the number of trips generated through the use of transportation demand management (“TDM”) measures. Example TDM strategies are provided in Appendix B and in the County TDM Guidelines.
- A toolkit of urban design and land use strategies from other agencies (e.g. CCTA), with a presumed VMT reduction tied to each strategy.
- A fair share payment toward a regional program designed to reduce VMT, if available.

### *Contra Costa General Plan*

The Transportation and Circulation Element and Conservation Element of the current General Plan includes in the following goals, policies, and implementation measures that help reduce greenhouse gas emissions in the County.

- **Goal 5-L:** To reduce greenhouse gas emissions from transportation sources through provision of transit, bicycle, and pedestrian facilities
- **Goal 5-F:** To reduce cumulative regional traffic impacts of development through participation in cooperative, multi-jurisdictional planning processes and forums
- **Goal 5-J:** To reduce single-occupant auto commuting and encourage walking and bicycling.
- **Policy 8-100:** Vehicular emissions shall be reduced throughout the County.

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#### 5.8.1.3 EXISTING CONDITIONS

##### **California's GHG Sources and Relative Contribution**

In 2021, the statewide GHG emissions inventory was updated for 2000 to 2019 emissions using the GWPs in IPCC's AR4 (IPCC 2013). Based on these GWPs, California produced 418.2 MMTCO<sub>2e</sub> GHG emissions in 2019. California's transportation sector was the single largest generator of GHG emissions, producing 39.7 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.1 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (10.5 percent), agriculture and forestry (7.6 percent), high GWP (4.9 percent), and recycling and waste (2.1 percent) (CARB 2021).

Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2016, California statewide GHG emissions dropped below the AB 32 target for year 2020 of 431 MMTCO<sub>2e</sub> and have remained below this target since then. In 2019, emissions from routine GHG-emitting activities statewide were almost 13 MMTCO<sub>2e</sub> lower than the AB 32 target for year 2020. Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 MTCO<sub>2e</sub> per person to 10.5 MTCO<sub>2e</sub> per person in 2019, a 25 percent decrease.

Transportation emissions continued to decline in 2019 statewide as they had done in 2018, with even more substantial reductions due to a significant increase in renewable diesel. Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2019, solar power generation continued its rapid growth since 2013. Emissions from high-GWP gases comprised 4.9 percent of California's emissions in 2019. This continues the increasing trend as the gases replace ozone-depleting substances being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) has declined 45 percent since the 2001 peak, though the state's gross domestic product grew 63 percent during this period (CARB 2021).

##### Existing Communitywide GHG Emissions

The existing land uses in the unincorporated County consist of single- and multi-family residences and retail, office, commercial, industrial, and institutional uses. Operation of these land uses generates GHG emissions from natural gas used for energy, heating, and cooking; electricity usage; vehicle trips for employees and residents; area sources such as landscaping equipment and consumer cleaning products; water demand; waste generation; and solid waste generation.<sup>6</sup> Table 5.8-4, *Existing GHG Emissions Inventory*, shows the emissions associated with existing land uses in the unincorporated County.

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<sup>6</sup> Emissions from water demand and wastewater are emissions associated with electricity used to supply, treat, and distribute water.

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GREENHOUSE GAS EMISSIONS

Table 5.8-4 Existing GHG Emissions Inventory

Sector	Unincorporated Contra Costa County (MTCO <sub>2</sub> e/year)	Percent of Total
On-Road Transportation	464,040	46%
Residential Energy	191,780	19%
Nonresidential Energy	109,370	11%
Solid Waste/Landfills	220,760	22%
Agriculture	36,130	4%
Off-road Equipment	54,010	5%
Water and Wastewater	4,870	<1%
BART	190	<1%
Land Use and Sequestration	-70,860	-7%
Total Community Emissions	1,010,290	100
Residents	174,150	NA
MTCO <sub>2</sub> e/capita	5.8	NA

Source: See Appendix 5.3-1

## 5.8.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- GHG-2 Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

### 5.8.2.1 CONSISTENCY WITH STATEWIDE GHG REDUCTION TARGETS

The Housing Element Update forecasts residential development in the unincorporated County through year 2031; therefore, this EIR analyzes the potential for the proposed project to conflict with statewide GHG reduction goals identified in the CARB Scoping Plan that are applicable to local governments for year 2030 under SB 32 as well as substantial progress toward the State’s carbon neutrality goals of EO B-55-18.<sup>7</sup> Based

<sup>7</sup> The 2022 Scoping Plan update includes statewide measures to achieve the state’s carbon neutrality goals under Executive Order B-55-18 such as carbon dioxide removal (CDR) that are not applicable to local governments. Carbon neutrality goals are a “no impact” level and not a “less than significant” impact level for climate change effects. There are presently no reliable means of forecasting how future technological developments related to carbon dioxide removal may affect future emissions in a planning jurisdiction. Therefore, carbon neutrality targets are not directly applicable to local governments and CEQA projects to mitigate GHG emissions impacts of a proposed project. Moreover, Executive Order S-03-05 GHG reduction targets for 2050 are in line with the scientifically established levels needed in the U.S. to limit global warming below 1.5 to 2.0 degrees Celsius, the warming threshold at which scientists say there will likely be major climate disruptions such as super droughts and rising sea levels. For these reason, the targets of Executive Order S-03-05 are applicable to the CCAP. However, the CCAP includes measures that align with the state’s carbon neutrality goals under Executive Order B-55-18.

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on the County's existing inventory in Table 5.8-4, a trajectory consistency with the State's GHG emissions targets would be:<sup>8</sup>

- 658,704 MTCO<sub>2e</sub> by Year 2030

Local governments have the flexibility to select their own GHG emission reduction targets that are different from the ones recommended by guidance documents. For a document that serves as a Qualified GHG Reduction Strategy, these targets should be consistent with or go beyond the recommendations in guidance documents, achieving a comparable or greater level of GHG emission reductions. At minimum, consistent with the state's regulatory targets for 2030.

#### 5.8.2.2 MASS EMISSIONS AND HEALTH EFFECTS

On December 24, 2018, in *Sierra Club et al. v. County of Fresno et al.* (Friant Ranch), the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. The EIR prepared for the project, which involved a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeal that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criterion air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

In 2009, the EPA issued an endangerment finding for six GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) in order to regulate GHG emissions from passenger vehicles. The endangerment finding is based on evidence that shows an increase in mortality and morbidity associated with increases in average temperatures, which increase the likelihood of heatwaves and ozone levels. The effects of climate change are identified in Table 5.8-2. Though identified effects such as sea level rise and increased extreme weather can indirectly impact human health, neither the EPA nor CARB has established ambient air quality standards for GHG emissions. The state's GHG reduction strategy outlines a path to avoid the most catastrophic effects of climate change. Yet the state's GHG reduction goals and strategies are based on the state's path toward reducing statewide cumulative GHGs as outlined in AB 32, SB 32, EO S-03-05, and EO B-55-18.

As mentioned above, the two significance thresholds that the County uses to analyze GHG impacts are based on achieving the statewide GHG reduction goals (GHG-1) and relying on consistency with policies or plans adopted to reduce GHG emissions (GHG-2). Further, because no single project is large enough to result in a measurable increase in global concentration of GHG emissions, climate change impacts of a project are considered on a cumulative basis. Without federal ambient air quality standards for GHG emissions and given the cumulative nature of GHG emissions and the County's significance thresholds, which are tied to reducing

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<sup>8</sup> Unincorporated Contra Costa County GHG emissions in 2005 were 1,291,580 MTCO<sub>2e</sub>, translating to a 1990 GHG emissions level of 1,097,840 MTCO<sub>2e</sub> (see Appendix 5.3-1). The 2030 target for SB 32 is a 40 percent reduction from 1990 levels, which equates to 658,704 MTCO<sub>2e</sub>.

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the state’s cumulative GHG emissions, it is not feasible at this time to connect the project’s specific GHG emissions to the potential health impacts of climate change.

### 5.8.3 Proposed Housing Element Policies

The following proposed Housing Element policies pertain to greenhouse gas emissions:

- **Policy HE-P1.1.** Assist low-income homeowners in maintaining and improving residential properties through housing rehabilitation and energy-efficiency assistance programs.
- **Policy HE-P2.2:** Encourage and promote the production of housing in close proximity to public transportation and services.
- **Policy HE-P8.1.** Participate in State and Bay Area regional efforts to reduce energy consumption.
- **Policy HE-A8.2.** Adopt and implement Updated Climate Action Plan.
- **Policy HE-P8.2:** Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

### 5.8.4 Environmental Impacts

#### 5.8.4.1 METHODOLOGY

This GHG evaluation was prepared in accordance with the requirements of CEQA to determine if significant GHG impacts are likely to occur in conjunction with future development in the unincorporated County. The GHG emissions inventory and forecast is based on data compiled for the CAP update and is included as Appendix 5.3-1 to the DEIR. The GHG emissions inventory was compiled using the following protocols.

- **Local Government Operations Protocol.** The County operations GHG inventory relies on the *Local Government Operations Protocol* (LGOP), which was first developed in 2008 and was updated in 2010. The LGOP is a tool for accounting and reporting GHG emissions of local government (municipal) operations and is used throughout California and the United States. The LGOP includes guidance from several existing programs as well as the state’s mandatory GHG reporting regulations.
- **U.S. Community Protocol.** The community-wide GHG inventory uses the *United States Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions* (U.S. Community Protocol), which was first developed in 2012 and last updated in 2019. The California Governor’s Office of Planning and Research encourages cities and counties in California to follow the U.S. Community Protocol for community-wide GHG emissions.
- **Global Protocol.** The *Global Protocol for Community-Scale Greenhouse Gas Inventories* (Global Protocol) was first developed in 2014 and is intended for preparing international-community-scale GHG inventories. It is largely consistent with the U.S. Community Protocol, although it contains additional guidance and resources to support a wider range of activities in other countries. This protocol is used to assess GHG emissions from sources that are not covered in the U.S. Community Protocol.

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#### *Sectors*

- **On-Road Transportation** includes GHG emissions created by driving on-road vehicles in the unincorporated county, including passenger and freight vehicles from the California Air Resources Board (CARB).
- **Residential Energy** includes GHG emissions attributed to the use of electricity and natural gas, and other home heating fuels in residential buildings from Pacific Gas & Electric Company (PG&E) and Marin Clean Energy (MCE).
- **Solid Waste** includes the GHG emissions released from trash collected in the unincorporated County from CalRecycle, as well as collective annual emissions from waste already in place at the Acme, Keller Canyon, and West Contra Costa Landfills.
- **Off-Road Equipment** includes GHG emissions from equipment that does not provide on-road transportation (excluding agricultural equipment), such as tractors for construction or equipment used for landscape maintenance.
- **Agriculture** includes GHG emissions from various agricultural activities, including agricultural equipment, crop cultivation and harvesting, and livestock operations.
- **Bay Area Rapid Transit (BART)** includes GHG emissions associated with the operation of BART for unincorporated county residents.
- **Water and Wastewater** accounts for the electricity used to transport every gallon of water or wastewater to unincorporated county residents and businesses as well as direct emissions resulting from processing of wastewater material.
- **Land Use and Sequestration** includes GHG emissions absorbed and stored in trees and soils on locally controlled lands as part of healthy ecosystems and released into the atmosphere from development of previously undeveloped land.

Industrial sources of emissions that require a permit from BAAQMD are not included in the community inventory. However, due to the 15/15 Rule, natural gas and electricity use data for industrial land uses may also be aggregated with the nonresidential land uses in the data provided by Pacific Gas & Electricity (PG&E). Life-cycle emissions are not included in this analysis because not enough information is available, and therefore they would be speculative. Black carbon emissions are not included in the GHG analysis because CARB does not include this short-lived climate pollutant in the state's GHG emissions inventory but treats it separately.

#### *GHG Emissions Factors*

Table 5.8-5, *Existing GHG Emission Factors*, shows the emissions factors for the year 2019. Some sectors, including agriculture and off-road emissions, are calculated using formulae or models and do not have specific emission factors.



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Table 5.8-5 Existing GHG Emission Factors

Sector	MTCO <sub>2</sub> e / Unit	2019 Rate	Source
PG&E electricity	kWh	0.000108	PG&E
Direct access electricity	kWh	0.000187	California Energy Commission
MCE	kWh	0.000045	MCE
Natural gas	therm	0.005311	US Community Protocol
Propane	gallons	0.005844	US Community Protocol
Kerosene	gallon	0.010569	US Community Protocol
Wood	MMBTU	0.095624	US Community Protocol
On-road vehicles	VMT	0.000408	CARB EMFAC2021
BART	passenger mile	0.000013	BART
Solid waste (municipal solid waste)	ton	0.261659	CalRecycle
Solid waste (alternative daily cover)	ton	0.245693	CalRecycle

Source: Appendix 5.3-1.

*GHG Emissions Forecast*

The forecast assumes that each person in unincorporated Contra Costa County will continue to contribute the same amount of GHG emissions to the community total as they did in 2019, so the amount of GHG emissions changes proportionally to the projected change in community demographics.

5.8.4.2 DISCUSSION OF NO GREENHOUSE GAS EMISSIONS

All of the impacts regarding the Housing Element Update would be less than significant or potentially significant.

5.8.4.3 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

The applicable thresholds are identified in brackets after the impact statement.

Impact 5.8-1: Implementation of the proposed project is projected to result in emissions that would **exceed the unincorporated County's** GHG reduction target established under Executive Order S-03-05 or **progress toward the State's carbon neutrality goal**. [Threshold GHG-1]

Development under the proposed project would contribute to global climate change through direct and indirect emissions of GHG from land uses within the unincorporated County. A Housing Element does not directly result in development without additional approvals. Before any development can occur in the unincorporated County, it must be analyzed for consistency with the General Plan, zoning requirements, and other applicable local and State requirements; comply with the requirements of CEQA; and obtain all necessary clearances and permits.

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### Emissions Forecast

The Housing Element Update guide the County’s policies to encourage housing that meets the needs of all residents in the unincorporated areas through 2031. The proposed project is a focused effort, with particular emphasis on compliance with state housing mandates. The community GHG emissions inventory and forecast for the unincorporated Contra Costa County is shown in Table 5.8-6, *GHG Emission Forecast*. As shown in this table, the increase in residential units and population associated with the proposed project results in slight increase in residential building energy use, solid waste, off-road equipment and land use and sequestration.

Table 5.8-6 GHG Emissions Forecast

Category	Unincorporated Contra Costa County GHG Emissions (MTCO <sub>2</sub> e/Year)			
	Existing	Proposed Project	Net Change	Percent Change
On-road transportation	464,040	425,870	-38,170	-8%
Residential energy	9%	9%	9%	9%
Nonresidential energy	-17%	-17%	-17%	-17%
Solid waste	4%	4%	4%	4%
Agriculture	-4%	-4%	-4%	-4%
Off-road equipment	29%	29%	29%	29%
Water and wastewater	-5%	-5%	-5%	-5%
BART	-26%	-26%	-26%	-26%
Land use and sequestration	-5%	-5%	-5%	-5%
Total Community Emissions	1,010,290	997,170	-13,120	-1%
Significance Threshold	1,097,840	658,700	NA	NA
Achieves Threshold	Yes	No	NA	NA

Source: Appendix 5.3-1.

Notes: The 2030 forecast includes State actions to reduce GHG emissions. Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fifth Assessment Report (AR5). Conservative analysis as proposed project examines a higher housing unit amount in comparison to what has been identified in the Housing Element Update. Additionally, the GHG emissions forecast includes growth in the nonresidential sectors since this data cannot be disaggregated.

As shown in Table 5.8-6, buildout of the residential land uses accommodated under the proposed project would result in a net decrease of 13,120 MTCO<sub>2</sub>e GHG emissions from existing conditions with the State Actions. The primary reason for the decrease in overall community-wide GHG emissions, despite an increase in population in the County, is a result of regulations adopted to reduce GHG emissions and turnover of California’s on-road vehicle fleets.

Table 5.8-6 includes reductions from state measures that have been adopted to reduce GHG emissions, including:

- The RPS requires increases in renewable electricity supplies.
- The Clean Car Standards require increased fuel efficiency of on-road vehicles and decreased carbon intensity of vehicle fuels.
- The updated Title 24 Building Energy Efficiency Standards require new buildings to achieve increased energy efficiency targets.

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- The Low Carbon Fuel Standard (LCFS) mandates reduced carbon intensity of fuels used in off-road equipment.

### **Consistency with the State's GHG** Reduction Targets and Carbon Neutrality Goals

Though the proposed project would generate a decrease in GHG emissions from the CEQA baseline in the forecast year, this EIR also analyzes the potential for the project to conflict with the GHG reduction goals established under SB 32. Pursuant to SB 32, the County would need to reduce GHG emissions by 40 percent below 1990 levels to a threshold of 658,704 MTCO<sub>2e</sub>. However, GHG emissions in the County at the proposed project horizon year would be 997,170 MTCO<sub>2e</sub> and would not achieve the 40 percent reduction necessary to ensure the County is on a trajectory to achieve the SB 32 reduction goal. Local reduction strategies to meet the 2030 GHG reduction goal would be included in the planned future updates to the Climate Action Plan Update. Therefore, GHG emissions impacts for the proposed project are considered potentially significant.

While growth in the County would cumulatively contribute to GHG emissions impacts, implementation of the Housing Element policies could also help minimizing energy and mobile-source emissions.

- **Policy HE-P1.1.** Assist low-income homeowners in maintaining and improving residential properties through housing rehabilitation and energy-efficiency assistance programs.
- **Policy HE-P8.1.** Participate in State and Bay Area regional efforts to reduce energy consumption.
- **Policy HE-A8.2.** Adopt and implement Updated Climate Action Plan.
- **Policy HE-P2.2:** Encourage and provide incentives for the production of housing in close proximity to public transportation and services.
- **Policy HE-P8.2.** Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

### Summary

Implementation of the policies listed above would minimizing GHG emissions associated with the County to the extent feasible. However, as described and shown in Table 5.8-7, the County would not achieve the SB 32 GHG reduction goal without additional local GHG reduction measures; and therefore, would not achieve substantial progress toward the State's carbon neutrality goals of EO B-55-18. Therefore, GHG emissions impacts for the proposed project are considered potentially significant.

***Level of Significance Before Mitigation:*** Impact 5.8-1 would be potentially significant.

### *Mitigation Measures*

GHG-1            The County shall prepare a Climate Action Plan (CAP) to achieve the GHG reduction targets of Senate Bill 32 for year 2030. The CAP shall be completed within 18 months of certification of the Housing Element EIR. The CAP shall be updated every five years to

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ensure the County is monitoring the plan's progress toward achieving the County's greenhouse gas (GHG) reduction target and to require amendment if the plan is not achieving specified level. The update shall consider a trajectory consistent with the GHG emissions reduction goal established under Executive Order (EO) S-03-05 for year 2050 and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CAP update (e.g., Senate Bill 32 for year 2030). The CAP update shall include the following:

- GHG inventories of existing and forecast year GHG levels for the unincorporated community.
- Tools and strategies for reducing GHG emissions to achieve the GHG reduction goals of Senate Bill 32 for year 2030.
- Tools and strategies for reducing GHG emissions to ensure a trajectory with the long-term GHG reduction goal of Executive Order S-03-05.
- Plan implementation guidance that includes, at minimum, the following components consistent with the proposed CAP:
  - Administration and Staffing
  - Finance and Budgeting
  - Timelines for Measure Implementation
  - Community Outreach and Education
  - Monitoring, Reporting, and Adaptive Management
  - Tracking Tools.

***Level of Significance After Mitigation:*** Impact 5.8-1 would remain significant and unavoidable.

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Impact 5.8-2: Implementation of the proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. [Threshold GHG-2])

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Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, ABAG's/MTC's Plan Bay Area, and the Contra Costa County CAP. A consistency analysis with these plans is presented below.

#### CARB Scoping Plan

The CARB Scoping Plan is applicable to state agencies but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require local jurisdictions to adopt its policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the State agencies from the Scoping Plan result in GHG emissions reductions at the local level. So local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes,

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and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the LCFS and changes in the corporate average fuel economy standards.

Project GHG emissions shown in Table 5.8-7 includes reductions associated with statewide strategies that have been adopted since AB 32 and SB 32. Development projects accommodated under the proposed project are required to adhere to the programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32, SB 32, and Executive Order B-55-18. Future development projects would be required to comply with these state GHG emissions reduction measures because they are statewide strategies. For example, new buildings associated with land uses accommodated by implementing the proposed project would be required to meet the CALGreen and Building Energy Efficiency Standards in effect at the time when applying for building permits. Furthermore, as discussed under the discussion for Impact 5.8-1, the General Plan and proposed project includes goals, policies, and programs that would help reduce GHG emissions and therefore help achieve GHG reduction goals. Implementation of the proposed project would not obstruct implementation of the CARB Scoping Plan, and impacts would be less than significant.

#### **ABAG/MTC's Plan Bay Area**

*Plan Bay Area* is the Bay Area's regional transportation plan to achieve the passenger vehicle emissions reductions identified under SB 375. *Plan Bay Area 2050* is the current SCS for the Bay Area, which was adopted October, 21 2021 (ABAG/MTC 2021a).

In addition to significant transit and roadway performance investments to encourage focused growth, *Plan Bay Area 2050* directs funding to neighborhood active transportation and complete streets projects, climate initiatives, lifeline transportation and access initiatives, safety programs, and PDA planning (ABAG/MTC 2021b). In Contra Costa County, a number of PDAs and TPAs have been designated in the unincorporated portion of the County (MTC 2021b).

As identified previously, the proposed project will locate suitable areas in the Contra Costa region where infill of housing can occur. Thus, the project would be consistent with the overall goals of *Plan Bay Area 2050* in concentrating new development in locations where there is existing infrastructure and transit. Therefore, the proposed project would not conflict with the land use concept plan in *Plan Bay Area 2050* and impacts would be less than significant.

Furthermore, as discussed in Section 5.14, *Population and Housing*, implementation of the proposed project would induce population and housing growth necessary to meet the population growth and housing needs in the unincorporated County. Thus, the proposed project would provide more housing for residents to both live and work in the County instead of commuting to other areas, which would contribute to minimizing VMT and reducing VMT per service population. Therefore, the proposed project would not interfere with ABAG's/MTC's ability to implement the regional strategies in Plan Bay Area, and impacts would be less than significant.

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### Contra Costa County CAP

The Contra Costa CAP was adopted in 2015 and includes GHG reduction strategies to achieve the GHG reduction goals of AB 32. These include<sup>9</sup>:

- **Goal 1: Energy Efficiency** – Residential units constructed in accordance with the Housing Element Update would be required to adhere to the Building and Energy Efficiency Standards under Title 24 as well as the additional requirements adopted by the County in January 2022 as part of the Reach Code. Beginning June 1, 2022, new residential development in the County is required to be all electric (no natural gas).
- **Goal 2: Renewable Energy** – Residential units constructed in accordance with the Housing Element Update would be required to adhere to the Building and Energy Efficiency Standards under Title 24. The 2021 Standards expanded the solar photovoltaic and battery storage requirements to include multi-family residential construction in addition to single-family residential construction.
- **Goal 3: Land Use and Transportation** – Residential units constructed in accordance with the Housing Element would increase land use density near transportation corridors.
- **Goal 4: Solid Waste** – The County is required to adhere to the requirements of AB 341, which increased the waste diversion goal to 75 percent. The County has waste diversion programs that are applicable to residential uses in the County. Additionally, AB 1826 requires multi-family residential dwellings with five or more units to divert organic waste.
- **Goal 5: Water Conservation** – Residential units constructed in accordance with the Housing Element would be required to have water efficient plumbing and water efficient landscaping in accordance with the California Building Code and the State Model Water Efficient Landscape Ordinance (WELO). The County’s urban water management provider also has prepared a Water Shortage Contingency Plan (WSCP) as part of the 2020 Urban Water Management Plan to address reduction in water supply, including a drought or other emergency.

Therefore, the proposed project would not interfere with the ability to implement the local strategies in Contra Costa County CAP, and impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.8-2 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.8-2 would be less than significant.

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<sup>9</sup> The 2015 CAP includes Goal 6: Government Operations. However, this goal is not applicable to the Housing Element Update.

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### 5.8.5 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts identified under Impact 5.8-1 and Impact 5.8-2 are not project-specific impacts to global warming, but the proposed project's contribution to this cumulative impact. As discussed above, the County would experience a reduction in GHG emissions from existing conditions despite the anticipated population and employment growth. However, despite this decrease additional reductions are needed to achieve the GHG reduction goals of SB 32 and consistency with the State's carbon neutrality targets. Consequently, the proposed project's cumulative contribution to global climate change impacts is cumulatively considerable.

### 5.8.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.8-2.

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.8-1: Implementation of the proposed project is projected to result in emissions that exceed the unincorporated County's GHG reduction target established under SB 32.

### 5.8.7 Mitigation Measures

#### Impact 5.8-1

GHG-1 The County shall prepare a Climate Action Plan (CAP) to achieve the GHG reduction targets of Senate Bill 32 for year 2030. The CAP shall be completed within 18 months of certification of the Housing Element EIR. The CAP shall be updated every five years to ensure the County is monitoring the plan's progress toward achieving the County's greenhouse gas (GHG) reduction target and to require amendment if the plan is not achieving specified level. The update shall consider a trajectory consistent with the GHG emissions reduction goal established under Executive Order (EO) S-03-05 for year 2050 and the latest applicable statewide legislative GHG emission reduction that may be in effect at the time of the CAP update (e.g., Senate Bill 32 for year 2030). The CAP update shall include the following:

- GHG inventories of existing and forecast year GHG levels for the unincorporated community.
- Tools and strategies for reducing GHG emissions to achieve the GHG reduction goals of Senate Bill 32 for year 2030.
- Tools and strategies for reducing GHG emissions to ensure a trajectory with the long-term GHG reduction goal of Executive Order S-03-05.

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- Plan implementation guidance that includes, at minimum, the following components consistent with the proposed CAP:
  - Administration and Staffing
  - Finance and Budgeting
  - Timelines for Measure Implementation
  - Community Outreach and Education
  - Monitoring, Reporting, and Adaptive Management
  - Tracking Tools.

#### 5.8.8 Level of Significance After Mitigation

##### Impact 5.8-1

Implementation of Mitigation Measure GHG-1 would ensure that the County prepares a Climate Action Plan to achieve the GHG reduction goals of Senate Bill 32 and chart a trajectory to achieve the long-term year 2050 GHG reduction goal set by EO S-03-05 and substantial progress toward the State's carbon neutrality goals of EO B-55-18. The County is in the process of updating their CAP. Mitigation Measure GHG-1 would also ensure that the County is tracking and monitoring the County's GHG emissions. However, given that the updated CAP is not yet available and growth in population within the County compared to the magnitude of emissions reductions needed to achieve the GHG reduction target, GHG emissions are considered **significant and unavoidable**.



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This section evaluates the potential impacts due to the policies and buildout under the proposed 2023-2031 Housing Element Update on human health and the environment due to exposure to hazardous materials or conditions. This includes the potential impact of redesignating or rezoning approximately 548 acres to meet the County's RHNA. Potential impacts and appropriate mitigation measures or standard conditions are included as necessary.

#### 5.9.1 Environmental Setting

##### 5.9.1.1 REGULATORY BACKGROUND

###### Federal Regulations

###### *Emergency Planning Community Right-to-Know Act*

The Emergency Planning Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act, was enacted in October 1986. This law requires any infrastructure at the State and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their communities. EPCRA Sections 301 through 312 are administered by United States Environmental Protection Agency's (EPA) Office of Emergency Management. The EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, Superfund Amendments and Reauthorization Act Title III is implemented through California Accidental Release Prevention program. The State of California has delegated local oversight authority of the California Accidental Release Prevention (CalARP) program to the Contra Costa County.

###### *Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)*

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) was developed to protect the water, air, and land resources from the risks created by past chemical disposal practices. Under CERCLA, the United States Environmental Protection Agency (USEPA) maintains a list, known as CERCLIS, of all contaminated sites in the nation that have in the past or are currently undergoing clean-up activities. CERCLIS contains information on current hazardous waste sites, potential hazardous waste sites, and remedial activities. This includes sites that are on the National Priorities List (NPL) or being considered for the NPL ("Superfund").

###### *Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984*

RCRA establishes a framework for national programs to achieve environmentally sound management of both hazardous and nonhazardous wastes. RCRA was designed to protect human health and the environment, reduce/eliminate the generation of hazardous waste, and conserve energy and natural resources. RCRA also promotes resource recovery techniques. A waste can legally be considered hazardous if it is classified as

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### HAZARDS AND HAZARDOUS MATERIALS

ignitable, corrosive, reactive, or toxic. Under RCRA, the U.S. EPA regulates hazardous waste from the time that the waste is generated until its final disposal (“cradle to grave”). The Hazardous and Solid Waste Amendments of 1984 (HSWA) both expanded the scope of RCRA and increased the level of detail in many of its provisions. The Hazardous Waste Management subchapter of the RCRA deals with a variety of issues regarding the management of hazardous materials including the export of hazardous waste, state programs, inspections of hazardous waste disposal facilities, enforcement, and the identification and listing of hazardous waste.

#### *Hazardous Materials Transportation Act*

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (HMTA), which is administered by the Research and Special Programs Administration of the U.S. Department of Transportation (DOT). HMTA provides DOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property that is inherent in the commercial transportation of hazardous materials. The HMTA governs the safe transportation of hazardous materials by all modes, excluding bulk transportation by water. DOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or is involved in any way with the manufacture or testing of hazardous materials packaging or containers. DOT regulations pertaining to the actual movement govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing.

#### *Occupational Safety and Health Act*

The federal Occupational Safety and Health Act of 1970 authorizes each state (including California) to establish their own safety and health programs with the United States Department of Labor, Occupational Safety and Health Administration’s (OSHA) approval. The California Department of Industrial Relations regulates implementation of worker health and safety in California.

OSHA Regulation 29 CFR 1926.62 regulates the demolition, renovation, or construction of buildings involving lead materials. Federal, state, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. All friable (crushable by hand) ACMs, or non-friable ACMs subject to damage, must be abated prior to demolition following all applicable regulations.

#### *Disaster Mitigation Act of 2000*

The Disaster Mitigation Act of 2000 requires state and local governments to prepare mitigation plans that identify hazards, potential losses, mitigation needs, goals, and strategies. It is intended to facilitate cooperation between state and local governments.

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### *Toxic Substances Control Act*

The Toxic Substances Control Act of 1976 was enacted by Congress to give the EPA the ability to track the 75,000 industrial chemicals currently produced by or imported into the United States. The EPA repeatedly screens these chemicals and can require reporting or testing of any that may pose an environmental or human health hazard. It can ban the manufacture and import of chemicals that pose an unreasonable risk. Also, the EPA has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics. It then can control these chemicals as necessary to protect human health and the environment. The Act supplements other federal statutes, including the Clean Air Act and the Toxics Release Inventory under EPCRA.

### *Federal Response Plan*

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and other resource providers, including the American Red Cross, that: 1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of State and local governments overwhelmed by a major disaster or emergency; 2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and 3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a Presidential declaration of a major disaster or emergency. The Federal Response Plan is part of the National Response Framework, which was most recently updated in October 2019.

### *National Response Framework*

The 2019 National Response Framework, published by the Department of Homeland Security, is a guide to how the nation responds to all types of disasters and emergencies. The Framework describes specific authorities and best practices for managing incidents that range from serious local to large-scale terrorist attacks or catastrophic natural disasters. In addition, the Framework describes the principles, roles, and responsibilities, and coordinating structures for responding to an incident, and further describes how response efforts integrate with those of the other mission areas.

### State Regulations

#### *California Hazardous Waste Control Act*

Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., the Department of Toxic Substance Control regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code,

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Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.

In Contra Costa County, remediation of contaminated sites is performed under the oversight of Contra Costa Health Services with the cooperation of the RWQCB. At sites where contamination is suspected or known to occur, the project sponsor is required to perform a site investigation and draw up a remediation plan, if necessary. For typical development projects, actual site remediation is done either before or during the construction phase of the project. Site remediation or development may be subject to regulation by other agencies. For example, if dewatering of a hazardous waste site were required during construction, subsequent discharge to the sewer collection system could require a permit from Contra Costa Water District, while discharge to a storm drain could require a permit from both the Contra Costa Health Services and the San Francisco RWQCB.

#### *California Health and Safety Code and Code of Regulations*

California Health and Safety Code Chapter 6.95 and California Code of Regulations (CCR), Title 19, Section 2729 describe the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures, training program information, and a hazardous material inventory disclosing hazardous materials stored, used, or handled on-site. A business that uses hazardous materials, or mixtures containing them, in certain quantities must establish and implement a business plan.

#### *Tanner Act (Assembly Bill 2948)*

Although numerous state policies deal with hazardous waste, the most comprehensive is the Tanner Act (California Civil Code § 1793.22), which was adopted in 1986. The Tanner Act governs the preparation of hazardous waste management plans and the siting of hazardous waste facilities in California. To be in compliance with the Tanner Act, local or regional hazardous waste management plans need to include provisions that define: 1) the planning process for waste management, 2) the permit process for new and expanded facilities, and 3) the appeals process to the state available for certain local decisions.

#### *California Building Code*

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is in Part 2 of Title 24 of the California Code of Regulations. The CBC is based on the 2015 International Building Code but has been modified for California conditions. The CBC is updated every three years, and the current (2019) CBC became effective on January 1, 2020. The Contra Costa County has adopted the CBC and incorporated it as Division 72, *Building Code* of the County Ordinance Code. Commercial and residential buildings are plan-checked by County building officials for compliance with the typical fire safety requirements of the CBC.



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#### *Underground Storage Tank Program*

Releases of petroleum and other products from USTs are the leading source of groundwater contamination in the United States. The RCRA Subtitle I establishes regulations governing the storage of petroleum products and hazardous substances in USTs and the prevention and cleanup of leaks. In EPA Region 9 (California, Arizona, Hawaii, Nevada, Pacific Islands, and over 140 tribal nations) the UST program operates primarily through state agency programs with EPA oversight. In California, the State Water Resources Control Board (SWRCB), under the umbrella of CalEPA, provides assistance to local agencies enforcing UST requirements. The purpose of the UST program is to protect public health and safety and the environment from releases of petroleum and other hazardous substances. The program consists of four elements: leak prevention, cleanup, enforcement, and tank tester licensing. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs, including groundwater analytical data, the surveyed locations of monitoring wells, and other data. The SWRCB's GeoTracker system currently has information submitted by responsible parties for over 10,000 leaking UST (LUST) sites statewide and has been extended to include all SWRCB groundwater cleanup programs, including the LUST, non-LUST (Spill, Leaks, Investigation, and Cleanup), Department of Defense, and landfill programs.

#### *Hazardous Materials Disclosure Programs*

Both the federal government (CFR, EPA, SARA, and Title III) and the state (Health and Safety Code, Division 20, Chapter 6.95, §§ 2500-25520; 19 CCR, Chapter 2, Subchapter 3, Article 4, §§ 2729-2734) require all businesses that handle more than specified amount of hazardous materials or extremely hazardous materials, termed a reporting quantity, to submit a hazardous materials emergency/contingency plan (also known as a hazardous materials business plan) to their local Certified Unified Program Agency (CUPA). The responsible CUPA in Contra Costa County is the Contra Costa Health Services Department., which is responsible for conducting compliance inspections of regulated facilities in the County.

The hazardous materials business plan includes the business owner/operator identification page, hazardous materials inventory chemical description page, and an emergency response plan and training plan. Business plans must include an inventory of the hazardous materials at the facility. The entire hazardous materials business plan needs to be reviewed and recertified every three years. Business plans are required to include emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. These plans need to identify the procedures to follow for immediate notification to all appropriate agencies and personnel of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel. All facilities must keep a copy of their plan onsite.

Hazardous materials business plans are designed to be used for responding agencies, such as the Contra Costa County Fire Protection District, during a release or spill to allow for a quick and accurate evaluation of each situation for appropriate response. Businesses that handle hazardous materials are required by law to provide an immediate verbal report of any release or threatened release of hazardous materials if there is a reasonable belief that the release or threatened release poses a significant present or potential hazard to human health and

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safety, property, or the environment. If a release involves a hazardous substance listed in Title 40 of the CFR in an amount equal to or exceeding the reportable quantity for that material, a notice must be filed with the California Office of Emergency Services within 15 days of the incident.

#### *California Department of Forestry and Fire Protection*

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include no fire threat, moderate, high, and very high fire threat. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. CAL FIRE's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

#### Regional Regulations

##### *Association of Bay Area Governments Hazard Mitigation Plan*

The Association of Bay Area Governments' multijurisdictional Local Hazard Mitigation Plan for the San Francisco Bay area was updated in 2021 in partnership with the Bay Conservation and Development Commission (BCDCs). Adapting to Rising Tides Program to support local governments in the regional plan for existing and future hazards of climate change. This detailed 5-year plan identifies potential natural and human-made hazards, assesses their potential risks, and includes mitigation methods to reduce risks. The potential hazards identified in the Plan include earthquakes and liquefaction, wildfires, floods, drought, solar storms, dam or levee failure, disease outbreak, freezes, wind, heat, thunder and lightning storms, siltation, tornadoes, hazardous materials, slope failure and mudflows, and other hazards. Similarly, mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

##### *Regional Catastrophic Earthquake Mass Transportation/Evacuation Plan*

The Bay Area Urban Area Security Initiative Approval Authority prepared a mass transportation and evacuation plan on behalf of the counties and cities within the 12-county Bay Area region. The plan describes the general strategy for emergency response to an incident with regional impact. The plan evaluated two earthquake disaster scenarios that could occur in the Bay Area including a 7.9 M on the northern segment of the San Andreas Fault and a 7.05 M earthquake on the entire Hayward Fault. It additionally coordinates the provision of transit services during these disaster events.

#### Local Regulations

##### *County Hazardous Waste Task Force*

Contra Costa County contains heavy industrial development that may be associated with hazardous waste transport across the County (Contra Costa 2005). Hundreds of miles of pipelines for the transportation of natural gas, crude oil, and refined petroleum products traverse Contra Costa County, including residential and

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commercial areas. Some of these pipelines may cross unstable slopes and areas underlain by soft mud and peat. The hazard of petroleum fires is considered more dangerous than natural gas fires as they are more likely to spread to nearby property. In 1983, Contra Costa County formed the County Hazardous Waste Task Force to appropriately manage the transport and disposal of hazardous waste. The County Hazardous Waste Management Plan is a comprehensive analysis of all waste management from generation through disposal.

### *Contra Costa County General Plan*

The Contra Costa General Plan Chapter 7, *Public Services and Facilities Element* contains goals and policies governing the use and handling of hazardous materials and fire protection in the County. The labeling of the goals and policies below are consistent with the labeling in the respective General Plan elements.

### ***Hazardous Waste Management***

- **Policy 7-103:** Contra Costa County will accept its fair share of hazardous waste management facilities to serve the local area, region and State.
- **Policy 7-104:** The siting of hazardous waste management facilities necessary to meet the County's needs shall be encouraged within Contra Costa County, according to the "Hazardous Waste Management Planning and Siting Principle," identified in the HWMP (refer to p. III-1 of the HWMP). To be sited off-site hazardous waste management facilities must be consistent with the HWMP (which includes the Hazardous Waste Management Planning and Siting Principle; siting criteria; and hazardous waste polices), as well as the criteria presented in the following policies.
- **Policy 7-105:** Facilities shall be designed to minimize risk to neighbors in the case of an accident or spill of hazardous wastes. All facilities shall be required to adopt an emergency response plan which includes immediate notification of the public in case of an emergency.
- **Policy 7-106:** To the degree necessary to protect human health and the environment and based on a risk assessment or environmental document, off-site commercial hazardous waste management facilities with similar general treatment methods, as defined in the County Hazardous Waste Management Plan, should not be concentrated in the same area of the County.
- **Policy 7-109:** All hazardous waste management facilities shall be located in areas where access roads leading to major transportation routes (e.g. arterials, freeways, or expressways) do not pass through residential neighborhoods, where residential frontage is minimized, is buffered, or has physical barriers, and where road networks are demonstrated to be relatively safe with regard to road design, construction, accident rates, and traffic flow. This policy does not apply to facilities solely dedicated to the collection and transfer of household hazardous waste.
- **Policy 7-114:** A buffer zone of 2,000 feet is required for hazardous waste disposal facilities based on the requirement in the Health and Safety Code, Section 25202.5, unless the owner proves to the satisfaction of the State Department of Health Services that a 2,000-foot buffer zone is not required to protect public health and safety. A larger buffer zone may be required for residual repositories based on risk assessments and the environmental impact report for the project.
- **Policy 7-121:** For all facilities, road networks leading to major transportation routes should be demonstrated to be safe with regard to road design and construction, accident rates, excessive traffic, etc. For residual repositories, it is preferable to have good access to major transportation routes. These facilities

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may be more distant from waste generation sites than other types of facilities because of their need for larger land areas. Treatment facilities should be located so as to minimize distances to major transportation routes that are designed to accommodate heavy vehicles.

- **Policy 7-135:** Treatment-type facilities shall only be sited in areas designated for industrial (heavy and light) use in the General Plan of the agency with local land use jurisdiction (the County or a City). If a treatment-type facility is proposed in a non-industrial area, a General Plan Amendment will be necessary to re-designate the property as industrial (or designation substantially equivalent to industrial) or a special designation for hazardous waste facilities in order to be consistent with the Hazardous Waste Management Plan.

#### *Fire Protection*

- **Goal 7-AA:** To incorporate requirements for fire-safe construction into the land use planning and approval process.
- **Goal 7-AD:** To provide special fire protection for high-risk land uses and structures.
- **Policy 7-66:** Sprinkler systems may be required in new residential structures, where necessary to protect health, safety and welfare.
- **Policy 7-71:** A set of special fire protection and prevention requirements shall be developed for inclusion in development standards applied to hillside, open space, and rural area development.
- **Policy 7-72:** Special fire protection measures shall be required in high risk uses (e.g. mid-rise and high-rise buildings, and those developments in which hazardous materials are used and/or stored) as conditions of approval or else be available by the district prior to approval
- **Policy 7-80:** Wildland fire prevention activities and programs such as controlled burning, fuel removal, establishment of fire roads, fuel breaks and water supply, shall be encouraged to reduce wildland fire hazards.
- **Policy 7-81:** All structures located in Hazardous Fire Areas, as defined in the Uniform Fire Code, shall be constructed with fire-resistant exterior materials, such as fire safe roofing, and their surroundings are to be irrigated and landscaped with fire-resistant plants, consistent with drought resistance and water conservation policies.

The Contra Costa General Plan Chapter 10, Safety Element also includes goals and policies that address hazardous materials and disaster planning.

#### *Hazardous Materials*

- **Goal 10-I:** To provide public protection from hazards associated with the use, transport, treatment and disposal of hazardous substances.
- **Policy 10-62:** Storage of hazardous materials and wastes shall be strictly regulated.
- **Policy 10-65:** Industries which store and process hazardous materials shall provide a buffer zone between the installation and the property boundaries sufficient to protect public safety. The adequacy of the buffer zone shall be determined by the County Planning Agency.
- **Policy 10-66:** To the greatest possible extent, new fuel pipelines should not be routed through centers of population nor should they cross major disaster evacuation routes.

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- **Policy 10-67:** In order to provide for public safety, urban and suburban development should not take place in areas where they would be subject to safety hazards from oil and gas wells. Development near oil and gas wells should meet recognized safety standards.
- **Policy 10-69:** Industry should be encouraged to utilize underground pipelines, rail, and water transportation of hazardous materials to the greatest extent feasible to take advantage of the greater separation from the general public provided by these modes of transportation.

### *Disaster Planning*

- **Policy 10-84:** The Office of Emergency Services, in cooperation with cities within the County, shall delineate evacuation routes and, where possible, alternate routes around points of congestion.
- **Policy 10-89:** Every high-rise building shall be designed and constructed to provide for the evacuation of occupants and/or for the creation of a safe environment in case of a substantial disaster, such as a severe earthquake or fire.
- **Policy 10-91:** Restrict homes built in rural areas or adjacent to major open space areas from having roofs which are covered with combustible materials.

Additionally, the County's Transportation and Circulation Element (Chapter 5) includes the following policies applicable to land uses at the County's two public airports:

### *Special policies that apply to the East County Airport (Byron Airport)*

- **Policy 5-65:** The buffer land or conservation easements acquired around the airport shall ensure that incompatible uses will not be allowed to locate within the safety zone.
- **Policy 5-66:** Establishment of commercial, industrial or residential development around the Byron Airport shall only be allowed if it is found to be consistent with the Airport Land Use Compatibility Plan (ALUCP) and the Airport Master Plan for Byron Airport.

### *Special Policies Regarding the Airport Land Use Commission*

- **Policy 5-69:** Structural heights shall be designated by the Federal Aviation Regulations (FAR) Part 77 surfaces associated with the various runway designations shown on the latest Airport Layout Plan.
- **Policy 5-70:** The Structural Height Limits defines maximum structural height. Height limits will be placed on new buildings, appurtenances to buildings, all other structures and landscaping in accordance with the Airport Layout Plan except in special instances when for reasons of safety the Commission may impose a more restrictive structural height. An applicant for any structure within the Airport Land Use Commission Planning Area proposed to penetrate any height limit surface shall submit an aeronautical analysis which specifies the proposed project's effect on airport instrument procedures for all runways, the effect on airport utility, and the effect on overall aviation safety. If, after reviewing the aeronautical study and other related information, it is determined that the proposed project would not have an adverse effect on safety and airport utility then, the project may be approved for heights other than those indicated by the FAR, Part 77, Structural Height Limits.

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- **Policy 5-71:** All major land use actions within the Buchanan Field and Byron Airport Influence Areas as shown upon Figure 5-5 of Chapter 5 of the General Plan shall be referred to the Contra Costa County Airport Land Use Commission for comment. The definition of what constitutes a major land use action is found on pages 2-6 through 2-8 of the Contra Costa County Airport Land Use Compatibility Plan adopted in December of 2000. If it is unclear whether or not an action falls within this listing, the County should err on the side of caution and refer the matter to the ALUC staff.
- **Policy 5-72:** New construction or building exterior alterations located in areas of terrain penetration as defined by the ALUC Airspace Protection Surfaces will be reviewed on a case-by-case basis with consideration given to topography, flight patterns, existing vegetation and other factors which might affect airspace and safety. The County will rely on ALUC land use compatibility guidance and programs for considering airspace safety analysis issues and height limitations of structures.
- **Policy 5-73:** Temporary structures, such as construction cranes or antennae, which would penetrate any adopted height limit surface, may be allowed after a case-by-case review, provided that obstruction lighting and marking is installed and a two week notice of temporary structure emplacement is provided by the proponent to the County Manager of Airports. Temporary structure emplacement shall be subject to reasonable time limit.
- **Policy 5-74:** The County may require an exterior building materials reflectivity analysis upon review of the proposed types of building materials, building height, and building location and use on site. Such analyses should be required for development of any structures on or adjacent to public airports which would be over three stories in height and utilize reflective surfaces. Reflectivity studies shall address the potential for pilot and airport operation interference, proposed mitigation to any identified potential interference resulting from reflected sunlight, and any other subject areas related to reflectivity which the County may deem appropriate. The County may include some or all of the proposed mitigation in its project approval process.
- **Policy 5-75:** Within each safety zone designated by the ALUC, the following are incompatible uses (The ALUC Airport Influence Area Maps for Buchanan Field Byron Airports are shown on Figure 5-5 of Chapter 5 of the General Plan):
  1. Any light source which would direct a steady light or flashing light of red, white, green, or amber color associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA approved facility.
  2. Any construction which would cause sunlight to be reflected toward an aircraft engaged in an initial straight climb following takeoff or toward an aircraft engaged in a straight final approach toward a landing at the airport.
  3. Any use which would generate smoke, attract large concentrations of birds, or may otherwise adversely affect safe air navigation within a safety zone.
  4. Any use which would generate electrical interference that would be detrimental to the operation of aircraft and/or aircraft instrumentation.
  5. Any use which would utilize or cause to be stored highly toxic, inflammable or otherwise hazardous materials which, in the event of an aircraft accident, could be released into the surrounding environment to threaten human life or property.

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6. Within the safety zone clear area, any use which involves the erection of a permanent above ground structure other than FAA approved facilities.
  7. Within the safety zones, excluding the clear areas, any use which on a regular basis would result in a density (excluding streets) in excess of 30 persons per acre or one person/500 square feet of gross building floor area, whichever is less.
  8. Any of the following uses: new single and multiple family residences, shopping centers, restaurants, schools, hospitals, arenas and other places of public assembly.
- **Policy 5-76:** The following are suggested uses within the ALUC Safety Zones for Buchanan Field:
    1. agriculture;
    2. open space;
    3. warehousing;
    4. light industry;
    5. parking of automobiles; and
    6. low occupant density public uses, such as sewage treatment plants.
  - **Policy 5-77:** Within the ALUC Safety Zone 2, no new lot splits shall be allowed and buildings on existing lots of record shall be located as far as practical from the extended runway centerline and shall be limited to two stories in height. The following are suggested uses within the ALUC Safety Zones for the Byron Airport:
    1. agriculture;
    2. open space;
    3. low intensity park and recreation uses;
    4. low occupant density public uses; and
    5. parking of automobiles;
    6. logistics/warehouse/distribution;
    7. light industry/business park;
    8. office; and,
    9. commercial.

### *Contra Costa Local Hazard Mitigation Plan*

The Local Hazard Mitigation Plan (LHMP) serves to reduce injury, loss of life, property damage, and loss of services from natural disasters. This LHMP provides a comprehensive analysis of the natural and human-caused hazards that threaten the County, with a focus on mitigation, allowing the County to remain eligible to receive additional federal and state funding to assist with emergency response and recovery, as permitted by the federal Disaster Mitigation Act of 2000 and California Government Code Sections 8685.9 and 65302.6; and it complements the efforts undertaken by the Safety Element. The LHMP complies with all requirements set forth under the federal Disaster Mitigation Act of 2000 and received approval from the Federal Emergency Management Agency (FEMA) in 2021. Contra Costa County updated its LHMP in 2017.

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#### *Contra Costa Emergency Operations Plan (EOP)*

The EOP provides the basis for a coordinated response before, during and after an emergency affecting Contra Costa County. It facilitates multi-jurisdictional and interagency coordination in emergency operations, particularly between local government, private sector, operational area (geographic county boundary), State response levels and appropriate Federal agencies. It also establishes the organizational framework of the California Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS) within Contra Costa County.

#### *Contra Costa County Ordinance Code*

##### ***Chapter 42-2 – Disaster Council and Emergency Services***

The Contra Costa County emergency services policy board consists of occupants of county or other public positions and offices. The operational area council is created as an advisory council to the emergency services policy board. The operational area council consists of emergency managers from incorporated cities, special districts, key utilities and businesses and staff of the sheriff's office, office of emergency services. The county administrator oversees the county's emergency organization. Unless otherwise specifically provided, or required by the context, all references in this chapter to the county administrator are in his capacity as the administrator of emergency services.

##### ***Chapter 450-2 – Hazardous Materials Release Response Plans and Inventories***

Health and Safety Code Chapter 6.95 requires, among other things, that any business which handles a specified quantity of a hazardous material establish a business plan for emergency response to a release or threatened release of a hazardous material, which includes an inventory of hazardous materials handled by the business, and report to the administering agency and the State Office of Emergency Services, occurrences of specified releases or threatened releases of hazardous materials. This ordinance implements Division 20 Chapter 6.95 of the California Health and Safety Code.

##### ***Chapter 450-6 – Underground Storage of Hazardous Substances***

**450-6.402 - Additional permits-** According to section 450-6.403, no person shall repair or make any modifications to an underground storage tank without a permit therefor issued by the department. The permits required by this section are in addition to the permit required by Health and Safety Code Section 25284.

**450-6.404 – Delivery-** Section 450-6.404 states that no person shall deliver any product to an underground storage tank unless the department has issued a permit for its operation to the owner and said permit has not expired or been revoked. Upon request by any person, the owner or operator of an underground storage tank shall allow inspection of the permit.

**450-6.406 – Fencing-** Additionally section 450-6.406 states that no person shall leave unattached any excavation over three feet in depth, associated in any way with an underground storage tank without erecting a fence adequate to prevent persons or animals from falling into the excavation.



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### ***Chapter 450-8 – Risk Management***

A facility that classifies as a stationary source shall submit a safety plan to the county health services director within one-year of the effective date of the ordinance codified in this chapter or within three years of the date a facility becomes a stationary source, that complies with the provisions of this section and that includes the safety elements listed in full in Chapter 450-8.016 - Stationary source safety requirements.

### ***Chapter 84-63- Land Use Permits for Development Projects Involving Hazardous Material***

Chapter 84-63 states that land use permits, variances or other land use entitlements granted for the operation or expansion of an offsite hazardous waste facility shall be consistent with the portions of the county hazardous waste management plan which identify siting criteria, siting principles or other policies applicable to hazardous waste facilities. Before granting the application, the division of the planning agency hearing the matter initially or on appeal shall find that the application complies with the applicable siting criteria, siting principles and other policies identified in the county hazardous waste management plan, and that the proposed offsite hazardous waste facility is consistent with the county hazardous waste management plan and the land uses which surround them.

### ***Section 1004-2.806 - Hazardous materials***

Prior to the issuance of any encroachment permit for the construction or installation of any pipelines for the transmission of flammable liquids or gases, approval shall be obtained from the road commissioner and, as applicable, from each fire protection district or the state fire marshal, as the case may be, in which any pipelines will be located. All approvals should be based on the determination that no undue fire hazard will be created to life or property in the areas through which the proposed pipeline will be located.

### ***Division 722 – Fire Code***

Contra Costa County, the Crockett-Carquinez Fire Protection District, and the Contra Costa County Fire Protection District adopt the 2022 California Fire Code (California Code of Regulations, Title 24, Part,9 [based on the 2021 International Fire Code published by the International Code Council]), including Chapters 1-10 and 12-80, Appendix B, Appendix C, Appendix D, Appendix F, Appendix H, Appendix I, Appendix J, and Appendix K (Ordinance No. 2022-34).

### ***Chapter 86.4- Airport Zoning***

**86-4.004 – Purpose-** Under the authority conferred by the Conservation and Planning Act of the state of California and in conformity with regulations and standards of the Civil Aeronautics Administration of the United States Department of Commerce, the board of supervisors deems it necessary to create an Airport zoning chapter to promote the health, safety and general welfare of the inhabitants of this county by preventing the creation or establishment of airport hazards, thereby protecting the lives and property of the users of the Contra Costa County Airport (Buchanan Field) and of the occupants of the land in its vicinity, and preventing destruction or impairment of the utility of the airport and the public investment in it, in accordance with and as a part of the comprehensive master plan of airports of this county.

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**86-4.014 - Height limits-** Except as otherwise provided in this chapter, no structure or tree shall be erected, altered, allowed to grow, or maintained in any airport approach zone, airport turning zone, or airport transition zone to a height greater than the height limit established in this section for that zone. For the purpose of this regulation, the following height limits are established for each zone:

- (1) Approach Zones one, two, three, and four shall have a maximum height limit of twenty feet at a distance of one thousand feet from the end of the runway. The maximum allowable height shall be increased in step-ups of five feet each for every two hundred foot segment added to the one thousand foot distance from the end of the runway, to a maximum height of one hundred fifty feet.
- (2) Approach Zones five and six shall have a maximum height limit of twenty feet at a distance of six hundred feet from the end of the runway. The maximum allowable height shall be increased in step-ups of five feet each for every hundred foot segment added to the six hundred foot distance from the end of the runway, to a maximum height of one hundred fifty feet.
- (3) All turning zones shall have a maximum height limit of one hundred fifty feet, except that portion of the turning zone marked on the Airport Zoning Plan for Buchanan Field, Contra Costa County, California, as "not included in turning zone."
- (4) All transition zone areas shall have the maximum height limit indicated on the airport zoning plan for Buchanan Field, Contra Costa County, California.

#### *Contra Costa Airport Land Use Compatibility Plan (ALUC)*

The ALUC is a planning document that is used to promote compatibility between the airports in Contra Costa County and the land uses which surround them. As adopted by the Contra Costa County Airport Land Use Commission, it serves as a tool for use by the commission in fulfilling its duty to review airport and adjacent land use development proposals. Additionally, the plan sets compatibility criteria applicable to local agencies in their preparation or amendment of land use plans and ordinances and to landowners in their design of new development.

#### 5.9.1.2 EXISTING CONDITIONS

##### Airports

There are two public general aviation airports located in Contra Costa County, Buchanan Field Airport and Byron Airport. There are also two private airstrips located in eastern Contra Costa County. Both airports are public reliever airports that serve the residents of Contra Costa County. Buchanan Field Airport is east of Concord and covers 495 acres (FAA 2022). Byron Airport is located south of Byron and covers 1,427 acres (Contra Costa 2022).

The Contra Costa County Airport Land Use Compatibility Plan (ACLUP) was issued by the Contra Costa County Airport Land Use Commission in 2000. Areas within the unincorporated County and several cities are within Buchanan Field and Byron Airport's Safety Compatibility Zones. These zones restrict certain land uses

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and heights of structures pursuant to FAA Part 77 Regulations protecting airspace near the airport (ALUC 2000a, ALUC 2000b).

#### Fire Hazards

The County contains 339 square miles of land mapped within CALFIRE's fire hazard severity zones (CALFIRE 2021). Currently 25.87 square miles of this land is developed with residential uses, which houses approximately 7 percent of the population in the County (Contra Costa 2018). An additional 3.4 square miles of undeveloped land in the County designated for residential uses is within a fire hazard severity zone (Contra Costa 2018). Developed and undeveloped properties within these portions of the County are vulnerable to wildfire risks due to their proximity to forested lands and land adapted to periodic wildfire events. These areas also face increased barriers for emergency access and response because a majority of this land is located on hilly terrain. New and existing development would need to effectively manage vegetative fuel loads and maintain adequate fuel modification zones to reduce wildfire potential and spread.

#### Hazardous Materials

Numerous types of hazardous materials and chemicals are transported and used throughout homes and businesses within the County. Contra Costa County contains extensive heavy industrial development along its west and north coasts, some of which is associated with hazardous materials uses. Richmond hosts the largest oil refinery in California. This refinery in addition to numerous other facilities across the north coast of the County released a combined total of 3.25 million pounds of toxic material in 2020 according to the EPA's Toxics Release Inventory (EPA 2022).

These heavy industrial uses present potential risks to public safety due to the explosiveness and flammability of petroleum and chemical materials. In addition, storage tanks and pipelines are located throughout the County and could present public safety risks due to geologic conditions. A majority of the transportation routes used to transport these materials are major roadways, freeways, rail lines, and waterways. These include several major state and interstate routes that traverse the County in addition to several railroads including the Union Pacific Railroad. The City of Richmond also hosts a marine port and an oil tanker terminal. Figure 10-9a in the County's current Safety Element of the General Plan shows areas the County has identified as hazardous land uses, which in addition to a number of petroleum and chemical industrial sites, includes the Concord Naval Weapons Station and the County's two airports (Contra Costa 2005). Figure 10-9b shows additional hazardous land uses including oil and gas wells and petroleum and natural gas pipelines (Contra Costa 2005).

According to the State Water Resources Control Board, there are 1,630 GeoTracker sites in the County. This includes 171 open cases. According to the Department of Toxic Substances Control, there are 511 Envirostor sites in the County. These include 69 active sites. Table 5.9-1, *GeoTracker Sites in Contra Costa County*, and Table 5.9-2, *Envirostor Sites in Contra Costa County*, summarize the statuses of the hazardous material sites within the County.

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Table 5.9-1 GeoTracker Sites in Contra Costa County

Type of Site	Status	Number of Sites
Leaking Underground Storage Tank (LUST)	Completed- Case Closed	858
	Open- Eligible for Closure	11
	Open- Remediation	10
	Open- Site Assessment	23
	Open- Verification Monitoring	3
	Open- Assessment and Interim Remedial Action	4
	Open- Inactive	0
	Subtotal, Open Cases	51
	TOTAL	909
Cleanup Program Site	Completed- Case Closed	140
	Open- Remediation	24
	Open- Verification Monitoring	16
	Open-Inactive	27
	Open-Site Assessment	30
	Open- Eligible for Closure	3
	Open- Assessment and interim Remedial Action	17
	Subtotal, Open Cases	120
TOTAL	260	
Permitted Underground Storage Tanks	TOTAL	461
	TOTAL	1,630

Source: SWRCB 2022

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Table 5.9-2 Envirostor Sites in Contra Costa County

Type of Site	Status	Number of Sites
Corrective Action Sites	Active	10
	Refer: RWQCB, Refer: SMBRP, Refer: RCRA, Refer: EPA	14
	No Further Action	6
	Inactive- Needs Evaluation	7
	Other	6
	TOTAL	43
Evaluation Sites	Active	9
	Refer RWQCB, Refer: Local Agency, Refer: Other Agency, Refer: RCRA, Refer RWQCB	27
	Inactive- Needs Evaluation	9
	No Further Action, No Action Required	28
	No Evidence of Release	2
	TOTAL	75
Military Evaluation Sites	Inactive- Needs Evaluation	2
	No Further Action Needed	12
	Refer: RWQB	2
	TOTAL	16
Tiered Permit	Active- Land Use Restrictions	1
	Certified O&M Land Use Restrictions	1
	Inactive- Needs Evaluation	14
	Refer: Other Agency	11
	TOTAL	26
State Response	Active (Land Use Restrictions)	9 (1)
	Certified	10
	Certified / Operation Maintenance (Land Use Restrictions)	2 (18)
	Refer: Other Agency, Refer: RCRA, Refer: RWQCB	6
	Inactive- Action Required	1
	No Further Action	5
TOTAL	52	
School Investigation	Inactive- Needs Evaluation	2
	Inactive- Withdrawn	1
	No Action Required / No Further Action	58
	TOTAL	61
School Cleanup	Active	1
	Certified	9
	Inactive- Needs Evaluation	1
	No Further Action	1
	TOTAL	12
Federal Superfund	Listed- Active	3
	Delisted- Active	2
	TOTAL	5
Hazardous Waste	Closed	5
	Protective Filer	10
	TOTAL	15

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Table 5.9-2 Envirostor Sites in Contra Costa County

Type of Site	Status	Number of Sites
Hazardous Waste- RCRA	Protective Filer	3
	Closed	11
	Post Closure Permit	5
	Operating Permit	5
	TOTAL	24
Voluntary Cleanup	Active (Land Use Restrictions)	28 (5)
	Certified	16
	Certified / Operation & Maintenance (Land Use Restrictions)	1 (15)
	Inactive Needs Evaluation	1
	Refer: Local Agency, Refer: Other Agency, Refer: RWQCB	5
	No Further Action	15
	TOTAL	86
Other	TOTAL	101
	TOTAL	511

Source: DTSC 2022

#### 5.9.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- H-1 Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- H-2 Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- H-3 Emit hazardous emissions or handle hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of an existing or proposed school.
- H-4 Be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- H-5 For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area.
- H-6 Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- H-7 Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

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### 5.9.3 Proposed Housing Element Policies

The following proposed Housing Element policy is applicable to hazards:

- **Policy HE-P8.3:** Locate below market-rate housing developments outside of mapped hazard zones as identified in the Health and Safety Element.

### 5.9.4 Environmental Impacts

#### 5.9.4.1 DISCUSSION OF NO HAZARDS AND HAZARDOUS MATERIAL IMPACTS

All of the impacts would be less than significant or potentially significant.

#### 5.9.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.9-1: Implementation of the proposed project, including construction and operation activities, could involve the transport, use, and/or disposal of hazardous materials; however, compliance with existing local, state, and federal regulations would ensure impacts are minimized. [Thresholds H-1, H-2, and H-3]

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The proposed Housing Element Update (HEU) does not propose construction or other development; rather, it provides capacity for future housing development consistent with State Housing Element Law and the RHNA for Contra Costa County. Demolition and construction activities associated with future housing development facilitated by the HEU could require transport of hazardous materials (e.g., asbestos-containing materials, lead-based paint, and/or contaminated soils). This transport would be limited in duration. Residential development sites within the County are not expected to transport, use, store, or dispose of substantial amounts of hazardous materials, with the exception of common residential-grade hazardous materials such as household cleaners and paint, among others. There are also a variety of existing regulatory processes, including General Plan Public Services and Facilities Element Policies 7-104, 7-105, 7-114, and 7-135; Safety Element Policies 10-62, 10-65, 10-66, 10-67, and 10-69 as well as Chapter 450-2, Chapter 450-6, Chapter 84-63 and Chapters 450-2, 450-6 and 84-63 of the County Ordinance Code, that would serve to minimize these potential impacts through the review for hazardous material contamination in soil, soil vapor, or groundwater and an assessment for hazardous building materials which could, upon disturbance during construction, be released to the environment or, upon future occupation, cause a hazard to the public due to exposure to hazardous materials above the applicable regulatory exposure limits. For example, policies Policy 10-67 states that in order to provide for public safety, urban and suburban development should not take place in areas where they would be subject to safety hazards from oil and gas wells. Development near oil and gas wells should meet recognized safety standards.

Impacts associated with hazardous materials would be dependent on the location of future residential development and the nature of surrounding land uses. Any future residential development proposals as a result of the implementation of the HEU would require project-specific environmental evaluation under the California Environmental Quality Act in order to determine that any potential impact are less than significant in regard to hazardous materials, and project approval would be considered in accordance with local policies and regulations, including the General Plan and the County Ordinance Code.

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Approval of the HEU itself, as a policy document update, would not change these regulations and would not provide any goals, policies, or programs that would significantly increase the risk of the release of hazardous materials. Therefore, impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.9-1 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.9-1 would be less than significant.

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Impact 5.9-2: Implementation of the proposed project could facilitate residential development of a site that is on a list of hazardous materials sites. [Threshold H-4]

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As indicated in the Existing Conditions subsection, there are multiple sites identified in the County that have remaining contamination in either soil, groundwater, and/or soil vapor. These sites may include sites that are pursuant to Government Code 65962.5; burn dump sites; active, abandoned, or closed landfills; areas with historic or current agriculture; or areas with petroleum contamination. As described in Impact 5.9-1, there are a variety of existing and proposed regulatory processes that would serve to minimize potential impacts through the review for hazardous material contamination in soil, soil vapor, or groundwater and an assessment for hazardous building materials which could, upon disturbance during construction, be released to the environment or, upon future occupation, cause a hazard to the public due to exposure to hazardous materials above the applicable regulatory exposure limits. Additionally, the proposed Housing Element Policy HE-P8.3 aims to prevent the location of below market-rate developments in mapped hazard areas identified in the County Health and Safety Element.

Under implementation of the proposed HEU, development may be located on or near a site such as those pursuant to Government Code 65962.5; burn dump sites; active, abandoned or closed landfills; areas with historic or current agriculture; or areas with petroleum contamination. However, any development, redevelopment, or reuse on or next to any of these sites would require environmental site assessment by a qualified professional to ensure that the relevant projects would not disturb hazardous materials on any of the hazardous materials sites or plumes of hazardous materials diffusing from one of the hazardous materials sites, and that any proposed development, redevelopment, or reuse would not create a substantial hazard to the public or the environment. Phase I Environmental Site Assessments are also required for land purchasers to qualify for the Innocent Landowner Defense under CERCLA and to minimize environmental liability under other laws such as RCRA. Properties contaminated by hazardous substances are also regulated at the local, state, and federal level and are subject to compliance with stringent laws and regulations for investigation and remediation. For example, compliance with the CERCLA, RCRA, California Code of Regulations, Title 22, and related requirements would remedy all potential impacts caused by hazardous substance contamination. Therefore, development of Housing Element Inventory Sites would result in a less than significant impact upon compliance with existing laws and regulations.

***Level of Significance Before Mitigation:*** Impact 5.9-2 would be less than significant.



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### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.9-2 would be less than significant.

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Impact 5.9-3: The HEU includes sites located in the vicinity of an airport or within the jurisdiction of an airport land use plan. [Threshold H-5]

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Airport-related hazards are generally associated with aircraft accidents, particularly during take-off and landing. Airport operation hazards include incompatible land uses, power transmission lines and tall structures that penetrate airspace operational areas, visual distractions, and wildlife hazards (e.g. bird strikes). In accordance with state law, the Contra Costa County Airport Land Use Commission adopted an Airport Land Use Compatibility Plan (ALUCP) in December 2000. The ALUCP sets land use compatibility and design criteria applicable to all development, including residential, which are within a certain distance from one of the County's two public airports. The proposed Housing Element Update sites inventory includes several sites in the Vine Hill community that are within two miles of the Buchanan Airport, as shown in Figure 5.9-1, *Buchanan Airport Safety Zones*. A portion of one of the sites is in the Airport's Safety Zone 4 which restricts development to no more than four habitable floors above ground. Additionally, as shown on Figure 5.9-2, *Byron Airport Safety Zones*, two sites in the Byron area that would be redesignated to a residential high density designation may fall within the Byron Airport's Safety Zone D, which restricts building height up to 100 feet.

Any future residential development proposals that may result after the update would require project-specific environmental evaluation under the California Environmental Quality Act in order to determine that any potential impact are less than significant in regard to nearby airports, and project approval would be considered in accordance with local policies and regulations, including the ALUC Plan, the General Plan policies from the Transportation and Circulation Element listed above in Section, 5.9.1.1, and Chapter 86.4, Airport Zoning, of County Ordinance Code. Therefore, impacts are less than significant.

***Level of Significance Before Mitigation:*** Impact 5.9-3 would be less than significant.

### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.9-3 would be less than significant.

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## 5. Environmental Analysis

Figure 5.9-1 Buchanan Airport Safety Zones

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Figure 5.9-2 Byron Airport Safety Zones

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Impact 5.9-4: Development under the proposed project could affect the implementation of an emergency responder or evacuation plan. [Threshold H-6]

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While the HEU is a policy-level document and does not include any specific development proposals, future development pursuant to policies included in the HEU would result in construction activities that could temporarily affect roadways as a result of lane closures or narrowing for roadway and/or utility improvements. This could affect emergency response times or evacuation routes. The proposed HEU would also increase the number of people who may need to evacuate the Planning Area in the event of an emergency.

To address such impacts, the County has adopted and continually updates an LHMP. The LHMP reduces injury, loss of life, property damage, and loss of services from natural disasters and provides a comprehensive analysis of the natural and human-caused hazards that threaten the County, with a focus on mitigation. This allows the County to remain eligible to receive additional federal and state funding to assist with emergency response and recovery, as permitted by the federal Disaster Mitigation Act of 2000 and California Government Code Sections 8685.9 and 65302.6, and it complements the efforts undertaken by the Safety Element. The LHMP complies with all requirements under the federal Disaster Mitigation Act of 2000 and received approval from the Federal Emergency Management Agency (FEMA) in 2018. In addition to the LHMP, the County implements an Emergency Operations Plan (EOP) and Community Wildfire Protection Plan (CWPP) to address emergency response and wildfire mitigation planning. Contra Costa County also participates in implementing regional plans including the Bay Area Multi-Jurisdictional Hazard Mitigation Plan to provide the framework for responding to major emergencies or disasters.

However, as noted in Section 5.18, *Wildfire*, in Impact 5.18-1, construction of new development or redevelopment could cause a temporary impairment of an evacuation route due to road closure during construction activities, and therefore create a significant impact with regard to emergency access and evacuation access. This would be limited to the duration of the construction period and direct impacts of construction would be evaluated during the project environmental review process or permit review process by applicable Fire Protection District; however, a temporary impact could still occur on single access roadways or evacuation constrained areas where there is limited ingress and egress. Implementation of Mitigation Measure WILD-1 would reduce impacts to less than significant.

***Level of Significance Before Mitigation:*** Impact 5.9-4 would be potentially significant.

### *Mitigation Measures*

Implement Mitigation Measure WILD-1 (see Section 5.18)

***Level of Significance After Mitigation:*** Impact 5.9-4 would be less than significant.

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Impact 5.9-5: Development on sites located in designated Very High Fire Hazard Severity Zones could expose structures and/or residences to fire danger. [Threshold H-7]

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The California Department of Forestry and Fire Protection (CALFIRE) has prepared a map of Contra Costa County showing areas designated as wildland area that may contains substantial forest fire risks and hazards, or “Very High Fire Hazard Severity Zone.” These areas are shown Figure 5.18-1, *Fire Hazard Severity Zones in Contra Costa County* in Section 5.18, *Wildfire*, of the DEIR. As previously noted, the proposed Housing Element update is a policy-level document that does not directly propose development.

The County includes 339 square miles of land mapped in high fire hazard severity zones, both in State Responsibility Areas and Local Responsibility Areas, including future housing sites listed in Tables 3-3, 3-4, and 3-5 that are proposed for redesignation or rezoning for increased residential densities in order to meet the County’s RHNA target.

As noted in the Section 5.18, *Wildfire*, development under the HEU would be required to comply with all applicable laws and regulations. These include General Plan Public Services and Facilities Element Policy 7-81, that states that all structures located in Hazardous Fire Areas, as defined in the Uniform Fire Code, must be constructed with fire-resistant exterior materials, such as fire safe roofing, and their surroundings are to be irrigated and landscaped with fire-resistant plants, consistent with drought resistance and water conservation policies. The County has also incorporated the 2022 CBC into its Ordinance Code which requires fire safe design and the maintenance of defensible space. Furthermore, Housing Element Policy HE-P8.3 aims to locate all below market-rate housing outside of mapped hazard areas in the Health and Safety Element.

However, as noted in Impact 5.18-2 of Section 5.18, compliance with the mandatory wildfire hazard reduction measures through state and local regulations, would not reduce impacts related to exacerbating the risk of pollutant concentrations from wildfire and the uncontrolled spread of wildfire to a less than significant level. The only way to fully avoid the wildfire impact from implementation of the proposed Housing Element Update is to not allow development in areas within the SRA, Very High Fire Hazard Severity Zones, and the Wildland-Urban Interface, thereby eliminating the wildfire impact. However, doing so is not feasible or practical as the County has a responsibility to meet other conflicting obligations, including increases in the number and type of housing available in Contra Costa County. The County needs to promote residential development, as required by State housing law, within its adopted growth boundaries. While possible forms of mitigation for wildfire risks in the unincorporated County would be implemented by the County, doing so to reduce impacts to a less-than-significant level would be infeasible and inconsistent with County planning goals and objectives. This conclusion does not prevent a finding of less-than-significant impacts at the project level; however, due to potential unknown impacts from future development under the Housing Element Update, impacts at the programmatic level would remain significant and unavoidable.

***Level of Significance Before Mitigation:*** Impact 5.9-5 would potentially significant.

#### *Mitigation Measures*

There are no feasible mitigation measures.

***Level of Significance After Mitigation:*** Impact 5.9-5 would be significant and unavoidable.



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#### 5.9.5 Cumulative Impacts

The geographic scope of analysis for cumulative hazardous materials impacts encompasses and is limited to the proposed HEU inventory sites and their immediately adjacent areas. This is because impacts relative to hazardous materials are generally site-specific and depend on the nature and extent of the hazardous materials release, and existing and future soil and groundwater conditions. For example, hazardous materials incidents tend to be limited to a smaller and more localized area surrounding the immediate spill location and extent of the release and could only be cumulative if two or more hazardous materials releases spatially overlapped.

##### Hazardous Materials

During the construction phase, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment. Construction activities for the cumulative projects would be subject to the same regulatory requirements discussed for the project for compliance with existing hazardous materials regulations, including the management of hazardous materials and spill response. Cumulative projects that transport, use, store, or dispose of hazardous materials would be required to comply with the same regulations as the proposed project. Entities that use hazardous materials would be required to prepare and implement Hazardous Materials Business Plans (HMBPs) that would describe procedures for the safe and legal transportation, storage, use, and disposal of hazardous materials. Similar to any residential development projects that could be constructed as a result of the HEU's implementation, cumulative projects that disturb more than one acre of ground would be required to implement a SWPPP to control run on and runoff from their respective sites.

Cumulative projects that have had previous spills of hazardous materials would be required to remediate their respective sites to the same established regulatory standards as the potential projects developed as a result of the HEU. This would be the case regardless of the number, frequency, or size of the release(s). The responsible party associated with each spill would be required to remediate site conditions to the same established regulatory standards. The residual less-than-significant effects that would remain after remediation would not combine with the potential residual effects of cumulative projects to cause a potential significant cumulative impact because residual impacts would be highly site-specific and would be below regulatory standards.

##### Emergency Response and Evacuation

With respect to emergency response and evacuation, once constructed, the residential projects would not restrict or interfere with the flow of emergency vehicles or evacuation and would therefore not create a cumulatively considerable effect. While additional traffic volumes could be expected with the construction of more housing, the County would be required to periodically update its emergency response and evacuation plan(s) as required under AB 747. This periodic reevaluation would address these changed conditions and would adjust the evacuation plans accordingly. Based upon these considerations, the cumulative effect of the HEU's implementation would be less than significant.

## 5. Environmental Analysis

### HAZARDS AND HAZARDOUS MATERIALS

#### Exposure to Fire Hazards

As noted in Section 5.18, Wildfire, development associated with the proposed project would result in new development within the SRA, Very High Fire Hazard Severity Zones, and WUI. To protect this development, the County requires that future development adhere to state and local regulations. With adherence to these building practices and wildfire management requirements, development associated with the proposed project would reduce wildfire risk. However, exposure to fire hazards for sites within VHFHSZ cannot be completely reduced to less than significant on a programmatic level, without the removal of sites within this zone from the Housing Element Sites Inventory. As stated in Impact 5.9-5, there are currently no feasible mitigation measures available to reduce these impacts, so cumulative impacts to fire hazard exposure are potentially significant.

#### 5.9.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.9-1, 5.9-2, and 5.9-3.

Without mitigation, these impacts would be **potentially significant**:

- Impact 5.9-4: Development under the proposed project could affect the implementation of an emergency responder or evacuation plan.
- Impact 5.9-5: Development on sites located in designated Very High Fire Hazard Severity Zones could expose structures and/or residences to fire danger.

#### 5.9.7 Mitigation Measures

Impact 5.9-4

Implement WILD-1

Impact 5.9-5

There are no feasible mitigation measures.

#### 5.9.8 Level of Significance After Mitigation

Impact 5.9-4

With the implementation of Mitigation Measure WILD-1, which requires the preparation of a Traffic Control Plan, impacts would be less than significant.

Impact 5.9-5

While the California Building Code, California Fire Code, SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations, Public Resources Code, and the County's Hazard Mitigation Plan, General Plan policies, and Ordinance Code standards, and the proposed Housing Element policy would reduce impacts; the only way to fully avoid the wildfire impact from implementation of the proposed project, is to not allow development in areas within Very High Fire Hazard Severity Zones and WUI areas, thereby eliminating the wildfire impact.

## 5. Environmental Analysis HAZARDS AND HAZARDOUS MATERIALS

However, doing so is not feasible or practical as the County has a responsibility to meet its RHNA allocation. Due to the potential unknown impacts from future development under the proposed project, impacts at the programmatic level would remain significant and unavoidable.

## 5. Environmental Analysis

### HAZARDS AND HAZARDOUS MATERIALS

#### 5.9.9 References

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## 5. Environmental Analysis

### 5.10 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts of the proposed Housing Element Update to hydrology and water quality conditions in Contra Costa County. A summary of the relevant regulatory policies and the existing hydrologic setting is followed by a discussion of the potential project impacts, and when necessary, provide appropriate mitigation.

#### 5.10.1 Environmental Setting

##### 5.10.1.1 REGULATORY BACKGROUND

###### Federal Regulations

###### *Clean Water Act*

The United States Environmental Protection Agency (USEPA) is the lead federal agency responsible for water quality management. The Clean Water Act (CWA) is the primary federal law that governs water quality control activities by the USEPA and the states. The CWA regulates direct and indirect discharge of pollutants; sets water quality standards for all contaminants in surface waters; and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality and nonpoint sources of pollution.

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the USEPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, the USEPA has delegated authority to the State Water Resources Control Board (SWRCB) and its Regional Water Quality Control Boards (RWQCBs) to identify beneficial uses and adopt applicable water quality objectives.

When water quality does not meet CWA standards and compromises designated beneficial uses of a receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as “impaired”. Once a water body has been designated as impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards, with a factor of safety included. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

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### HYDROLOGY AND WATER QUALITY

#### *National Pollutant Discharge Elimination System*

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the CWA to regulate municipal and industrial discharges to surface waters of the United States, including discharges from municipal separate storm sewer systems (MS4). Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Under the National Pollutant Discharge Elimination System (NPDES) program, all facilities that discharge pollutants into waters of the United States are required to obtain a NPDES permit.

Requirements for stormwater discharges are also regulated under this program. In California, the NPDES permit program is administered by the SWRCB through the nine RWQCBs. Contra Costa County is within the jurisdiction of the San Francisco Bay RWQCB (Region 2) and the Central Valley RWQCB (Region 5). The County's storm drain system collects water from numerous non-point source of pollution and is permitted as a MS4 (Municipal Separate Storm Sewer System). The County is currently regulated under one separate NPDES permit for discharge to the San Francisco Bay and under the jurisdiction of the San Francisco RWQCB (Permit No. CAS612008) (SFRWQCB 2022).

#### *Federal Emergency Management Agency*

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The design standard for flood protection is established by FEMA. FEMA's minimum level of flood protection for new development is the 100-year flood event, also described as a flood that has a 1-in-100 chance of occurring in any given year.

As required by the FEMA regulations, all development constructed within the 100-year floodplain or a Special Flood Hazard Area (as delineated on the FIRM) must be elevated so that the lowest floor is at or above the base flood elevation level. The term "development" is defined by FEMA as any human-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials. Per these regulations, if development in these areas occurs, a hydrologic and hydraulic analysis must be performed prior to the start of development and must demonstrate that the development does not cause any rise in base flood elevation levels, because no rise is permitted within regulatory floodways. Upon completion of any development that changes existing Special Flood Hazard Area boundaries, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision, as soon as practicable, but not later than six months after such data become available.

## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

### State Regulations

#### *Porter-Cologne Water Quality Act*

The Porter-Cologne Water Quality Act (Water Code sections 13000 et seq.) is the basic water quality control law for California. This Act established the SWRCB and divided the state into nine regional basins, each under the jurisdiction of a RWQCB. The SWRCB is the primary State agency responsible for the protection of California's water quality and groundwater supplies. The RWQCBs carry out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan, or basin plan, that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water-quality conditions and problems. As stated previously, Contra Costa County is within the jurisdiction of both the San Francisco Bay RWQCB (Region 2) and the Central Valley RWQCB (Region 5). The Porter-Cologne Act also authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, NPDES permits, Section 401 water quality certifications, or other approvals.

#### *Statewide General Construction Permit*

Construction projects of one acre or more of land area must comply with the requirements of the SWRCB Construction General Permit (Order No. 2009-009-DWQ as amended by 2010-0014-DWQ). Under the terms of the permit, applicants must file Permit Registration Documents (PRDs) with the SWRCB prior to the start of construction, including a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and signed certification statement.

The SWPPP must demonstrate conformance with applicable Best Management Practices (BMP), including a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project location. The SWPPP must list BMPs that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. Additionally, the SWPPP must contain a visual monitoring program, a chemical monitoring program for nonvisible pollutants if there is a failure of the BMPs, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

#### *State Water Resources Control Board Trash Amendments*

On April 7, 2015, the SWRCB adopted an amendment to the Water Quality Control Plan for Ocean Waters of California to control trash and Part 1, Trash Provisions, of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California. They are collectively referred to as "the Trash Amendments". The Trash Amendments apply to all surface waters of California and include a land-use-based compliance approach to focus trash controls on areas with high trash-generation rates. Areas such as high density residential, industrial, commercial, mixed urban, and public transportation stations are considered priority land uses. There are two compliance tracks for Phase I and Phase II MS4 permittees:

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### HYDROLOGY AND WATER QUALITY

- Track 1: Permittees must install, operate, and maintain a network of certified full capture systems in storm drains that capture runoff from priority land uses.
- Track 2: Permittees must implement a plan with a combination of full capture systems, multi-benefit projects, institutional controls, and/or other treatment methods that have the same effectiveness as Track 1 methods.

The Trash Amendments provide a framework for permittees to implement their provisions, which is provided in Section C.10, Trash Load Reduction, of the San Francisco RWQCB MS4 permit. Section C.10 of the San Francisco RWQCB MS4 permit provides more specific trash load requirements than the Trash Amendments. The Contra Costa County Watershed Program is working to meet trash load reduction goals by working to install full trash capture devices or control measures for full trash capture equivalency throughout unincorporated Contra Costa County.

#### *Water Conservation in Landscaping Act of 2006*

The Water Conservation in Landscaping Act includes the State of California's Model Water Efficient Landscape Ordinance (MWELo), which requires cities and counties to adopt landscape water conservation ordinances. The MWELo was revised in July 2015 via Executive Order B-29-15 to address the ongoing drought and build resiliency for future droughts. State law requires all land use agencies, which includes cities and counties, to adopt a WELO that is at least as efficient as the MWELo prepared by the DWR. The 2015 revisions to the MWELo improve water conservation in the landscaping sector by promoting efficient landscapes in new developments and retrofitted landscapes. The revisions increase water efficiency by requiring more efficient irrigation systems, incentives for grey water usage, improvements in on-site stormwater capture, and limiting the portion of landscapes that can be covered in high-water-use plants and turf. New development projects that include landscape areas of 500 square feet or more are subject to the MWELo. This applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review. The previous landscape size threshold for new development projects ranged from 2,500 square feet to 5,000 square feet. The size threshold for rehabilitated landscapes has not changed and remains at 2,500 square feet. Contra Costa County has adopted the MWELo, as codified in Chapter 82-26, *Water Efficient Landscapes*, of the Contra Costa County Ordinance Code.

#### Regional Regulations

##### *San Francisco Bay Regional Water Quality Control Board*

Portions of Contra Costa County that drain to the San Francisco Bay are within the jurisdiction of the San Francisco Bay RWQCB (Region 2). The San Francisco Bay RWQCB addresses regionwide water quality issues through the creation and triennial update of the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan). The Basin Plan was adopted in 1995 and most recently amended May 4, 2017. This Basin Plan designates beneficial uses of the State waters within Region 2, describes the water quality that must be maintained to support such uses, and provides programs, projects, and other actions necessary to achieve the standards established in the Basin Plan. The *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*, as adopted by the SWRCB in 1995 and last amended in 2018, also provides water quality principles



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### HYDROLOGY AND WATER QUALITY

and guidelines to prevent water quality degradation and protect the beneficial uses of waters of enclosed bays and estuaries. The San Francisco Bay RWQCB also administers the MS4 permit for cities and towns within Contra Costa County that have stormwater draining in San Francisco Bay. The cities and towns, as well as Contra Costa County and the Contra Costa County Flood Control and Water Conservation District have joined together to form the Contra Costa Clean Water Program (CCCWP).

#### *Central Valley Regional Water Quality Control Board*

On September 23, 2010, the Central Valley RWQCB adopted the East Contra Costa County Municipal Stormwater Permit, which applies to unincorporated areas in east Contra Costa County (roughly east of Pittsburg) and the municipalities of Antioch, Oakley, and Brentwood. These entities are also part of the CCCWP and the East Contra Costa County MS4 permit has similar regulations and requirements as the San Francisco RWQCB's MS4 permit. However, the SF RWQCB and the Central Valley RWQCB have agreed to have all of Contra Costa County under one MS4 permit that is under the jurisdiction of the San Francisco RWQCB (Permit No. CAS612008). The Central Valley RWQCB also provides beneficial uses of State water in Region 5 under the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*. The fifth amendment to the Basin Plan was issued in May 2018.

#### *Contra Costa Clean Water Program*

The CCCWP comprises Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, and 19 cities and towns within Contra Costa County. Members of the program are regulated stormwater dischargers under the MS4 permits of San Francisco and Central Valley RWQCBs. Permittees must comply with the San Francisco SWQCB MS4 permit C.3, *New Development and Redevelopment*, which requires new development and redevelopment projects to incorporate treatment measures and appropriate source control and site design features to reduce the pollutant load in stormwater discharges and minimize runoff flows. Where development projects increase the impervious area, drain to unhardened channels, or are in less developed watersheds, additional analysis and treatment is required to reduce hydromodification impacts of stormwater discharges. Permittees incorporate Hydromodification Management (HM) control standards for applicable development projects. The guidelines for compliance of the Provision C.3 standards are provided in the latest edition (2017) of the *Stormwater C.3 Guidebook*, which was prepared by the CCCWP. CCCWP is currently preparing an updated *Stormwater C.3 Guidebook* to reflect the latest San Francisco RWQCB MS4 permit requirements.

#### *Contra Costa County Flood Control & Water Conservation District*

The Contra Costa County Flood Control & Water Conservation District (FC District) was established in 1951 and provides flood protection facilities, regional storm drainage systems, and creek pollution reduction measures. The FC District uses drainage areas (DAs) to plan and implement flood control facilities, which are funded through development fees. The Hydrology Section of the FC District collects and analyzes precipitation and runoff data and prepares hydrological analyses of watersheds that are used in project development.

## 5. Environmental Analysis

### HYDROLOGY AND WATER QUALITY

#### *Contra Costa County Watershed Program*

The Contra Costa County Watershed Program (CWP) is responsible for ensuring that the County complies with the MS4 permits. The County complies with these requirements by implementing various stormwater pollution prevention activities in the unincorporated areas of Contra Costa County by:

- Ensuring that pollutants stay out of the storm drain system, creeks, the Delta and the Bay so that only “Rain (Goes) Down the Drain”
- Managing and enforcing the stormwater compliance program and Enforcement Response Plan to minimize stormwater impacts
- Requiring new development projects to mitigate impacts to stormwater quality and flow rates
- Promoting pollution prevention awareness and providing public outreach
- Supporting local non-profit creek groups
- Inspecting businesses to ensure responsible stormwater practices are implemented
- Investigating and responding to illicit discharges
- Sweeping streets to remove pollutants before they enter the storm drain.

#### *Contra Costa County Stormwater Management and Discharge Control Ordinance*

The purpose of the Contra Costa County Stormwater Management and Discharge Controls Ordinance (Division 1014) is to implement the provisions of the MS4 permits for unincorporated areas of Contra Costa County by reducing pollutants in stormwater discharges to the maximum extent practicable and reducing stormwater runoff rates and volumes and non-point source pollution through stormwater management controls. The ordinance requires new development projects that are regulated under the MS4 permits to control stormwater runoff and prepare a stormwater control plan for review and approval by the County. The ordinance also codifies various federal and state requirements for stormwater pollution prevention and requires compliance with these statutes and regulations.

#### *Contra Costa County Floodplain Management Ordinance*

Chapter 82-28 of the County Ordinance Code provides the floodplain management regulations. The purpose of this ordinance is to promote the public health, safety, and general welfare of the public, and minimize public and private losses due to flood conditions in specific areas by implementing flood protection provisions. Specifically, Article 82-28.1002 provides the standards for construction in floodplains or special flood hazard areas. Article 82-28.14, Flood Hazard Zones, applies to all land in that portion of the Sacramento-San Joaquin Valley that is within the jurisdiction of Contra Costa County and states that projects within this area must comply with the federal floodplain regulations.

#### *Contra Costa County Water Supply Ordinance*

Chapter 414-4 of the County Ordinance Code provides for the protection of the county’s groundwater sources from construction activities. The purpose of this ordinance is to establish approval of water supply systems for any person proposing to subdivide or develop any property needing water for domestic purposes. (Ord. 81-56 § 1).

## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

### *Contra Costa General Plan*

The Contra Costa General Plan Chapter 7, Public Facilities/Services Element, Chapter 8, Conservation Element, and Chapter 10, Safety Element, contains goals and policies governing water supply and quality standards as well as flood protection measures in the County. The labeling of the goals and policies below are consistent with the labeling in the respective of the General Plan.

#### ***Drainage and Flood Control***

- **Policy 7-39:** Land use plans and zoning shall be the primary means for floodplain management in preference to structural improvements, where possible.
- **Policy 7-45:** On-site water control shall be required of major new developments so that no significant increase in peak flows occurs compared to the site's pre-development condition, unless the Planning Agency determines that off-site measures can be employed which are equally effective in preventing adverse downstream impacts expected from the development or the project is implementing an adopted drainage plan.
- **Policy 7-50:** Public access to watercourses shall be required of major new developments when liability, security, and maintenance issues can be satisfactorily resolved.
- **Policy 7-55:** As appropriate and to the extent allowed by law, assess all new development projects at least \$0.35 per square foot of impervious surface created. This drainage fee is to be collected through existing County Flood Control drainage area fee ordinances, newly adopted drainage area fee ordinances, existing and new assessment districts, or other financial entities. The fee may be applied to the cost of any developer-sponsored regional flood control improvements on- or off-site which mitigate the project's flooding impacts. Regional facilities are defined as systems sized to handle at least 15 cubic feet per second and suitable for public agency maintenance, i.e., 24-inch diameter and larger storm drains.
- **Policy 7-56:** All residential and non-residential uses proposed in areas of special flood hazards, as shown on FEMA maps, shall conform to the requirements of County Floodplain management applied to all ordinances, approved entitlements (land use permits, tentative, final, and parcel maps, development plan permits, and variances) and ministerial permits (buildings and grading permits).

#### ***Water Resources***

- **Policy 8-74:** Preserve watersheds and groundwater recharge areas by avoiding the placement of potential pollution sources in areas with high percolation rates.
- **Policy 8-75:** Preserve and enhance the quality of surface and groundwater resources.
- **Policy 8-77:** Provide development standards in recharge areas to maintain and protect the quality of groundwater supplies.

#### ***Flood Hazard***

- **Policy 10-33:** The areas designated on Figure 10-8 shall be considered inappropriate for conventional urban development due to unmitigated flood hazards as defined by FEMA. Applications for development at urban or suburban densities in areas where there is a serious risk to life shall demonstrate appropriate solutions or be denied.

## 5. Environmental Analysis

### HYDROLOGY AND WATER QUALITY

- **Policy 10-34:** In mainland areas affected by creeks, development within the 100-year flood plain shall be limited until a flood management plan can be adopted, which may include regional and local facilities if needed. The riparian habitat shall be protected by providing a cross section of channel suitable to carry the 100- year flow. Flood management shall be accomplished within the guidelines contained in the Open Space/Conservation Element.
- **Policy 10-35:** In mainland areas along the rivers and bays affected by water backing up into the watercourse, it shall be demonstrated prior to development that adequate protection exists either through levee protection or change of elevation.
- **Policy 10-36:** On islands in East County, development shall not be allowed until a study is performed to resolve issues and determine appropriate locations for development. This study shall be a high priority for the County and should include the following:
  - a risk assessment of development in that area; and
  - an analysis of flooding due to runoff and tides, settlement of shallow soils, deep subsidence, liquefaction, and adequacy of insurance programs.
- **Policy 10-37:** A uniform set of flood damage prevention standards should be established by the cooperative efforts of all County, State, and federal agencies with responsibilities for flood control works and development in flood-prone areas in the County.
- **Policy 10-38:** Flood-proofing of structures shall be required in any area subject to flooding; this shall occur both adjacent to watercourses as well as in the Delta or along the waterfront.
- **Policy 10-39:** In developing areas which are subject to the provisions of the Flood Insurance Program, for which there is no reasonable expectation of flood control project participation by the Corps of Engineers and where a significant number of properties will be affected, the Flood Control District shall be permitted to construct 100-year flood protection works when so directed by the Board of Supervisors.
- **Policy 10-40:** Planning Agency and Flood Control District review of any significant project proposed for areas in the County which are not presently in Flood Zones shall include an evaluation of the potential downstream flood damages which may result from the project.

#### *Water Supply*

- **Policy 10-71:** The County shall support local, regional, State, and Federal government efforts to improve water quality.
- **Policy 10-72:** The County shall support water quality standards adequate to protect public health in importing areas as a priority at least equal in status to support of Bay/Delta estuary water standards.
- **Policy 10-73:** Point sources of pollution shall be identified and controlled to protect adopted beneficial uses of water.
- **Policy 10-74.** Public ownership of lands bordering reservoirs shall be encouraged to safeguard water quality.
- **Policy 10-80:** Because of the public need for water of a quality suitable for domestic, industrial, and agricultural uses, the County shall take an active role in reviewing regional, State and federal programs which could affect water quality and water supply safety in Contra Costa County.

## 5. Environmental Analysis

### HYDROLOGY AND WATER QUALITY

- **Policy 10-82:** Discourage the development of new wells for domestic use in areas with high nitrite concentrations in the ground water.

#### *Local Hazard Mitigation Plan*

The Contra Costa County Hazard Mitigation Plan (HMP), adopted in January 2018, is a guide to hazard mitigation within the County and serves as a tool to help more than three dozen local agencies and special purpose districts reduce their risks from a wide range of potential events, such as earthquakes, flooding, wildfires, or extreme heat (Contra Costa County 2018). The LMP describes past events in terms of frequency, severity, and warning time; exposure to the population and critical facilities and infrastructure; and mitigation strategies to reduce exposure and vulnerability to the hazard. The potential events discussed in the HMP that pertain to hydrology and water quality include:

- Dams and Levee Failure
- Drought
- Flooding
- Severe Weather
- Tsunamis
- Climate Change

#### 5.10.1.2 EXISTING CONDITIONS

##### Regional and Local Hydrology

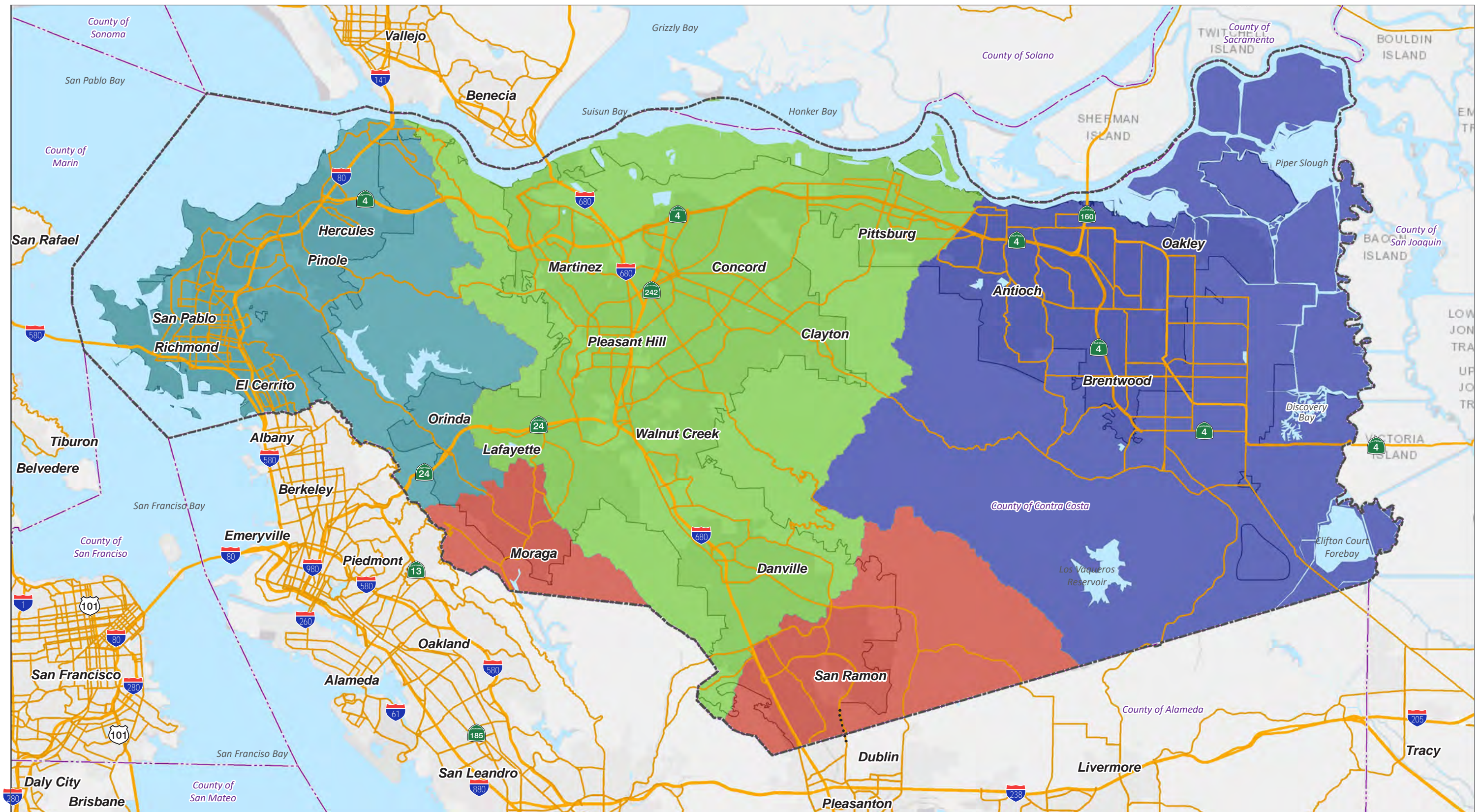
Contra Costa County is bounded by San Francisco Bay and San Pablo Bay to the west, by Suisun Bay and the San Joaquin River to the north, the Old River to the east and Alameda County to the south. All of Contra Costa County's water drains either directly or indirectly into San Francisco Bay or the Sacramento-San Joaquin Delta Estuary. Water from the western, urbanized portion of the County drains directly into San Francisco Bay or San Pablo Bay, while water from the northern and eastern portions drain into Suisun Bay and the San Joaquin River and its tributaries, eventually flowing into San Pablo and San Francisco Bays. The south-central portion of the County is within the Alameda Creek drainage basin; this area's water drains south to Alameda Creek, then west to the San Francisco Bay (Contra Costa 2005).

According to the CCCWP, there are sixteen major watersheds and thirty-one sub-watersheds within Contra Costa County (CCCWP 2022). Additionally, Contra Costa County includes the headwaters of creeks that drain through other counties before reaching the Bay. Figure 5.10-1, *Watersheds of Contra Costa County*, shows the sixteen major watersheds within Contra Costa County.

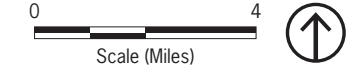
## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

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HOUSING ELEMENT



Source: Conservation.ca.gov, 2009



- Contra Costa County Boundary
- - - County Boundary
- Urban Limit Line

- San Francisco Bay Watershed
- San Joaquin Delta Watershed
- San Pablo Bay Watershed
- Suisun Bay Watershed

Figure 5.10-1  
 Watersheds of Contra Costa County

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HYDROLOGY AND WATER QUALITY

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## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

### Topography

Contra Costa County's geography and topography is dominated by the alluvial plains along San Francisco and San Pablo Bay, the Oakland-Berkeley Hills, several inland valleys, and Mount Diablo, an isolated 3,849-foot peak at the north end of the Diablo Range. Elevations range from sea level to 3,849 feet in the Diablo Range near the center of the County. Much of the land is rural and there is abundant open space. The San Joaquin-Sacramento River Delta provides boating, fishing, and other water recreation activities. The East Bay Regional Park District is one of the largest regional park districts in the United States, with over 96,000 acres in 65 area parks.

### Climate and Precipitation

Contra Costa County has a Mediterranean climate with mild winters and hot dry summers. The cool waters of the Pacific Ocean and San Francisco Bay also influence the summer and winter temperatures, moderating the summer and winter temperatures in the western portion of Contra Costa County. The county's topography also plays a role in regulating the climate. The hills east of Richmond and around Mount Diablo are above the cool, coastal fog in the summer and block cold air in the winter (Contra Costa 2003, pg. 22). The average annual rainfall is approximately 18.4 inches but can vary greatly depending on elevation and drought conditions. The lowest annual recorded rainfall was 4.6 inches in 2013 and the highest was 38.4 inches in 1983 (USA Facts 2022). The average July high temperature is 85 degrees Fahrenheit, and the average December low temperature is 40 degrees Fahrenheit.

### Water Quality

Water quality in Contra Costa County is monitored by the San Francisco RWQCB and the Central Valley RWQCB through implementation of the Basin Plans. The Basin Plans designate beneficial uses for surface water bodies and groundwater within Contra Costa County, water quality objectives, and strategies for achieving these objectives. As shown in Table 5.10-1, *Beneficial Uses for Surface Waters in Contra Costa County*, provides the beneficial uses for surface water in the County.

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 HYDROLOGY AND WATER QUALITY

Table 5.10-1 Beneficial Uses for Surface Waters in Contra Costa County

Water Body		Beneficial Uses <sup>1</sup>														
		MUN	FRSH	IND	COM	COLD	EST	MAR	MIGR	RARE	SPWN	WARM	WILD	REC-1	REC-2	NAV
<b>San Francisco Bay Region</b>																
<b>Central Basin</b>	Cerrito Creek											X	X	X	X	
	Baxter Creek											X	X	X	X	
	Richmond Inner Harbor				X		X						X	X	X	X
<b>San Pablo Basin</b>	Rodeo Creek					X					X	X	X	X	X	
	Refugio Creek											X	X	X	X	
	Pinole Creek					X			X	X	X	X	X	X	X	
	Garrity Creek											X	X	X	X	
	Rheem Creek											X	X	X	X	
	San Pablo Creek		X			X			X	X	X	X	X	X*	X	
	San Pablo Reservoir	X			X	X					X	X	X	X*	X	
	Lauterwasser Creek		X									X	X	X	X	
	Briones Reservoir	X				X					X	X	X	X*	P	
	Bear Creek (Contra Costa)		X							X		X	X	X	X	
	Wildcat Creek		X			X			X	X		X	X	X	X	
	Jewel Lake					X						X	X	X	X	
Lake Anza		X		X	X						X	X	X	X		

<sup>1</sup> Municipal and Domestic Supply (MUN) – Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.  
 Industrial Service Supply (IND) – Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.  
 Water Contact Recreation (REC-1) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, or use of natural hot springs.  
 Non-Contact Water Recreation (REC-2) – Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.  
 Warm Freshwater Habitat (WARM) – Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.  
 Cold Freshwater Habitat (COLD) – Includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.  
 Estuarine Habitat (EST) – Includes uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).  
 Wildlife Habitat (WILD) – Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.  
 Rare, Threatened or Endangered Species (RARE) - Waters that support the habitats necessary for the survival and successful maintenance of plant or animal species designated under state or federal law as rare, threatened or endangered.  
 Marine Habitat (MAR) – Includes uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).  
 Migration of Aquatic Organisms (MIGR) – Includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.  
 Navigation (NAV) – Uses of water for shipping, travel, or other transportation by private, military, or commercial vessels  
 Freshwater Replenishment (FRSH) – Uses of water for natural or artificial maintenance of surface water quantity or quality

5. Environmental Analysis  
 HYDROLOGY AND WATER QUALITY

Table 5.10-1 Beneficial Uses for Surface Waters in Contra Costa County

Water Body		Beneficial Uses <sup>1</sup>														
		MUN	FRSH	IND	COM	COLD	EST	MAR	MIGR	RARE	SPWN	WARM	WILD	REC-1	REC-2	NAV
Suisun Basin	Alhambra Creek					X			X	X	X	X	X	X	X	
	Franklin Creek					X			X	X	X	X	X	X	X	
	Arroyo del Hambre					X						X	X	X	X	
	Peyton Slough			X	X		X	X		X			X	X	X	
	Pacheco Creek											X	X	X	X	
	Walnut Creek					X			X	X	X	X	X	X	X	
	Grayson Creek					X			X	X		X	X	X	X	
	Pine Creek					X			X	X	X	X	X	X	X	
	Galindo Creek					X						X	X	X	X	
	San Ramon Creek											X	X	X	X	
	Bollinger Canyon Creek					X					X	X	X	X	X	
	Las Trampas Creek					X				X		X	X	X	X	
	Tice Creek									X		X	X	X	X	
	Lafayette Creek					X										
	Lafayette Reservoir	X			X	X					X	X	X	X	X	
	Hastings Slough						X			X		X	X	X	X	
	Mt. Diablo Creek					X			X	X	X	X	X	X	X	
	Mitchell Creek					X			X	X	X	X	X	X	X	
Donner Creek					X					X	X	X	X	X		
Mallard Slough				X		X		X	X		X	X	X	X		
Kicker Creek									X		X	X	X	X		
New York Slough				X		X		X	X			X	X	X	X	
<b>Central Valley Basin Plan</b>																
	Marsh Creek				X					X		X	X	P	P	
	Marsh Creek Reservoir									X		X	X	P	P	

Source: SFBRWQCB 2019, CVRWQCB 2018  
 X designates an existing beneficial use for a given hydrologic area  
 P designates a potential beneficial use for a given hydrological area

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### HYDROLOGY AND WATER QUALITY

Section 303(d) of the CWA requires states to identify the water bodies that do not meet established water quality standards under traditional point source controls. These water bodies are listed as impaired under Section 303(d) of the CWA. Once a water body has been placed on the 303(d) list, states are required to develop a total maximum daily load (TMDL) threshold to address each pollutant causing impairment. A TMDL defines how much of a pollutant a water body can tolerate and still meet water quality standards. There are twenty-three waterbodies within Contra Costa County listed as impaired water bodies, as shown in Table 5.10-2, *Impaired Water Bodies in Contra Costa County*, the table also provides the TMDL status for each pollutant.

Table 5.10-2 Impaired Water Bodies in Contra Costa County

	Waterbody	303 (d) List Impairments	TMDL Status/Project
San Francisco Bay Region	Baxter Creek	Trash	2029 Attainment Date
	Briones Reservoir	Mercury	2029 Expected Completion
	Castro Cove, Richmond	Mercury, Polycyclic Aromatic Hydrocarbons (PAHs), Selenium, Dieldrin	2010 Attainment Date
	Grayson Creek	Trash	2029 Attainment Date
	Kirker Creek	Toxicity	2021 Expected Completion
		Diazinon	San Francisco Bay Urban Creeks Diazinon
		Trash	2029 Attainment Date
	Lafayette Reservoir	Polychlorinated Biphenyls (PCBs)	2019 Expected Completion
		Mercury	2013 Expected Date Completion
	Mt. Diablo Creek	Pesticides, Toxicity	San Francisco Bay Urban Creeks Diazinon
		Toxicity	2021 Expected Completion
	Pine Creek sub watershed	Diazinon	San Francisco Bay Urban Creeks Diazinon
	Pinole Creek	Diazinon	San Francisco Bay Urban Creeks Diazinon
	Rodeo Creek	Diazinon	San Francisco Bay Urban Creeks Diazinon
	San Pablo Creek	Diazinon	San Francisco Bay Urban Creeks Diazinon
		Trash	2029 Attainment Date
	San Pablo Reservoir	Mercury, Pesticides, PCBs	2013 Expected Completion
Pesticides		2019 Expected Completion	
PCBs		2020 Expected Completion	
Stege Marsh	Zinc, Pesticides, Copper, Mercury, PCBs	2019 Expected Attainment	
Walnut Creek	Diazinon	San Francisco Bay Urban Creeks Diazinon	
Central Valley Region	Discovery Bay	Mercury	2029 Expected Completion
	Dune Creek	Mercury	2015 Expected Completion
		Metals	2027 Expected Completion
	Kellogg Creek	Salinity, Dissolved Oxygen, Indicator Bacteria	2021 Expected Completion
		Toxicity	2027 Expected Completion
	Grayson Creek	Trash	2029 Attainment Date
	Los Vaqueros Reservoir	Mercury	2027 Expected Completion
	Marsh Creek (Dune Creek to Marsh Creek Reservoir)	Metals	2020 Expected Completion
		Mercury	2015 Expected Completion
	Marsh Creek (Marsh Creek Reservoir to San Joaquin River; partly in Delta Waterways, western portion)	Pathogens	2023 Expected Completion
Toxicity		2027 Expected Completion	
Mercury		Delta Methylmercury TMDL Project	
Marsh Creek Reservoir	Mercury	2025 Expected Completion	

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	Waterbody	303 (d) List Impairments	TMDL Status/Project
	Sand Creek	Diazinon	San Francisco Bay Urban Creeks Diazinon
		Salinity	2021 Expected Completion
		Chlorpyrifos	2026 Attainment Date
		Toxicity	2021 Expected Completion
		Pathogens	2021 Expected Completion
		Diazinon	2026 Attainment Date
		Pesticides	2021 Expected Completion

Source: SWRCB 2018

Groundwater

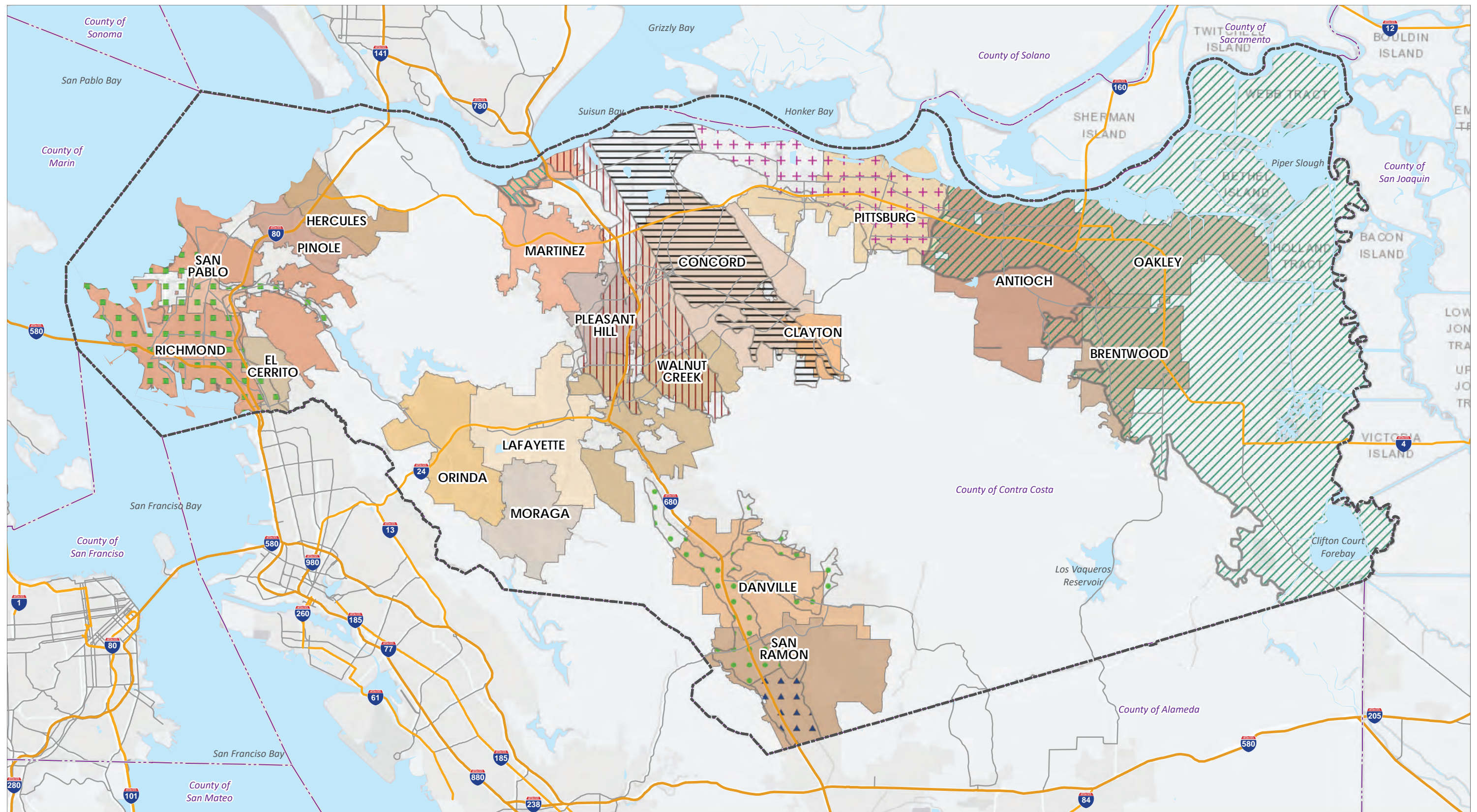
Eight groundwater basins identified in the DWR Bulletin 118 are within Contra Costa County. The locations of these groundwater basins are shown on Figure 5.10-2, *Groundwater Basins within Contra Costa County*. The western end of Contra Costa County contains the northernmost end of the Santa Clara Valley East Bay Plain Subbasin. Proceeding east across the northern edge of the County are the Arroyo del Hambre Valley, Ygnacio Valley, Clayton Valley, Pittsburg Plain, and the San Joaquin Valley-East Contra Costa Subbasins. The San Ramon Valley Subbasin and a small portion of the Livermore Valley subbasin extend along Interstate 680 in the south-central portion of the County. Table 5.10-3, *Existing and Potential Beneficial uses in Groundwater Basins in Contra Costa County*, lists the groundwater basins provided in the San Francisco and Central Valley RWQCB Basin Plans and their existing and potential beneficial uses.

All groundwater in the Central Valley Region is considered as suitable or potentially suitable, at a minimum, for municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply (CVRWQCB 2019).

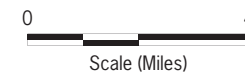
## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

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HOUSING ELEMENT



Source: Department of Water Resources, 2022



- Contra Costa County Boundary
- - - County Boundary
- Urban Limit Line

- Incorporated Communities
- Uncorporated County Areas

- ▨ Arroyo Del Hambre Valley
- ▨ Clayton Valley
- ▲ Livermore Valley

- ▨ Pittsburg Plain
- ▨ San Joaquin Valley
- San Ramon Valley

- Santa Clara Valley
- ▨ Ygnacio Valley

Figure 5.10-2

Groundwater Basins within Contra Costa County

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Table 5.10-3 Existing and Potential Beneficial Uses in Groundwater Basins in Contra Costa County

Groundwater Basin Name	Beneficial Uses <sup>1</sup>			
	MUN	PRO	IND	AGR
Santa Clara Valley- East Bay Plain	X	X	X	X
Livermore Valley	X	X	X	X
Pittsburg Plain	P	P	P	P
Clayton Valley	X	P	P	P
Ygnacio Valley	P	P	P	P
San Ramon Valley	X	P	P	X
Arroyo del Hambre Valley	P	P	P	P
San Joaquin-East Contra Costa	X	X	X	X

Source: SFBRWQB 2019, CVRWQCB 2019

<sup>1</sup>Municipal and Domestic Supply (MUN) – Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

Industrial Process Supply (PRO) – Uses of water for industrial activities that depend primarily on water quality

Industrial Service Supply (IND) – Uses of water for industrial activities that do not depend primarily on water quality, including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.

Agricultural Supply (AGR) – Uses of water for farming, horticulture, or ranching, including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing

According to the DWR’s SGMA Basin Prioritization dashboard (DWR 2022), groundwater is not used for municipal purposes in the Arroyo Del Hambre Valley, Ignacio Valley, Clayton Valley, and San Ramon Valley groundwater subbasins. These four groundwater subbasins are characterized by DWR as very low priority. Groundwater supply is limited by the effect of saltwater intrusion and pollutant contamination in the three subbasins that border the Carquinez Strait and Suisun Bay. East Bay Municipal Utility District (EBMUD) does not extract groundwater from these groundwater basins for municipal supplies. Although there are limited domestic and irrigation wells in the San Ramon Valley subbasin, there are no municipal supply wells that extract groundwater from this subbasin. Because of the very low priority designation from DWR, groundwater sustainability plans (GSPs) are not required for these subbasins.

The Pittsburg Plain groundwater subbasin is characterized as a very low priority basin by DWR and thus a GSP is not required. The City of Pittsburg extracts groundwater from this subbasin using two wells. According to the 2020 UWMP, the City pumped 1,480 acre-feet of water from this subbasin in 2020 (City of Pittsburg 2021). However, approximately 85 to 95 percent of the City’s water supply is purchased from Contra Costa Water District, which provides surface water from the Central Valley Project. The City prepared the Pittsburg Plain Groundwater Management Plan in 2012 to manage and protect groundwater resources within and underlying the City.

The northern tip of the Santa Clara Valley – East Bay Plain groundwater subbasin is within Contra Costa County. However, this portion of the subbasin is limited in terms of water supply because of saltwater intrusion and contamination in the shallow aquifer. The East Bay Plain subbasin is characterized by DWR as medium priority and a GSP has been prepared by EBMUD and the City of Hayward as the groundwater sustainability agencies (GSAs). However, EBMUD and the City of Hayward are not currently pumping groundwater from this subbasin as a water supply source. They have implemented the Bayside Groundwater Project which injects drinking water into the deep aquifer in the southern portion of the groundwater subbasin with the possibility of extracting and treating the groundwater as a supplemental water supply

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source during times of drought. However, to date, no groundwater pumping from this facility has occurred (EBMUD 2022).

The San Joaquin Valley – East Contra Costa groundwater subbasin is in the eastern portion of Contra Costa County and is characterized as a medium priority basin by DWR. Eight local agencies that overlay the basin have collaborated to develop a GSP. The agencies are the cities of Antioch and Brentwood, Bryon Bethany Irrigation District, Contra Costa County, Contra Costa Water District, Diablo Water District, the town of Discovery Bay, and East Contra Costa Irrigation District. The East Contra Costa Subbasin Groundwater Sustainability Plan was issued in October 2021 and provides sustainability goals and management principles to protect all beneficial uses and users of groundwater in the subbasin (ECC GSA 2021). The groundwater basin does not show any signs of over-pumping; however, its ranking as a medium priority basin is based on the importance of groundwater as a source of supply for domestic and agricultural uses. In addition, there are many disadvantaged communities that rely on groundwater as the sole source of supply.

The Livermore Valley groundwater subbasin is in the south-central portion of Contra Costa County and is designated as a medium priority basin. Groundwater in this basin has been actively managed since 1974 by the Zone 7 Water Agency. They submitted an Alternative GSP that was accepted by DWR. The groundwater basin is not in critical overdraft conditions, and the 2021 Alternative GSP demonstrates that the basin has continued to operate within its sustainable yield over a period of at least 10 years (Zone 7 Water Agency 2021).

#### Flood Zones

FEMA designates floodplain zones on Flood Insurance Rate Maps (FIRMs) to assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction within a 100-year floodplain. The 100-year floodplain is defined as an area that has a 1 percent chance of being inundated during a 12-month period. FEMA also prepares maps for 500-year floods, which mean that in any given year, the risk of flooding in the designated area is 0.2 percent.

In some locations, FEMA also provides measurements of base flood elevations for the 100-year flood, which is the minimum height of the flood waters during a 100-year event. Base flood elevation (BFE) is reported in feet above sea level. Depth of flooding is determined by subtracting the land's height above sea level from the base flood elevation. Areas within the 100-year flood hazard area that are financed by federally backed mortgages are subject to mandatory federal insurance requirements and building standards to reduce flood damage. This typically requires elevating the finished floor of the structure one to two feet above the BFE.

There are four primary types of flooding that occur in Contra Costa County (Contra Costa 2018):

- **Stormwater Runoff Flooding.** This typically occurs during the rainy winter season, when runoff exceeds the capacity of the storm drain system. It is very likely when groundwater levels are high and during high tides. It causes shallow street flooding and structure inundation and generally occurs in flat areas that are urbanized. However, severe weather storms can also cause landslides and mudflows in the mountainous areas.

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- **Riverine Flooding.** This is defined as the overbank flooding of rivers and streams because of large-scale weather systems that generate prolonged rainfall. This causes not only the inundation of floodwaters and debris but also the river and stream channels can be eroded by flowing water, resulting in a shift in channel location.
- **Flash Floods.** These are defined as a rapid and extreme flow of high water into a normally dry area or a rapid water level rise in a stream or creek. It normally occurs with little or no warning. The risk is increased in urban areas when vegetation and ground cover has been removed and replaced with roads and impervious surfaces.
- **Tidal Floods.** These floods are characterized as the inundation of normally dry land by bay waters, often caused by extreme tide events called “king tides.” These events normally occur once or twice a year and are the leading cause of flooding by bay waters. Tidal flooding is exacerbated by sea level rise due to climate change.

Figure 5.10-3, *FEMA 100-Year and 500-Year Flood Zones*, shows the locations within Contra Costa County that are within the 100-year or 500-year floodplains. Some of the coastal areas of the County that border San Francisco Bay, San Pablo Bay, and Suisun Bay to the west and north are designated as within Zone VE, which is defined as coastal high hazard areas. Zone VE extends offshore to the inland limit that is subject to high-velocity wave action. The boundary of Zone VE is generally based on wave heights (3 feet or greater) or wave run-up depths (3 feet or greater). Although the eastern delta portion of Contra Costa County is protected by levees, this area has often been subject to flooding due to the overtopping or failure of the levees. High tides combined with large river inflow and rain-soaked levees have caused significant damage to agricultural land and private dwellings. Other areas within Contra Costa County that are within the 100-year floodplain are adjacent to various streams and rivers.

#### Tsunamis and Seiches

A tsunami is a series of traveling ocean waves generated by a rare, catastrophic event, including earthquakes, submarine landslides, and submarine or shoreline volcanic eruptions. Tsunamis can travel over the ocean surface at speeds of 400 to 500 miles per hour or more, and wave heights at the shore can range from inches to 50 feet. Factors influencing the size and speed of a tsunami include the source and magnitude of the triggering event, as well as off-shore and on-shore topography.

Contra Costa County has never been impacted by a tsunami. The closest tsunami to the area was in 2011 when an earthquake in Japan traveled across the Pacific Ocean and created wave surges that damaged coastal areas in nearby Santa Cruz and Monterey counties.

Figure 5.10-4 shows the coastal locations within Contra Costa County that are within the tsunami inundation zone. The map was updated in 2021 and includes portions of the cities of Richmond, El Cerrito, San Pablo, and Martinez. The map is based on inundation limits corresponding to a 975-year average return period and represents areas that could be exposed to tsunami hazards during an event (State of California 2021).

A seiche is an oscillation wave generated in a closed or partially closed body of water, which can be compared to the back-and-forth sloshing in a bathtub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, tsunamis, or landslides into the water body. Bodies of water such as bays, harbors,

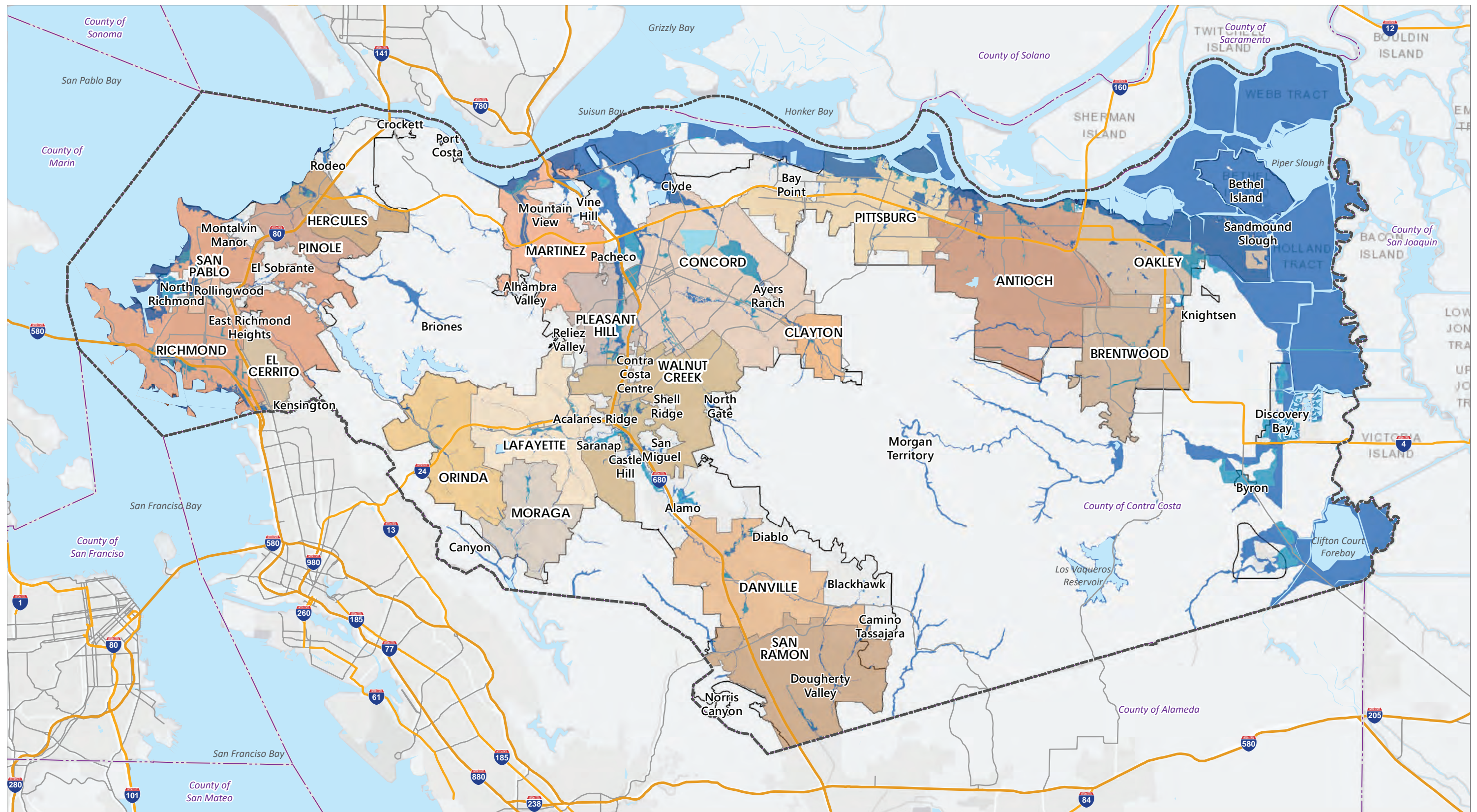
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reservoirs, ponds, and swimming pools can experience seiche waves up to several feet in height during a strong earthquake. However, for a seiche to occur in San Pablo or San Francisco Bay, the wave frequency of a tsunami would have to match the resonance frequency of the bay or harbor. The typical frequency of a tsunami is ten minutes to an hour, and the resonance frequency of San Pablo and San Francisco Bay is somewhere between one to ten hours. Therefore, tsunamis have frequencies too short to resonate within the San Pablo and San Francisco Bay and a seiche is unlikely.

There are 27 dams in Contra Costa County and another six dams outside the County that have inundation areas that extend into the County. However, there has never been a reported dam failure in Contra Costa County. Therefore, it is unlikely that a seiche would occur at any of these reservoirs that would cause overtopping of the dam and result in regional flooding.

HOUSING ELEMENT



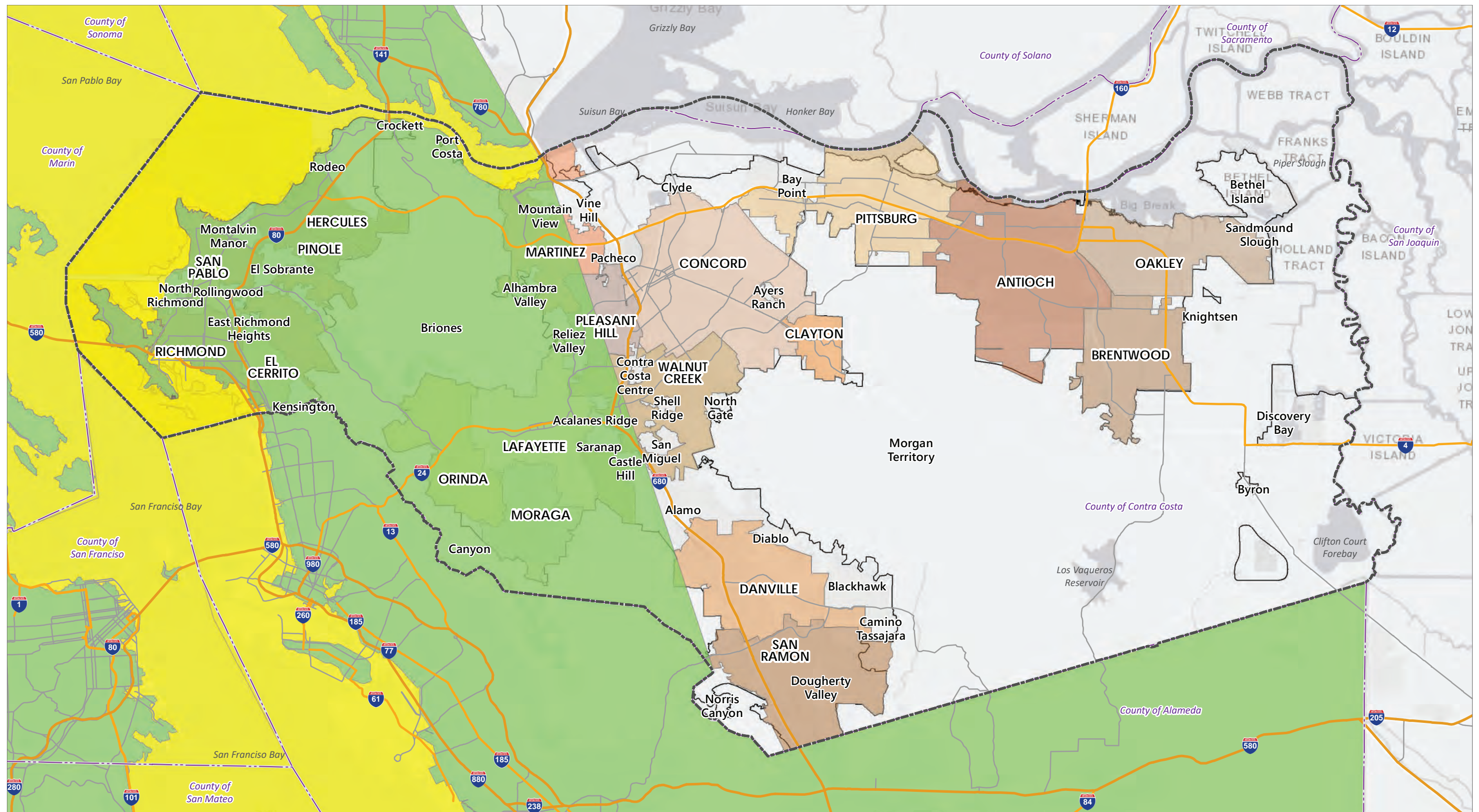
Source: FEMA, 2009



- Contra Costa County Boundary
- County Boundary
- Urban Limit Line
- Incorporated Communities
- Unincorporated County Areas
- 100-Year Flood Zone
- 500-Year Flood Zone
- Area of Undetermined but Possible Flood Hazard

Figure 5.10-3  
 FEMA 100-Year and 500-Year Flood Zones

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Source: Conservation.ca.gov, 2009



- |                                  |                             |                                   |
|----------------------------------|-----------------------------|-----------------------------------|
| --- Contra Costa County Boundary | ■ Incorporated Communities  | ■ Inside Tsunami Inundation Zone  |
| - - - County Boundary            | □ Uncorporated County Areas | ■ Outside Tsunami Inundation Zone |
| — Urban Limit Line               |                             |                                   |

Figure 5.10-4  
Tsunami Inundation Zones

## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

### 5.10.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- HYD-1 Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- HYD-2 Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- HYD-3 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
- i) Result in a substantial erosion or siltation on- or off-site.
  - ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite.
  - iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
  - iv) Impede or redirect flood flows.
- HYD-4 In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- HYD-5 Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

### 5.10.3 Proposed Housing Element Policies

- **Policy HE-P8.3:** Locate below market-rate housing developments outside of mapped hazard zones as identified in the Health and Safety Element.

### 5.10.4 Environmental Impacts

#### 5.10.4.1 DISCUSSION OF NO HYDROLOGY AND WATER QUALITY IMPACTS

All of the impacts would be less than significant.

## 5. Environmental Analysis HYDROLOGY AND WATER QUALITY

### 5.10.4.2 DISCUSSION OF IMPACT AND MITIGATION MEASURES

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Impact 5.10-1: Potential development associated with the proposed project could result in erosion and water quality impacts to downstream surface water. Compliance with the requirements of the SWRCB's **Construction** General Permit and implementation of BMPs during construction and compliance with the MS4 permit and implementation of stormwater control measures during operations would minimize the potential for water quality impacts. [Threshold HYD-1]

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The Housing Element Update would create new housing development, which would involve soil disturbance during the construction and operational phases that could generate pollutants. Stormwater runoff would discharge into storm drains which ultimately flow into creeks, rivers, and San Francisco Bay, San Pablo Bay, Suisun Bay, and the Delta.

#### Construction Impacts

Clearing, grading, excavation, and other construction activities have the potential to impact water quality due to soil erosion and increases in the amount of silt and debris carried in runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. The refueling and parking of construction vehicles and other equipment on-site during construction may result in oil, grease, or related pollutant leaks and spills that could discharge into the storm drain system.

To minimize these potential impacts, each housing site that disturbs one acre or more of land would require compliance with the Construction General Permit (CGP) Water Quality Order 2009-0009-DWQ (as amended by Order No. 2010-0014-DWQ and 2012-006-DWQ), which includes the preparation and implementation of a SWPPP. A SWPPP requires the incorporation of BMPs to control sediment, erosion, and hazardous materials contamination of runoff during construction and prevent contaminants from reaching receiving water bodies. The CGP also requires that prior to the start of construction activities, the project applicant must file PRDs with the SWRCB, which includes a Notice of Intent, risk assessment, site map, annual fee, signed certification statement, and SWPPP. The construction contractor is required to maintain a copy of the SWPPP at the site and implement all construction BMPs identified in the SWPPP during construction activities. Prior to the issuance of a grading permit, the project applicant is required to provide proof of filing of the PRDs with the SWRCB and Contra Costa County.

Submittal of the PRDs and implementation of the SWPPP throughout the construction phase of the future housing sites would address anticipated and expected pollutants of concern from construction activities. As a result, water quality impacts associated with construction activities would be less than significant.

#### Operational Impacts

Residential development has the potential to generate pollutants, such as nutrients, pesticides, sediment, trash and debris, oxygen demanding substances, oil and grease, and pathogens. These pollutants could eventually end up in stormwater discharged from the site and impact downstream watercourses. However, development proposed under the Housing Element would be subject to the Municipal Regional Stormwater NPDES Permit (MRP, MS4 permit) issued by the San Francisco Bay RWQCB, which was recently updated and



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reissued in May 2022. Project applicants would also need to comply with the requirements outlined in the CCCWP's *Stormwater C.3 Guidebook*. The guidebook is updated periodically to reflect the latest MS4 permit requirements; therefore, future development under the Housing Element Update would need to comply with the latest thresholds listed for the area and the reissuance of the MS4 permit.

All projects that create or replace at least 2,500 square feet of impervious surface must submit a Stormwater Control Plan for a Small Land Development Project, as described in CCCWP's *Stormwater C.3 Guidebook*. The project applicant also must incorporate at least one of the control measures listed in the guidebook:

- Disperse runoff from the roof or paved area to a vegetated area
- Incorporate some amount of permeable pavement
- Include a cistern or rain barrel, if allowed by the municipality
- Incorporate a bioretention facility or planter box.

For projects considered Regulated Projects under the latest MS4 permit (see below), a Stormwater Control Plan (SCP) must be prepared that incorporates low impact design (LID) features. The SCP must include site design features that protect natural resources, source control measures that reduce pollutants in stormwater, and stormwater treatment measures that temporarily retain and treat stormwater on-site prior to discharge to the storm drain system. The project applicant must also prepare an Operation and Maintenance Plan that details how the stormwater treatment measures will be inspected and maintained and provide a maintenance agreement that “runs with the land” for perpetuity.

The project types and area thresholds for Regulated Projects are described in Provision C.3.b. in the MS4 permit issued in May 2022. Prior to July 1, 2023, approved projects that create or replace more than 10,000 square feet of impervious surface are considered Regulated Projects. Effective July 1, 2023, approved projects that create or replace the following area thresholds are considered Regulated Projects:

- At least 10,000 square feet for one single-family home, not part of a larger plan of development.
- At least 5,000 square feet for all other new development and redevelopment projects, including parking lot renovation, unless exempt.

In addition, projects that create and/or replace one acre or more of impervious surfaces must comply with the hydromodification requirements of the MS4 permit, unless exempted. This requires the design and construction of stormwater treatment measures that also provide flow and volume control so that post-project runoff does not exceed pre-project rates and durations.

As part of the statewide mandate to reduce trash within receiving waters, the County is required to adhere to the requirements of the California Trash Amendments and is also required to adhere to Provision C.10 of the San Francisco Bay MS4 permit. The requirements include the installation and maintenance of trash screening devices at all public curb inlets, grate inlets, and catch basin inlets or control measures for full trash capture equivalency. The trash screening devices must be approved by the SWRCB.

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Therefore, with the implementation of these State and local requirements in conjunction with compliance to Contra Costa County policies, development pursuant to the Housing Element Update would not violate any water quality standards or waste discharge requirements for both construction and operational phases, and impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.10-1 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.10-1 would be less than significant.

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Impact 5.10-2: Development associated with proposed project would increase impervious surfaces which would reduce the amount of stormwater available for recharge but would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. [Threshold HYD-2]

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Implementation of the proposed project would result in a significant environmental impact if it would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. New development under the proposed Housing Element Update could result in an increase in impervious surfaces, thus reducing groundwater recharge. Also, new projects that involve construction dewatering could have a temporary impact on the shallow groundwater aquifer.

#### Groundwater Use

Four of the groundwater basins within Contra Costa County are categorized as very low priority basins and there is no groundwater withdrawal from these basins for municipal water supply. EBMUD and the Contra Costa Water District (CCWD) are the main water purveyors in Contra Costa County. EBMUD's service area is generally in the western portion of the County and CCWD encompasses most of central and northeastern Contra Costa County.

Although EBMUD does pump groundwater from the Santa Clara Valley – East Bay Plain groundwater basin, most of its water supply (85-95 percent) is from surface water sources. Because of saltwater intrusion issues, there are no municipal groundwater wells in the northern tip of this groundwater basin, where potential new housing units could be located. Therefore, implementation of the Housing Element Update would not have a significant impact on groundwater supply in this basin. CCWD's water supply primarily is surface water from contracts with the Central Valley Project (CVP). CCWD does not pump groundwater to meet its demands.

The City of Pittsburg pumps a small amount of groundwater from two municipal wells, which tap into the Pittsburg Plain groundwater basin. But most of their water supply (85 to 95 percent) is from surface water sources. There are no new housing units planned that would be served by the Dublin-San Ramon Water District, which is within the Livermore Valley groundwater basin. The Diablo Water District, which obtains approximately 20 percent of its total supply from groundwater wells that tap into the San Joaquin Valley-East

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Contra Costa groundwater basin. However, according to the 2020 UWMP, there is a surplus of water to meet its demands under normal, single-dry years, and multiple-dry years. Therefore, new housing units within its service area would not impact groundwater supply. Byron and Discovery Bay in eastern Contra Costa County have small community systems that rely on groundwater, but additional housing units in these areas would not substantially impact groundwater supplies. In addition, the Contra Costa County Ordinance Code details regulations to meet water supply demands for new housing construction. Ordinance 81-56 § 1, states any property needing water for domestic purposes shall demonstrate an approved water supply and obtain written approval from the health officer for such development.

### Groundwater Recharge

Although new projects pursuant to the Housing Element Update would increase the amount of impervious surfaces and could potentially impact groundwater recharge, these projects would be required to implement BMPs and LID measures, which include on-site infiltration, where feasible. The MS4 permits and the CCCWP Stormwater C.3 Guidebook require site design measures, source control measures, stormwater treatment measures, and hydromodification measures to be included in a SCP that must be submitted and approved by the County. These measures minimize the impact of impervious surfaces by including permeable pavement, drainage to landscape areas and bioretention areas, and the collection of rooftop runoff in rain barrels or cisterns. These measures would increase the potential for groundwater recharge and have a less than significant impact on groundwater levels.

Therefore, the proposed project would not significantly interfere with groundwater recharge, nor would the project substantially deplete groundwater supplies. Thus, impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.10-2 would be less than significant.

### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.10-2 would be less than significant.

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Impact 5.10-3: Development associated with the proposed project would not alter the course of a stream or river but would increase the amount of impervious surfaces, which could impact stormwater runoff rates and volumes. However, this would not result in: i) substantial erosion or siltation on- or off-site; ii) increased runoff that would result in flooding on- or off-site; iii) increased runoff that would exceed the capacity of existing or planned storm drain systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows. [Threshold HYD-3] [Threshold HYD-4]

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### Erosion and Siltation

The proposed project would result in new housing units and changes in land use that would result in an increase in impervious surfaces. This, in turn, could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause erosion or siltation in drainage swales and streams. Increases in tributary flows can exacerbate creek bank erosion or cause destabilizing channel incision.

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All potential new development pursuant to the Housing Element Update would be required to implement construction-phase BMPs as well as post-construction site design, source control measures, and treatment controls in accordance with the requirements of the CGP, the MS4 Permit, and the CCCWP Stormwater C.3 Guidebook. Typical construction BMPs include silt fences, fiber rolls, catch basin inlet protection, water trucks, street sweeping, and stabilization of truck entrance/exits. Each new development or redevelopment project that disturbs one or more acre of land would be required to prepare and submit a SWPPP to the SWRCB that describes the measures to control discharges from construction sites.

Once potential future development projects have been constructed, there are C.3 requirements in the MS4 permit for new development or redevelopment projects that must be implemented and include site design measures, source control measures, LID, and stormwater treatment measures that address stormwater runoff and would reduce the potential for erosion and siltation. Site design measures include minimizing impervious surfaces; conserving the natural areas of the site as much as possible; and protecting slopes and channels from erosion. LID measures include the use of permeable pavements, directing runoff to pervious areas, and the construction of bioretention areas. The SCP must also include operation and maintenance procedures and an agreement to maintain any stormwater treatment and control facilities for perpetuity. Compliance with these regional and local regulatory requirements will ensure that erosion and siltation impacts from new housing development projects would be less than significant.

#### Flooding On- or Off-Site

New housing units and changes in land uses could result in increases in impervious surfaces, which in turn could result in an increase in stormwater runoff, higher peak discharges to drainage channels, and the potential to cause nuisance flooding in areas without adequate drainage facilities. However, all potential future development must comply with the requirements of the MS4 Permit and the CCCWP Stormwater C.3 Guidebook. Regulated projects must implement BMPs, including LID BMPs and site design BMPs, which effectively minimize imperviousness, temporarily detain stormwater on-site, decrease surface water flows, and slow runoff rates. Projects that create and/or replace one acre of impervious surface must also adhere to the hydromodification requirements of the CCCWP Stormwater C.3 Guidebook to ensure that post project runoff does not exceed pre-project runoff. Adherence to these regulatory requirements would minimize the amount of stormwater runoff from proposed housing projects. Therefore, the projects pursuant to the Housing Element Update would not result in flooding on- or off-site and impacts would be less than significant.

#### Stormwater Drainage System Capacity

As stated in the impact discussions above, an increase in impervious surfaces with new housing units could result in increases in stormwater runoff, which in turn could exceed the capacity of existing or planned stormwater drainage systems. All potential future development and redevelopment projects would be required to comply with the MS4 permit requirements and follow the CCCWP Stormwater C.3 Guidebook when designing on-site stormwater treatment facilities. The hydrology study and SCP for each project is subject to County review to verify that the on-site storm drain systems and treatment facilities can accommodate stormwater runoff from the site and would not exceed the capacity of downstream drainage systems at the point of connection. Also, construction of flood control facilities and implementation of the C.3 provisions

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for new development, which include LID design and bioretention areas, would minimize increases in peak flow rates and runoff volumes, thus reducing stormwater runoff to the storm drain system. With implementation of these regulatory requirements, there would not be a significant increase in stormwater runoff to the existing storm drain systems.

Also, new development pursuant to the Housing Element Update would not create substantial additional sources of polluted runoff. During the construction phase, projects would be required to prepare SWPPPs, thus limiting the discharge of pollutants from the site. During operation, projects must implement BMPs and LID measures that minimize the amount of stormwater runoff and associated pollutants.

With implementation of these control measures and regulatory provisions to limit runoff from new development sites, the Housing Element Update would not result in significant increases in runoff that would exceed the capacity of existing or planned storm drain facilities, and the impact is less than significant.

#### Redirecting Flood Flows

Some of the proposed housing sites in the area around the north and the eastern portion of Contra Costa County are within the 100-year floodplain. Future development in these areas would be subject to Contra Costa County's Floodplain Management Ordinance. Prior to the start of construction or development within a Flood Hazard Area (i.e., 100-year floodplain or coastal high hazard area), the County requires project applicants to apply for a Floodplain Permit from the Public Works Department and construct new development in accordance with the standards of construction in Article 82-28.1002. The standards of construction vary depending on where the proposed structure but typically requires that the finished floor be elevated at least one to two feet above the base flood elevation. Prior to occupancy of any building, proof that a Letter of Map Revision (LOMR) and an elevation certificate has been submitted to FEMA must be provided to the County. Compliance with FEMA's National Flood Insurance Program requirements and the County's floodplain requirements would ensure that new construction does not impede or redirect flood flows and impacts would be less than significant.

#### Flooding, Tsunamis, and Seiches

Given that Contra Costa County has never been impacted by a tsunami, the risk of flooding and the release of pollutants due to a tsunami event is unlikely. Tsunami hazards in San Francisco Bay and San Pablo Bay are much smaller than along the Pacific Coast, because the bays are enclosed bodies of water. Due to the infrequent nature of tsunamis and relatively low predicted tsunami wave heights in the area, the County is reasonably safe from tsunami hazards. Also, the County's Floodplain Ordinance includes requirements for development within coastal high-hazard areas, which include tsunami zones. In addition, there are various precautions and warning systems that would be implemented by the County in the event of a tsunami. As discussed previously, seiches are unlikely to occur because tsunamis have frequencies too short to resonate within the San Pablo and San Francisco Bay.

Therefore, compliance with the FEMA and County regulatory requirements regarding construction in 100-year floodplains and the unlikelihood of tsunamis or seiches impacting new housing units, the potential for the release of pollutants from these events is minimal and impacts would be less than significant.

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***Level of Significance Before Mitigation:*** Impact 5.10-3 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.10-13 would be less than significant.

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Impact 5.10-4: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. [Threshold HYD-5]

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Adherence to the Construction General Permit, the MS4 permit, and the CCCWP Stormwater C.3 Guidebook would ensure that surface and groundwater quality are not adversely impacts during construction and operation of development pursuant to the Housing Element Update. As a result, site development would not obstruct or conflict with implementation of the San Francisco RWQCB's and the Central Valley RWQCB's Water Quality Control Plans (Basin Plans).

There are three groundwater basins within Contra Costa County that have groundwater sustainability plans (GSPs). Neither EBMUD nor the City of Hayward are pumping groundwater from the Santa Clara Valley – East Bay Plain groundwater subbasin. The Livermore Valley groundwater subbasin is managed by the Zone 7 Water Agency, which submitted an Alternative GSP. The groundwater basin is not in critical overdraft conditions, and the 2021 Alternative GSP demonstrates that the basin has continued to operate within its sustainable yield over a period of at least 10 years. The San Joaquin Valley – East Contra Costa groundwater subbasin is not in critical overdraft and does not show any signs of over-pumping. In addition, the water purveyors within the Contra Costa County service area rely primarily on surface water, which accounts for more than 80 percent of their water supply. Therefore, the addition of 20,417 maximum allowable units scattered throughout Contra Costa County would not obstruct or conflict with any groundwater management plans.

***Level of Significance Before Mitigation:*** Impact 5.10-4 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.10-4 would be less than significant.

### 5.10.5 Cumulative Impacts

The geographic context used for the cumulative assessment to hydrology and water quality encompasses the watersheds within Contra Costa County. New development in these watersheds could increase impervious areas, thus increasing runoff and flows into the storm drainage systems. All future development would be required to comply with the MS4 Permit and the CCCWP Stormwater C.3 Guidebook and implement BMPs that direct drainage to landscaped areas and incorporate bioretention facilities that reduce stormwater runoff

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into the site design. Implementation of these BMPs on a regional basis would reduce cumulative impacts to hydrology and drainage to less than significant.

All projects would be required to comply with various County ordinances and policies as well as numerous water quality regulations that control construction-related and operational discharge of pollutants into stormwater. The water quality regulations implemented by the San Francisco Bay RWQCB and the Central Valley RWQCB take a basin wide approach and consider water quality impairment in a regional context. For example, the NPDES Construction Permit ties receiving water limitations and basin plan objectives to terms and conditions of the permit, and the MS4 Permit requires all permittees to manage stormwater systems and be collectively protective of water quality. Projects in these watersheds would implement structural and nonstructural source-control BMPs that reduce the potential for pollutants to enter runoff, and treatment control BMPs that remove pollutants from stormwater. Therefore, cumulative water quality impacts would be less than significant after compliance with these permit requirements, and impacts would not be cumulatively considerable.

Projects in the watersheds may be constructed within 100-year flood zones, areas of sea level rise, or tsunami inundation zones. Such projects would be mandated to comply with National Flood Insurance Program requirements. In addition, other jurisdictions within these watersheds regulate development within flood zones in a similar manner as Contra Costa County's Ordinance Code and in compliance with FEMA standards to limit cumulative flood hazard impacts. Therefore, cumulative impacts to hydrology, drainage, and flooding would be less than significant, and impacts of the proposed project would not be cumulatively considerable.

### 5.10.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

### 5.10.7 Mitigation Measures

No mitigation measures are required.

### 5.10.8 Level of Significance After Mitigation

Impact would be less than significant.

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### 5.11 LAND USE AND PLANNING

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to land use in Contra Costa County from implementation of the proposed project.

Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, or division of neighborhoods or communities. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this DEIR.

#### 5.11.1 Environmental Setting

##### 5.11.1.1 REGULATORY BACKGROUND

###### Regional Regulations

###### *Association of Bay Area Governments (ABAG)*

The Association of Bay Area Governments (ABAG) is a regional planning agency incorporating various local governments in the San Francisco Bay Area in California. It encompasses nine counties surrounding the San Francisco Bay, including Contra Costa County. ABAG is responsible for conducting the Bay Area's Regional Housing Needs Allocation (RHNA) process every eight years via the Housing Methodology Committee in conjunction with local elected officials and staff, stakeholders, and residents from around the region.

The California Department of Housing and Community Development (HCD) has approved the ABAG Regional Housing Needs Allocation (RHNA) Plan. HCD's approval comes after action by the ABAG Executive Board to approve the Final RHNA, which occurred in December 16, 2021. The Final RHNA Plan distributes the Bay Area's portion of the state housing needs to local agencies within the nine-county region and reports the methodology used for determining the RHNA.

###### *Plan Bay Area 2050*

Plan Bay Area 2050 is a 30-year plan that charts a course for a Bay Area that is affordable, connected, diverse, healthy, and vibrant for all residents through 2050 and beyond (Plan Bay Area 2021). Thirty-five strategies comprise the heart of the Plan to improve housing, the economy, transportation, and the environment.

###### Local Regulations

###### *Contra Costa County General Plan*

The following policies, which pertain to land use and planning, are included in the Land Use Element of the General Plan:

- **Policy 3-1:** Housing infill shall be supported and stimulated where the jobs/housing ratio shows an overabundance of jobs to housing.

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- **Policy 3-3:** As feasible, areas experiencing rapid urban growth shall be developed so as to provide a balance of new residential and employment opportunities.
- **Policy 3-5:** New development within unincorporated areas of the County may be approved, providing growth management standards and criteria are met or can be assured of being met prior to issuance of building permits in accordance with the Growth Management Program.
- **Policy 3-6:** Development of all urban uses shall be coordinated with provision of essential community services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water, and flood control.
- **Policy 3-7:** The location, timing and extent of growth shall be guided through capital improvements programming and financing (i.e., a capital improvement program, assessment districts, impact fees, and developer contributions) to prevent infrastructure, facility, and service deficiencies.
- **Policy 3-8:** Infilling of already developed areas shall be encouraged. Proposals that would prematurely extend development into areas lacking requisite services, facilities, and infrastructure shall be opposed. In accommodating new development, preference shall generally be given to vacant or under-used sites within urbanized areas, which have necessary utilities installed with available remaining capacity, before undeveloped suburban lands are utilized.
- **Policy 3-9:** Areas not suitable for urban development because of the lack of availability of public facilities shall remain in their present use until the needed infrastructure is or can be assured of being provided.
- **Policy 3-10:** Extension of urban services into agricultural areas outside the Urban Limit Line, especially growth-inducing infrastructure, shall be generally discouraged.
- **Policy 3-11:** Urban uses shall be expanded only within an Urban Limit Line where conflicts with the agricultural economy will be minimal.
- **Policy 3-12:** Preservation and buffering of agricultural land should be encouraged as it is critical to maintaining a healthy and competitive agricultural economy and assuring a balance of land uses. Preservation and conservation of open space, wetlands, parks, hillsides, and ridgelines should be encouraged as it is crucial to preserve the continued availability of unique habitats for wildlife and plants, protect unique scenery, and provide a wide range of recreational opportunities for County residents.
- **Policy 3-21:** The predominantly single-family character of substantially-developed portions of the County shall be retained. Multiple-family housing shall be dispersed throughout the County and not concentrated in single locations. Multiple-family housing shall generally be located in proximity to facilities such as arterial roads, transit corridors, and shopping areas.
- **Policy 3-22:** Housing opportunities for all income levels shall be created. Fair affordable housing opportunities should exist for all economic segments of the County.
- **Policy 3-23:** A diversity of living options shall be permitted while ensuring community compatibility and quality residential development.
- **Policy 3-24:** Housing opportunities shall be improved through encouragement of distinct styles, desirable amenities, attractive design, and enhancement of neighborhood identity.
- **Policy 3-25:** Innovation in site planning and design of housing developments shall be encouraged in order to upgrade quality and efficiency of residential living arrangements and to protect the surrounding environment.

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- **Policy 3-26:** Efforts to maintain and rehabilitate existing dwelling units in established neighborhood areas shall be supported.
- **Policy 3-27:** Existing residential neighborhoods shall be protected from incompatible land uses and traffic levels exceeding adopted service standards.
- **Policy 3-28:** New residential development shall be accommodated only in areas where it will avoid creating severe unmitigated adverse impacts upon the environment and upon the existing community.
- **Policy 3-29:** New housing projects shall be located on stable and secure lands or shall be designed to mitigate adverse or potentially adverse conditions. Residential densities of conventional construction shall generally decrease as the natural slope increases.

### *Contra Costa County Municipal Code*

#### ***Chapter 82-1***

Section 82-1.010, Urban Limit Line, establishes an urban limit line to ensure the enforcement of the 65/35 standard set forth in Section 82-1.006 of the County Zoning Code. The urban limit line limits potential urban development in the County to 35 percent of the land in the County and prohibits that County from designating any land located outside the urban limit line for an urban land use.

#### ***Chapter 814-2***

Chapter 814-2, SD-1 Slope Density and Hillside Development Combining District, provides objectives for the Chapter's regulation of residential slope density and hillside, which include requiring the retention of trees and other vegetation which stabilize steep hillsides, retaining moisture, minimizing erosion and enhancing the natural scenic beauty, and where necessary, requiring additional landscaping to enhance the scenic and safety qualities of the hillsides.

#### 5.11.1.2 EXISTING CONDITIONS

Ranging from urban to rural, land in Contra Costa County is used for many purposes. In the West and Central County subareas, primary uses in suburban cities and towns are residential, commercial, and industrial. In the East County subarea, land is still primarily used for agriculture and general open space. To a large extent the County is comprised of "bedroom communities" populated by a commuter workforce. Over the years, development pressure has steadily moved eastward from the flat Baylands, to the valleys near Mt. Diablo, and now to the communities of East County. The elongated corridors of cities and towns are connected by a network of major transportation routes linking the County directly to employment centers in San Francisco and Alameda Counties.

As a whole, the County remains relatively undeveloped.

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### LAND USE AND PLANNING

#### 5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- LU-1        Physically divide an established community.
- LU-2        Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

#### 5.11.3 Proposed Housing Element Policies

The following proposed Housing Element policies are applicable to land use and planning:

- **Policy HE-P1.1:** Assist low-income homeowners in maintaining and improving residential properties through housing rehabilitation and energy-efficiency assistance programs. Promote increased awareness among property owners and residents of the importance of property maintenance to neighborhood quality.
- **Policy HE-P1.2:** To the extent practicable, focus rehabilitation expenditures and code enforcement efforts in communities with a high concentration of older and/or substandard residential structures for continued reinvestment in established neighborhoods. The goal of the code enforcement efforts is to improve overall quality of life in these neighborhoods.
- **Policy HE-P1.3:** Assist affordable housing providers in the acquisition of older residential structures and maintain them as long-term affordable housing.
- **Policy HE-P1.4:** Ensure that the County’s condominium conversion ordinance (Chapter 926-2.202) mitigates impacts to displaced tenants and ensures the quality of units being sold to homeowners.
- **Policy HE-P1.5:** Preserve existing affordable housing developments at risk of converting to market-rate housing through promotion of bond refinancing and other mechanisms.
- **Policy HE-P2.1:** Support development of affordable housing by non-profit and for-profit developers through affordable housing funding sources, regulatory incentives such as density bonus, and/or flexible development standards through planned unit developments.
- **Policy HE-P2.2:** Encourage and promote the production of housing in close proximity to public transportation and services.
- **Policy HE-P2.3:** Increase the supply of affordable housing and mixed income housing through the Inclusionary Housing Ordinance.
- **Policy HE-P2.4:** Encourage accessory dwelling unit (ADU) and junior accessory dwelling unit (JADU) construction as a viable means of meeting affordable housing needs “by design.”
- **Policy HE-P2.5:** Promote new or innovative housing design and building types to lower housing costs.
- **Policy HE-P2.6:** Plan for a variety of housing types in the county. Encourage innovative, nontraditional designs and layouts in response to evolving housing needs. Provide housing opportunities for all economic segments of the community while ensuring compatibility with surrounding uses.

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- **Policy HE-P4.2:** Continue to support the provision of rental assistance to extremely low-, very low-, and low-income households.
- **Policy HE-P4.4:** Designate additional land to address the County’s Regional Housing Needs Assessment (RHNA) allocation
- **Policy HE-P5.1:** Maintain an up-to-date site inventory that details the amount, type, and size of vacant and underutilized parcels, and assist developers in identifying land suitable for residential development.
- **Policy HE-P5.2:** Provide adequate sites to meet the housing needs of special-needs groups, including seniors, disabled persons, large households, single parents, persons with HIV/AIDS, persons with mental illness, farmworkers, and the homeless.
- **Policy HE-P5.3:** Promote mixed-use development by eliminating minimum lot sizes in P-1 zoning districts.
- **Policy HE-P6.1:** Establish and maintain development standards that support housing development while protecting quality of life goals.
- **Policy HE-P6.2:** Provide financial and/or regulatory incentives where feasible and appropriate to offset or reduce the costs of affordable housing development, including density bonuses and flexibility in site development standards.
- **Policy HE-P6.3:** Encourage P-1 zoning in areas with concentrations of applicants seeking variances.
- **Policy HE-P6.4:** Expand efforts to provide for timely and coordinated processing of residential development projects to minimize project holding costs and encourage housing production.
- **Policy HE-P7.1:** Prohibit discrimination in the sale or rental of housing to anyone on the basis of race, color, ancestry, national origin, religion, disability, sex, sexual orientation, familial status, marital status, or other such arbitrary factors.

### 5.11.4 Environmental Impacts

#### 5.11.4.1 DISCUSSION OF NO LAND USE AND PLANNING IMPACTS

All of the impacts would be less than significant or potentially significant.

#### 5.11.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.11-1: Project implementation would not divide an established community. [Threshold LU-1]

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Division of an established community common occurs as a result of development and construction of physical features that constitute a barrier to easy and frequent travel between two or more constituent parts of a community. For example, a large freeway structure with few crossings could effectively split a community. Likewise, geographic features could similarly affect the community, such as the development of a large residential project on the opposite side of a river from the existing community.

The project does not propose project-specific development. Future residential development associated with the proposed project would occur on several parcels of land designated for residential and non-residential use across the County. The proposed project would result in parcels that would either have an increase in density or no density changes, compared to existing conditions.

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The proposed General Plan Update would change the designations and zoning of the proposed housing sites, and this EIR evaluates the sites using the proposed general plan land use designations as currently under consideration. Compliance with the General Plan and Municipal Code would ensure that future residential development would not divide an established community and would be compatible with surrounding uses. Therefore, impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.11-1 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.11-1 would be less than significant.

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Impact 5.11-2: Project Implementation would not conflict with applicable plans adopted for the purpose of avoiding or mitigating an environmental effect. [Threshold LU-2]

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#### ABAG

#### *RHNA*

To demonstrate housing resources for the extremely low-income, very low-income, and low-income housing categories, HCD requires that the County provide enough vacant land to accommodate at least 7,610 housing units, as seen in Table 3-1, *2023-2031 Regional Housing Needs Allocation (RHNA)*. Existing land uses as established in the current Land Use Element of the General Plan consist of a variety of residential, commercial, office, industrial, agricultural, and recreational/open space uses. To meet the RHNA obligations and to further the goals of the overall general plan update, the County is considering changes to land use designations and densities. Therefore, the implementation of the proposed project would not conflict with the RHNA allocations for the County, as the increase in housing units would help the County with meeting its required allocation. Impacts would be less than significant.

#### *Plan Bay Area 2050*

Plan Bay Area 2050 is a 30-year plan that charts a course for a Bay Area that is affordable, connected, diverse, healthy, and vibrant for all residents through 2050 and beyond (Plan Bay Area 2021). Thirty-five strategies comprise the heart of the Plan to improve housing, the economy, transportation, and the environment. Table 5.11-1, *Plan Bay Area 2050 Consistency Analysis – Housing Strategies*, shows the proposed project's consistency with the housing strategies of Plan Bay Area 2050.



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Table 5.11-1 Plan Bay Area 2050 Consistency Analysis – Housing Strategies

Housing Strategies	Consistency Analysis
H1. Further strengthen renter protection beyond state law.	Consistent. The proposed project includes policies such as Policy HE-P4.2 and Policy HE-P7.1 which call for providing rental assistance and prohibiting discrimination of renters.
H2. Preserve existing affordable housing.	Consistent. The proposed project includes the following policies which aim to assist affordable housing providers, support the development of additional affordable housing, increase the affordable housing supply, encourage ADUs and JADUs as a means of meeting affordable housing needs, promote innovative housing design/building types to lower housing costs, and provide financial/regulatory incentives to offset the costs of affordable housing development: Policy HE-P1.3, Policy HE-P2.1, Policy HE-23.3, Policy HE-P2.4, Policy HE-P2.5, and Policy HE-P6.2.
H3. Allow a greater mix of housing densities and types in Growth Geographies.	Consistent. The proposed project would include a variety of housing types and densities throughout the County, including in parcels located in Priority Development Areas. Additionally, Policy HE-P2.2, which encourages and provides incentives for the production of housing in close proximity to public transportation and services, would further this strategy.
H4. Build adequate affordable housing to ensure homes for all.	Consistent. See Strategy H2. Additionally, Policy HE-P5.2, which calls for providing housing needs to meet special needs groups, and Policy HE-P7.1, which prohibits discrimination, would also ensure there would be adequate homes for all.
H5. Integrate affordable housing into all major housing projects.	Consistent. See Strategy H2.
H6. Transform aging malls and office parks into neighborhoods.	Consistent. The proposed project would redesignate land currently designated for non-residential use (such as commercial, public/semi-public, and mixed-use parcels) to residential uses.
H7. Provide targeted mortgage, rental and small business assistance to Equity Priority Communities.	Consistent. Policy HE-P4.2 of the proposed project, which calls for continuing to support the provision of rental assistance to extremely low-, very low-, and low-income households, would meet this Strategy.
H8. Accelerate reuse of public and community-owned land for mixed-income housing and essential services.	Consistent. See Strategy H6.

Source: Plan Bay Area 2021

As shown in Table 5.11-1, the proposed project would be consistent with the Plan Bay Area 2050 housing strategies. Therefore, impacts would be less than significant.

General Plan Update

Moreover, the proposed General Plan Update would change the designations and zoning of the proposed housing sites, and this EIR evaluates the sites using the proposed general plan land use designations as currently under consideration. Upon adoption of the General Plan Update, the proposed project would be consistent with the proposed General Plan. Impacts would be less than significant.

**Level of Significance Before Mitigation:** Impact 5.11-2 would be less than significant.

Mitigation Measures

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.11-2 would be less than significant.

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#### 5.11.5 Cumulative Impacts

The proposed project would have the cumulative effect of reinforcing and supporting land use policies and plans for the County. The proposed project also has the effect of enhancing the development of the community by providing housing options for all income levels, particularly low-income categories, as required by RHNA. As such, this is considered a beneficial cumulative effect.

#### 5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

#### 5.11.7 Mitigation Measures

No mitigation measures are required.

#### 5.11.8 Level of Significance After Mitigation

Impacts would be less than significant.

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### 5.11.9 References

Association of Bay Area Governments (ABAG). 2022. Final Regional Housing Needs Allocation (RHNA) Plan: San Francisco Bay Area, 2023-2031, [https://abag.ca.gov/sites/default/files/documents/2022-04/Final\\_RHNA\\_Methodology\\_Report\\_2023-2031\\_March2022\\_Update.pdf](https://abag.ca.gov/sites/default/files/documents/2022-04/Final_RHNA_Methodology_Report_2023-2031_March2022_Update.pdf).

Plan Bay Area. 2021, October. Plan Bay Area 2050. <https://www.planbayarea.org/finalplan2050>

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### 5.12 MINERAL RESOURCES

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Movable minerals or an “ore deposit” is defined as a deposit of ore or mineral having a value materially in excess of the cost of developing, mining and processing the mineral and reclaiming the Plan Area.

#### 5.12.1 Environmental Setting

##### 5.12.1.1 REGULATORY BACKGROUND

###### State Regulations

###### *California Surface Mining and Reclamation Act of 1975*

The California Surface Mining and Reclamation Act (SMARA) was enacted in 1975 and updated in January 2007 to limit new development in areas with significant mineral deposits. Through SMARA, the California Geological Survey identifies geologic deposits of valuable minerals used in manufacturing processes and the production of construction materials. Requirements for SMARA are codified under PRC §§ 2710 et seq. Under state law, all mining operations are required to obtain permits prior to commencing operations and abide by local and state operating requirements. Mining operations are also required to have appropriate reclamation plans in place, provide financial assurances, and abide by state and local environmental laws. SMARA classifies lands into mineral resource zones (MRZs) according to the known or inferred mineral potential. The criteria for establishing the zones are based on four general categories, discussed below:

- MRZ 1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ 2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
- MRZ 3: Areas containing mineral deposits, the significance of which cannot be evaluated.
- MRZ 4: Areas where available information is inadequate for assignment to any other MRZ zone.

###### Local Regulations

###### *Contra Costa County General Plan General Plan*

Chapter 8, Conservation Element, contains the following policies related to mineral resources.

- **Policy 8-54:** Mining and quarrying shall be a permitted use in certain privately owned areas which are in an open space designation in the General Plan (e.g. Open Space, Agricultural lands, etc.) and which contain known mineral deposits with potential commercial value. These deposits include, but are not limited to, rocks, gravel, sand, salt, and clay.
- **Policy 8-56:** Incompatible land uses shall not be permitted within the mineral resource impact areas identified as containing significant sand and gravel deposits (as shown in Figure 8-4 of the General Plan).

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- **Policy 8-57:** Incompatible uses are defined as land uses inherently incompatible with mining and/or uses that require high public or private investment in structures, land improvements, and landscaping that prevent mining because of the higher economic value of the land and its improvements.
- **Policy 8-58:** Future development in the vicinity of valuable mineral resource zones shall be planned and designed to minimize disturbance to residential areas or other sensitive land uses and to permit the safe passage of quarry trucks.
- **Policy 8-59:** Development of compatible land uses shall be encouraged within 1,000 feet of the quarrying sites. Compatible uses include secondary activity related to the quarry operation, recreation facilities, parks, agricultural uses, and permanent open space.

Additionally, Policy 3-72 in the Land Use Element applies to development in areas that contain mineral resources.

- **Policy 3-72:** Within southeastern Contra Costa County there is a geological deposit of domengine sandstone located just southerly of Camino Diablo and easterly of Vasco Road. Limited residential or ranchette development of these mineral properties may be appropriate, but residential use shall be identified as secondary to mineral operations and will not be allowed to preclude the full utilization of identified mineral resources. Any nearby residential use will be permitted conditionally after recognizing the probable expansion of mineral operations and accepting the possible nuisance and inconvenience associated with mineral operations.

#### *Contra Costa County Ordinance Code*

Chapter 88-11 Surface Mining and Reclamation of the County Ordinance regulates the extraction of mineral resources in the County. It is intended to implement the requirements of SMRA and the policies within the General Plan. It also discusses the protection of these resources, stating that mine development is encouraged in compatible areas before encroachment of conflicting uses. Mineral resources areas that have been classified by the State Department of Conservation's Division of Mines and Geology or designated by the State Mining and Geology Board, as well as existing surface mining operations, shall be protected from intrusion by incompatible land uses that may impede or preclude mineral extraction or processing, to the extent possible for consistency with the County's General Plan.

#### 5.12.1.2 EXISTING CONDITIONS

Mineral resources in Contra Costa County include aggregate and stone for commercial, industrial, and construction uses. The most important mineral resources mined in the County include a regionally significant deposit of diabase near Mt. Zion and Clayton. Diabase is an intrusive igneous rock which is used extensively for road base and as rip-rap to prevent streambank erosion. Both Lone Star and Kaiser quarries utilize this resource. A geological deposit of domegine sandstone is located on the north side of Mt. Diablo, just south of Camino Diablo and east of Vasco Road. This is the sole deposit of this material in the State of California. Domegine sandstone is used by Pacific Gas & Electric Company as trench backfill and is a primary ingredient in the manufacture of heat resistant glass used in the national space program. An additional area in the County which has a long history of mineral resource production is located near Port Costa. Mining in this

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area began at the turn of the century to support a brick manufacturing operation which is unique in the County, and one of only a few in the entire State. Mining and brick production have been continuous from 1905 to the present, under several different ownerships. In 1966, a lightweight shale aggregate facility was constructed. Furthermore, sand and sandstone deposits are mined from several locations in the County but focused in the Byron area of southeast County. Figure 8-4 Mineral Resource Areas in the County General Plan shows the locations of these areas (Contra Costa 2005).

Based on the Mineral Land Classification prepared by the Division of Mine Reclamation (DMR) in the California Department of Conservation (DOC), the County contains several additional regionally significant mineral resources deposits including exposures of basalt and andesite located near the City of Moraga, the northern end of the Berkeley Hills, and a small ridge southwest of the City of Orinda. Sandstone and shale deposit consisting of three parcels are also located on the west side of the City of Richmond (DMR 1996). There are several other mapped areas classified as MRZ-2 and MRZ-3 in the County as well, as shown on Figure 5.12-1, *Mineral Resource Zones and Resource Sectors in Contra Costa County*. Contra Costa contains two present or potential sources of Portland cement concrete aggregate: the diabase deposit near Clayton and the sandstone deposit in Richmond (DMR 1987).

The United States Geological Survey identifies a total of 231 mineral resource sites in the County including operating or closed mines, mineral prospects, and processing plants (USGS 2022). USGS reports that there are 39 currently operating mines in the County and 127 sites that contain mineral resources but have not yet been mined (USGS 2022). However, the DOC reports that there are only five mines in the County, including one stone quarry in Richmond, two rock quarries near Clayton, and two sand-gravel pits near Byron (DMR 2020). According to Geologic Energy Management Division (GEMD) of the DOC maps, there are 22 active oil, gas and water wells in the County that produced 92,235 barrels of oil condensate and 138,286 thousand cubic feet of total gross gas in 2019 (GEMD 2020).

### 5.12.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

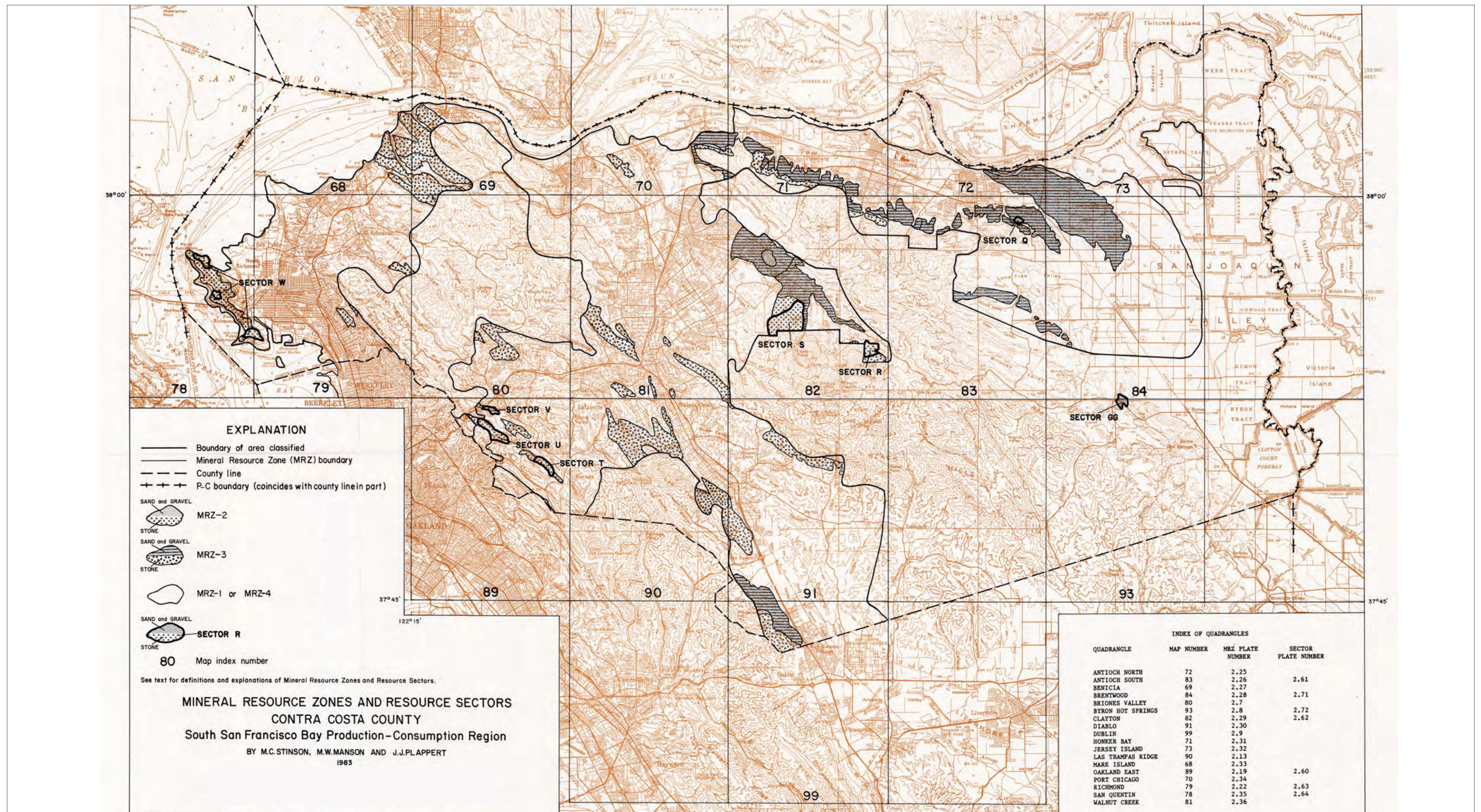
- M-1 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- M-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

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Source: USGS, 1983



Figure 5.12-1

Mineral Resource Zones and Resource Sectors

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### 5.12.3 Proposed Housing Element Policies

The proposed Housing Element Update does not include any policies relevant to mineral resources.

### 5.12.4 Environmental Impacts

#### 5.12.4.1 DISCUSSION OF NO MINERAL RESOURCES IMPACTS

All of the impacts would be less than significant or potentially significant.

#### 5.12.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.12-1: Implementation of the proposed project could result in the loss of availability of a known mineral resource. [Thresholds M-1 and M-2]

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As shown in Figure 5.12-1, the County includes several significant or potentially significant mineral resource areas designated by SMARA. As part of the Housing Element Update (HEU), the County is proposing the potential redesignation of several sites that overlie mapped MRZ-2 and MRZ-3 areas, including those in the communities of Rodeo, Vine Hill, and Bay Point. MRZ-2 designated areas are areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence. MRZ-3 designated areas are assumed to contain mineral deposits, the significance of which cannot be evaluated.

As seen on Figure 8-4 in the County's Conservation Element, the mineral resources considered to be of local importance include crushed rock near Mt. Zion, on the north side of Mt. Diablo, in the Concord area; shale in the Port Costa area; and sand and sandstone deposits, mined from several locations, but focused in the Byron area of southeast County (Contra Costa 2005). No Housing Element sites overlie these areas. Therefore, the proposed project would not result in the loss of availability of locally important mineral resources.

Development projects in the County would be required to comply with Chapter 88-11 of the County Ordinance Code which implements the Surface Mining and Reclamation Act. This ordinance aims protect significant mineral resources from the intrusion of incompatible land uses. However, because the Housing Element Sites Inventory contains sites in designated MRZ-2 and MRZ-3 areas, residential development on these sites would contribute to the loss of availability of a known mineral resource of value to the region and the residents of the state. However, implementation of Mitigation Measure MIN-1, which requires the County geologist to site-specific determinations of mineral resource value, would reduce impacts to less than significant.

***Level of Significance Before Mitigation:*** Impact 5.12-1 would be potentially significant.

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#### *Mitigation Measures*

- MIN-1 Pursuant to the Public Resources Code, the Surface Mining and Reclamation Act, Chapter 9, Article 4, Section 2762(e), prior to the issuance of grading permit on lands classified by the State Geologist as MRZ-3 or MRZ-2, the County Geologist shall make a site-specific determination as to the site's potential to contain or yield important or significant mineral resources of value to the region and the residents of the State of California.
- If it is determined by the County Geologist that lands classified as MRZ-3 have the potential to yield significant mineral resources which may be of “regional or statewide significance” and the proposed use is considered “incompatible” (as defined by Section 3675 of Title 14, Article 6, of the California Code of Regulations) and could threaten the potential to extract said minerals, the future project applicant(s) shall prepare an evaluation of the area in order to ascertain the significance of the mineral deposit located therein. This site-specific mineral resources study shall be performed to, at a minimum, document the site's known or inferred geological conditions; describe the existing levels of development on or near the site which might preclude mining as a viable adjacent use; and analyze the state standards for designating land as having “regional or statewide significant” under the Surface Mining and Reclamation Act. The results of such evaluation shall be transmitted to the State Geologist and the State Mining and Geological Board (SMGB).
  - Should significant mineral resources be identified, the future project applicant(s) shall either avoid said resource or shall incorporate appropriate findings subject to a site-specific discretionary review and CEQA process.

***Level of Significance After Mitigation:*** Impact 5.12-1 would be less than significant.

#### 5.12.5 Cumulative Impacts

Cumulative projects could cause significant cumulative impacts if they caused a loss of availability of a known mineral resource valuable to the region and the state or caused a loss of availability of an important mining site delineated in a local general plan or other land use plan. Development in or near some areas of the County would have the potential to result in land uses that are incompatible with mining and resource recovery and would result in a cumulative loss of available resources. Compliance with Mitigation Measure MIN-1 would mitigate impacts to mineral resources of local, regional, and statewide importance less than significant.

#### 5.12.6 Level of Significance Before Mitigation

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.12-1: The proposed project could lead to a loss of mineral resources of regional or statewide importance.

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### 5.12.7 Mitigation Measures

#### Impact 5.12-1

MIN-1 Pursuant to the Public Resources Code, the Surface Mining and Reclamation Act, Chapter 9, Article 4, Section 2762(e), prior to the issuance of grading permit on lands classified by the State Geologist as MRZ-3 or MRZ-2, the County Geologist shall make a site-specific determination as to the site's potential to contain or yield important or significant mineral resources of value to the region and the residents of the State of California.

- If it is determined by the County Geologist that lands classified as MRZ-3 have the potential to yield significant mineral resources which may be of “regional or statewide significance” and the proposed use is considered “incompatible” (as defined by Section 3675 of Title 14, Article 6, of the California Code of Regulations) and could threaten the potential to extract said minerals, the future project applicant(s) shall prepare an evaluation of the area in order to ascertain the significance of the mineral deposit located therein. This site-specific mineral resources study shall be performed to, at a minimum, document the site's known or inferred geological conditions; describe the existing levels of development on or near the site which might preclude mining as a viable adjacent use; and analyze the state standards for designating land as having “regional or statewide significant” under the Surface Mining and Reclamation Act. The results of such evaluation shall be transmitted to the State Geologist and the State Mining and Geological Board (SMGB).
- Should significant mineral resources be identified, the future project applicant(s) shall either avoid said resource or shall incorporate appropriate findings subject to a site-specific discretionary review and CEQA process.

### 5.12.8 Level of Significance After Mitigation

#### Impact 5.12-1

The mitigation measure identified above would reduce potential impacts associated with mineral resources to a level that is less than significant. Therefore, no significant unavoidable adverse impacts relating to mineral resources remain.

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#### 5.12.9 References

Contra Costa, County of. 2005. Contra Costa County General Plan 2005-2020 - Chapter 8: Conservation Element, Chapter 3: Land Use Element. <https://www.contracosta.ca.gov/4732/General-Plan>

Division of Mine Reclamation, California Department of Conservation (DMR). 2020. Mines Online- Richmond (Chevron) Quarry 91-07-0006, Clayton Quarry 91-07-0003, Cemex Clayton Quarry 91-07-0004, Kellogg 91-07-0012, Byron Plant 91-07-0001. <https://maps.conservation.ca.gov/mol/index.html>

———. 1996. Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region.

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Geologic Energy Management Division, California Department of Conservation (GEMD). 2020, October. 2019 Annual Report of the State Oil and Gas Supervisor.

United States Geological Survey. 2022, May 16. (Accessed) Mineral Resources Data System- Contra Costa County. <https://mrdata.usgs.gov/mrds/map-graded.html>

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### 5.13 NOISE

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for implementation of the proposed project to result in noise impacts in the county. This section discusses the fundamentals of sound; examines federal, state, and local noise guidelines, policies, and standards; evaluates potential noise and vibration impacts associated with the proposed project; and provides mitigation to reduce noise and vibration impacts at sensitive locations. Noise monitoring and modeling data are in the Noise Appendix, Appendix 5.13-1 to this Draft EIR.

#### 5.13.1 Environmental Setting

##### 5.13.1.1 NOISE AND VIBRATION FUNDAMENTALS

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Following are brief definitions of terminology used in this section.

#### Glossary

- **Sound.** A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level ( $L_{eq}$ ).** The mean of the noise level, energy averaged over the measurement period.
- **$L_{max}$ .** The maximum root-mean-square noise level during a measurement period.
- **Statistical Sound Level ( $L_n$ ).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the  $L_{50}$  level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period), which is half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The  $L_{10}$  level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the “intrusive sound level.” The  $L_{90}$  is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”
- **Day-Night Sound Level ( $L_{dn}$  or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 pm to 7:00 am.

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- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the levels occurring during the period from 7:00 pm to 10:00 pm, and 10 dB added to the sound levels occurring during the period from 10:00 pm to 7:00 am. Note: For general community/environmental noise, CNEL and  $L_{dn}$  values rarely differ by more than 1 dB. As a matter of practice,  $L_{dn}$  and CNEL values are considered to be equivalent/interchangeable and are treated therefore in this assessment.
- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ( $1 \times 10^{-6}$  in/sec).

#### Sound Fundamentals

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel. The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all and are “felt” more like a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale performs this compensation by weighting frequencies in a manner approximating the sensitivity of the human ear.

Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernable to most people in an exterior environment whereas a 10 dBA change is perceived as a doubling (or halving) of the sound.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and many local governments have established criteria to protect public health and safety and to prevent disruption of certain human activities.

#### Sound Measurement

Sound pressure is measured through the A-weighted measure to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear’s de-emphasis of these frequencies.



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Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale, representing points on a sharply rising curve. On a logarithmic scale, an increase of 10 dBA is 10 times more intense than 1 dBA, 20 dBA is 100 times more intense, and 30 dBA is 1,000 times more intense. A sound as soft as human breathing is about 10 times greater than 0 dBA. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. This phenomenon is known as “spreading loss.” For a single point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance in a hard-site environment. Line source noise in a relatively flat environment with absorptive vegetation decreases by 4.5 dBA for each doubling of distance.

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called  $L_{eq}$ ), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the  $L_{50}$  noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the  $L_2$ ,  $L_8$  and  $L_{25}$  values represent the noise levels that are exceeded 2, 8, and 25 percent of the time, or 1, 5, and 15 minutes per hour. These “ $L_n$ ” values are typically used to demonstrate compliance for stationary noise sources with a city’s or county’s noise ordinance, as discussed below. Other values typically noted during a noise survey are the  $L_{min}$  and  $L_{max}$ . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law, cities, and counties require that, for planning purposes, an artificial dBA increment be added to quiet time noise levels in a 24-hour noise descriptor called the Community Noise Equivalent Level or Day-Night Noise Level. The CNEL descriptor requires that an artificial increment of 5 dBA be added to the actual noise level for the hours from 7:00 pm to 10:00 pm and 10 dBA for the hours from 10:00 pm to 7:00 am. The  $L_{dn}$  descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 pm and 10:00 pm. Both descriptors give roughly the same 24-hour level (i.e., typically within 1 dBA of each other), though the CNEL is only slightly more restrictive (i.e., higher); therefore, they are used interchangeably in this assessment.

#### Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure, functions of the heart, and the nervous system. Extended periods of noise exposure above 90 dBA can result in permanent hearing damage. When the noise level reaches 120 dBA, even short-term exposure causes a tickling sensation in the ear, called the threshold of

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feeling. As the sound reaches 140 dBA, the tickling sensation becomes painful, called the threshold of pain. Table 5.13-1 shows typical noise levels from familiar noise sources.

Table 5.13-1 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2013a.

### Vibration Fundamentals

Vibration is an oscillating motion in the earth. Like noise, vibration is transmitted in waves, but through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard.

Vibration can be natural—such as earthquakes, volcanic eruptions, or landslides—or man-made, such as explosions, heavy machinery, or trains. Both natural and man-made vibration may be continuous, such as from operating machinery, or impulsive, as from an explosion.

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As with noise, vibration can be described by both its amplitude and frequency. Amplitude can be characterized in three ways—displacement, velocity, and acceleration. Particle displacement is a measure of the distance that a vibrated particle travels from its original position; for the purposes of soil displacement, is typically measured in inches or millimeters. Particle velocity is the rate of speed at which soil particles move in inches per second or millimeters per second. Table 5.13-2 presents the human reaction to various levels of peak particle velocity.

Table 5.13-2 Human Reaction to Typical Vibration Levels

Vibration Level Peak Particle Velocity (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling—houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: Caltrans 2013b.

Vibrations also vary in frequency, and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz. Traffic vibrations exhibit a similar range of frequencies; however, due to their suspension systems, buses often generate frequencies around 3 Hz at high vehicle speeds. It is less common, but possible, to measure traffic frequencies above 30 Hz.

The way in which vibration is transmitted through the earth is called propagation. As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

5.13.1.2 REGULATORY BACKGROUND

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, and local governments have established standards and ordinances to control noise.

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#### Federal Regulations

##### *Federal Highway Administration*

Proposed federal or federal-aided highway construction projects at a new location, or the physical alteration of an existing highway that significantly changes the horizontal or vertical alignment or increases the number of through-traffic lanes, require an assessment of noise and consideration of noise abatement per 23 CFR Part 772, “Procedures for Abatement of Highway Traffic Noise and Construction Noise.” The Federal Highway Administration (FHWA) has adopted noise abatement criteria for sensitive receivers—such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals—when “worst-hour” noise levels approach or exceed 67 dBA  $L_{eq}$  (Caltrans 2020).

##### *US Environmental Protection Agency*

In addition to FHWA standards, the EPA has identified the relationship between noise levels and human response. The EPA determined that over a 24-hour period, an  $L_{eq}$  of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an  $L_{eq}$  of 55 dBA and interior levels at or below 45 dBA. These levels are relevant to planning and design and useful for informational purposes, but they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community; therefore, they are not mandated.

The EPA also set 55 dBA  $L_{dn}$  as the basic goal for exterior residential noise intrusion. However, other federal agencies, in consideration of their own program requirements and goals, as well as the difficulty of actually achieving a goal of 55 dBA  $L_{dn}$ , have settled on the 65 dBA  $L_{dn}$  level as their standard. At 65 dBA  $L_{dn}$ , activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

##### *US Department of Housing and Urban Development*

The US Department of Housing and Urban Development (HUD) has set the goal of 65 dBA  $L_{dn}$  as a desirable maximum exterior standard for residential units developed under HUD funding (This level is also generally accepted within the State of California). Although HUD does not specify acceptable interior noise levels, standard construction of residential dwellings typically provides 20 dBA or more of attenuation with the windows closed. Based on this premise, the interior  $L_{dn}$  should not exceed 45 dBA.

##### *Occupational Health and Safety Administration*

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise limitations would apply to the operation of construction equipment and could also apply to any proposed industrial land uses. Noise exposure of this type is dependent on work conditions and is addressed through a facility’s Health and Safety Plan, as required under OSHA, and is therefore not addressed further in this analysis.

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#### State Regulations

##### *General Plan Guidelines*

The State of California, through its General Plan Guidelines, discusses how ambient noise should influence land use and development decisions and includes a table of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable uses at different noise levels, expressed in CNEL (OPR 2017). A conditionally acceptable designation implies new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements for each land use and needed noise insulation features are incorporated in the design. By comparison, a normally acceptable designation indicates that standard construction can occur with no special noise reduction requirements. The general plan guidelines provide cities with recommended community noise and land use compatibility standards that can be adopted or modified at the local level based on conditions and types of land uses specific to that jurisdiction.

##### *California Building Code*

The California Building Code (CBC) is Title 24 of the California Code of Regulations. CBC Part 2, Volume 1, Chapter 12, Section 1206.4, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources not exceed 45 dBA in any habitable room. The noise metric is evaluated as either the  $L_{dn}$  or the CNEL, whichever is consistent with the noise element of the local general plan.

The State of California's noise insulation standards for non-residential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA  $L_{eq(1hr)}$ .

##### *Airport Noise Standards*

California Code of Regulations Title 21, Subchapter 6, Airport Noise Standards, establishes 65 dBA CNEL as the acceptable level of aircraft noise for persons living in the vicinity of airports. Noise-sensitive land uses are generally incompatible in locations where the aircraft exterior noise level exceeds 65 dBA CNEL, unless an aviation easement for aircraft noise has been acquired by the airport proprietor or the residence is a high-rise with an interior CNEL of 45 dBA or less in all habitable rooms and has an air circulation or air conditioning system, as appropriate. Assembly Bill (AB) 2776 requires any person who intends to sell or lease residential properties in an airport influence area to disclose that fact to the person buying the property.

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#### Local Regulations

##### *Contra Costa County General Plan*

The following goals and policies that pertain to noise are from the Noise Element of the General Plan:

- **Goal 11-A:** To improve the overall environment in the County by reducing annoying and physically harmful levels of noise for existing and future residents and for all land uses.
- **Goal 11-B:** To maintain appropriate noise conditions in all areas of the County.
- **Goal 11-C:** To ensure that new developments will be constructed so as to limit the effects of exterior noise on the residents.
- **Goal 11-D:** To recognize the economic impacts of noise control and encourage an equitable distribution of these costs.
- **Goal 11-E:** To recognize citizen concerns regarding excessive noise levels, and to utilize measures through which the concerns can be identified and mitigated.
- **Policy 11-1.** New projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines contained in Figure 11-6 of the General Plan. These guidelines, along with the future noise levels shown in the future noise contours map, should be used by the County as a guide for evaluating the compatibility of “noise sensitive” projects in potentially noisy areas.
- **Policy 11-2.** The standard for outdoor noise levels in residential areas is a DNL of 60 dB. However, a DNL of 60 dB or less may not be achievable in all residential areas due to economic or aesthetic constraints. One example is small balconies associated with multifamily housing. In this case, second and third story balconies may be difficult to control to the goal. A common outdoor use area that meets the goal can be provided as an alternative.
- **Policy 11-3.** If the primary noise source is train pass-bys, then the standard for outdoor noise levels in residential areas is a DNL of 70 dB. A higher DNL is allowable since the DNL is controlled by a relatively few number of train pass-bys that are disruptive outdoors only for short periods. Even though the DNL may be high, during the majority of the time the noise level will be acceptable.
- **Policy 11-4:** Title 24, Part 2, of the California Code of Regulations requires that new multiple-family housing projects, hotels, and motels exposed to a DNL of 60 dB or greater have a detailed acoustical analysis describing the project will provide an interior DNL of 45 dB or less. The County also shall require new single-family housing projects to provide for an interior DNL of 45 dB or less.
- **Policy 11-5.** In developing residential areas exposed to a DNL in excess of 65 dB due to single events such as train operation, indoor noise levels due to these single events shall not exceed a maximum A-weighted noise level of 50 dB in bedrooms and 55 dB in other habitable rooms. Single event indoor residential noise levels from airport related causes will be 45 dB CNEL.
- **Policy 11-6.** If an area is currently below the maximum “normally acceptable” noise level, an increase in noise up to the maximum should not be allowed necessarily.
- **Policy 11-7.** Public projects shall be designed and constructed to minimize long-term noise impacts on existing residents.

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- **Policy 11-8.** Construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.
- **Policy 11-9.** Sensitive land use shall be encouraged to be located away from noise areas, or the impacts of noise on these uses shall be mitigated. If residential areas are planned adjacent to industrial noise sources, then a noise study shall be performed to determine the extent of any noise impacts and recommend appropriate noise mitigation measures.
- **Policy 11-10.** Development located within 6,000 feet of the Camp Parks Reserve Forces Training Area shall be required to prepare a detailed acoustical analysis. The analysis shall determine if the project will be affected severely by noise and, if so, what noise mitigation measures are available.
- **Policy 11-11.** Noise impacts upon the natural environment, including impacts on wildlife, shall be evaluated and considered in review of development projects.

*Contra Costa County Code*

Contra Costa County does not have a specific noise ordinance for operational exterior stationary noise sources. However, Contra Costa County Code (County Code) does include noise standards for other noise sources.

- **Title 7, Building Regulations, Section 716-8.1008, Nuisances,** states that operations shall be controlled to prevent nuisances to public and private ownerships because of dust, drainage, removal of natural support of land and structures, encroachment, noise, and/or vibration.
- **Title 8, General Regulations, Section 82-44.410, Conditions,** establishes exterior noise standards for special events. This section states that when a temporary event permit is granted for any event in a residential zoning district or at a residence in any other zoning district the event shall not generate or emit any noise or sound that exceeds any of the levels specified in Table 5.13-3 when measured at the exterior of any dwelling unit located on another residential property.

Table 5.13-3 Allowable Exterior Noise Levels for Events

Time Period	Noise Level (dBA)				
	L <sub>50</sub>	L <sub>25</sub>	L <sub>8</sub>	L <sub>2</sub>	L <sub>max</sub>
9:00 am–8:00 pm	60	65	70	75	80
8:00 pm–10:00 pm	55	60	65	70	75

Source: Contra Costa County Code.

Note: Amplified sound is prohibited after eight p.m. Sundays through Thursdays and after ten p.m. Fridays, Saturdays, and holidays. A temporary event permit shall not allow the use of amplified sound after these hours.

*Buchanan Field Airport Noise Management Program*

- The Buchanan Field Airport Noise Management Program includes Noise Abatement Procedures, for airplanes and helicopters, such as arrivals, departures, and training procedures. The Noise Management Program also includes the following restrictions:
- Airplanes exceeding 78 dBA per FAA AC 36-3 are prohibited.
- Curfew for airplanes exceeding 75 dBA per AC 36-3 between 10:00 p.m. and 7:00 a.m. local.

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#### *Construction Noise and Vibration*

The County of Contra Costa does not have specific limits or thresholds for construction noise and vibration. The Federal Transit Administration (FTA) provides criteria for acceptable construction noise levels at sensitive receptors and groundborne vibration for various types of buildings. The recommended vibration criteria by the FTA are shown in Table 5.13-4, *Building Architectural Damage Limits*. The FTA construction noise criterion for residential receptors during daytime hour is 80 dBA  $L_{eq(8hr)}$ .

Table 5.13-4 Building Architectural Damage Limits

Building Category	PVV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: FTA 2018.

#### 5.13.1.3 EXISTING CONDITIONS

##### Ambient Noise Measurements

Ambient noise monitoring was conducted within the Plan Area by PlaceWorks in April 2019 during weekday periods to determine a baseline noise level at different environments. Long-term (48-hour) measurements were conducted at 4 locations in the Plan Area, and short-term (15 minute) measurements were conducted at 19 locations in the Plan Area. All measurements were conducted from Tuesday, April 23, through Thursday, April 25, 2019. Short-term measurements were generally made during morning (7:00 am to 10:00 am) and evening (3:00 pm to 7:00 pm) peak commute hours.

Meteorological conditions during the measurement periods were favorable for outdoor sound measurements and were noted to be representative of the typical conditions for the season. All sound level meters were equipped with a windscreen during measurements.

All sound level meters used for noise monitoring satisfy the American National Standards Institute standard for Type 1 instrumentation.<sup>1</sup> The sound level meters were set to “slow” response and “A” weighting (dBA). The meters were calibrated prior to and after the monitoring period. All measurements were at least 5 feet above the ground and away from reflective surfaces. Noise measurement locations are described below and shown in Figures 5.13-1 through 5.13-6, *Approximate Noise Monitoring Locations*.

##### *Ambient Noise Monitoring Results*

During the ambient noise survey, the CNEL noise levels at monitoring locations ranged from 66 to 80 dBA CNEL. The long-term noise measurement results are summarized below and shown in Table 5.13-5, *Long-Term Noise Measurements Summary*, and a graphical summary of the daily trend during long-term noise

<sup>1</sup> Monitoring of ambient noise was performed using Larson-Davis Model LxT and 820 sound level meters.



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measurements is provided in Appendix 5.13-1. The short-term noise measurement results are also summarized below and shown in Table 5.13-6, *Short-Term Noise Measurements Summary*.

Table 5.13-5 Long-Term Noise Measurement Summary

Monitoring Location	Description	Long-Term Noise Level, dBA		
		CNEL	Lowest L <sub>eq</sub> (1hr)	Highest L <sub>eq</sub> (1hr)
LT-1	Richmond Parkway east of San Pablo Avenue 04/23/2019, 11:00 am	80	68.8	76.4
LT-2	Antioch BART Line along Evora Road 04/23/2019, 1:00 pm	75	63.3	71.9
LT-3	Antioch BARR Line along San Miguel Road 04/23/2019, 2:00 pm	66	49.1	69.2
LT-4	Taylor Boulevard east of Withers Avenue 04/23/2019, 3:00 pm	76	54.1	76.8

Table 5.13-6 Short-Term Noise Measurements Summary (dBA)

Monitoring Location	15-Minute Noise Level, dBA						
	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>2</sub>	L <sub>8</sub>	L <sub>25</sub>	L <sub>50</sub>
ST-1	64.4	78.1	49.7	76.8	69.2	55.0	51.7
ST-2	47.8	55.3	45.1	52.6	49.4	48.1	47.1
ST-3	72.0	87.6	33.9	80.5	77.4	71.7	61.0
ST-4	74.3	87.8	44.0	80.8	78.8	75.7	72.0
ST-5	60.0	75.8	47.5	68.2	64.6	59.3	54.6
ST-6	59.7	77.1	47.1	68.8	64.7	57.6	52.6
ST-7	75.5	88.5	51.1	81.3	79.4	77.2	74.2
ST-8	56.0	76.1	34.3	67.7	56.7	43.8	39.8
ST-9	70.4	82.6	50.1	76.5	74.2	71.6	68.7
ST-10	70.1	77.3	43.6	74.7	73.6	71.8	69.4
ST-11	75.1	84.4	46.7	80.4	79.0	77.0	73.9
ST-12	69.2	81.0	41.3	76.4	74.0	70.8	65.0
ST-13	56.8	78.8	33.5	66.2	52.0	46.0	42.1
ST-14	68.3	85.3	38.2	76.4	72.7	68.1	62.0
ST-15	67.8	88.1	38.2	76.2	72.0	62.9	51.2
ST-16	73.4	87.7	60.5	81.2	78.6	72.2	68.8
5-Minute Noise Level, dBA at BART Rail Locations							
ST-17 <sup>a</sup>	57.0	69.3	47.2	62.5	60.3	57.9	55.0
ST-18 <sup>a</sup>	66.6	80.1	43.5	75.1	72.2	66.8	58.8
ST-19 <sup>a</sup>	53.1	66.5	45.8	61.6	55.6	52.3	50.7

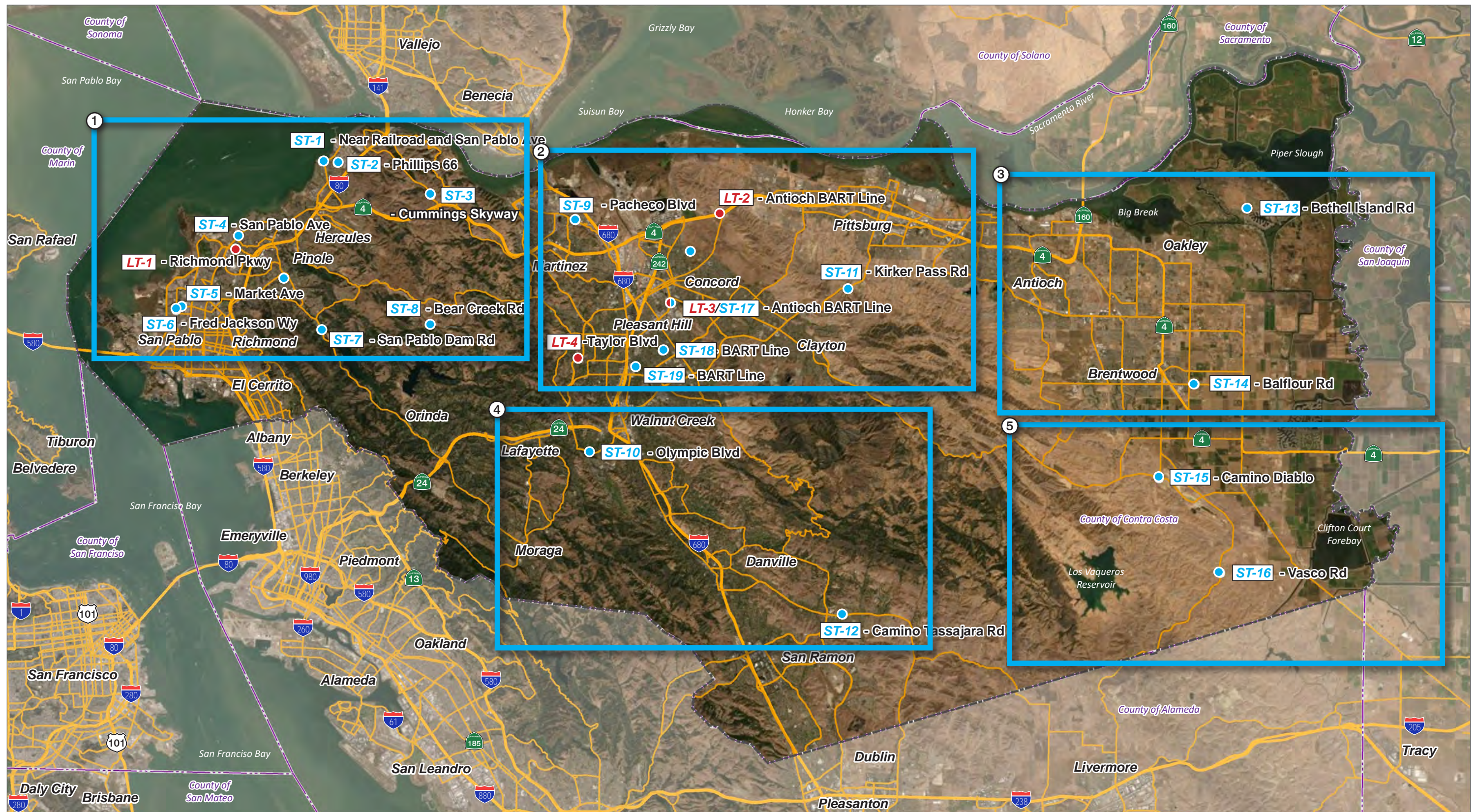
Notes: ft = feet, NB = northbound, SB = southbound, EB = eastbound, WB = westbound  
<sup>a</sup> 5-minute ambient measurements at BART rail locations only.

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#### *Long-Term Noise Monitoring Locations*

- **Long-Term Location 1 (LT-1)** was on Richmond Parkway east of San Pablo Avenue. The measurement location was approximately 20 feet north of the Richmond Parkway westbound centerline. A 48-hour noise measurement was conducted, beginning at the 12:00 pm hour on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic.
- **Long-Term Location 2 (LT-2)** was at the intersection of Willow Pass Road and SR-4 westbound onramp and in close proximity to the Antioch BART line in the median of SR-4. A 48-hour noise measurement was conducted, beginning at the 1:00 pm hour on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic and BART pass-bys.
- **Long-Term Location 3 (LT-3)** was on San Miguel Road north of Systron Drive and in close proximity to the Antioch BART line at the transition from an embankment to an elevated platform. A 48-hour noise measurement was conducted, beginning at the 2:00 pm hour on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic and BART pass-bys.
- **Long-Term Location 4 (LT-4)** was on Taylor Boulevard east of Withers Avenue. The measurement location was approximately 25 feet south of the Taylor Boulevard eastbound centerline. A 48-hour noise measurement was conducted, beginning at the 3:00 pm hour on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic.



Source: ESRI, 2022



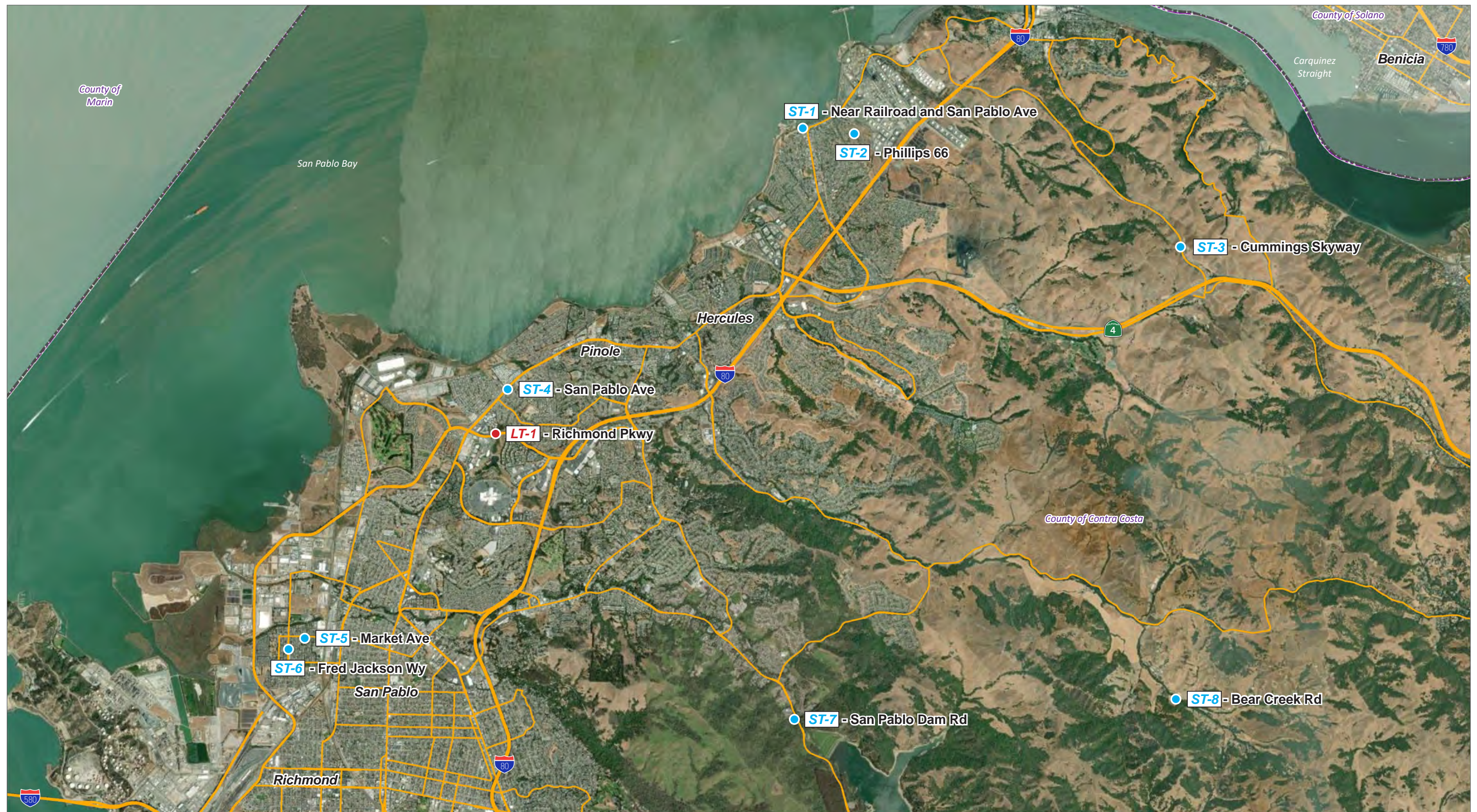
--- Contra Costa County Boundary

--- County Boundary

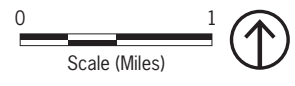
# Index Map Areas (5)

Figure 5.13-1

Approximate Countywide Noise Monitoring Locations (Index Map)



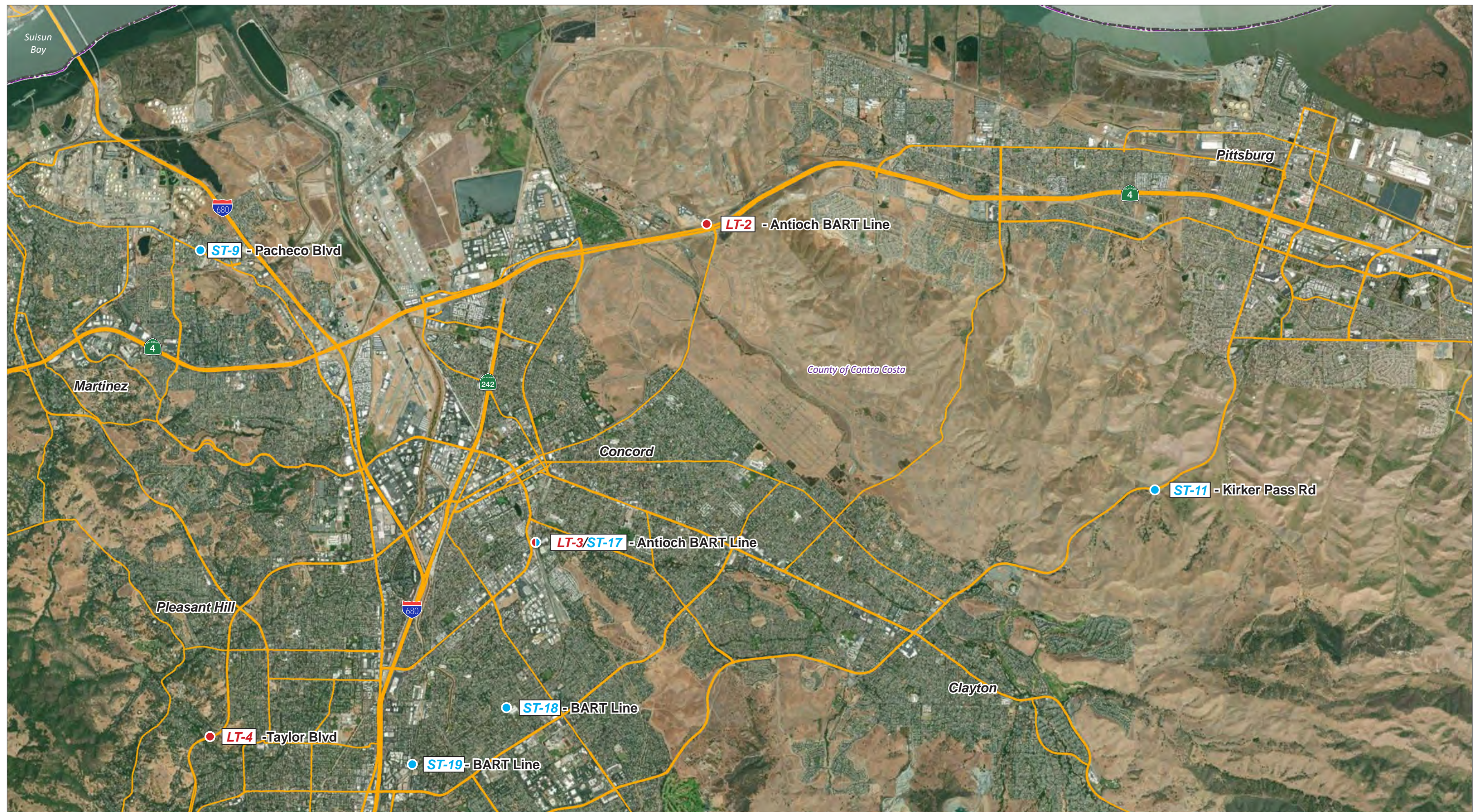
Source: ESRI, 2022



--- Contra Costa County Boundary

- **ST-X** Short-Term Noise Measurement Locations
- **LT-X** Long-Term Noise Measurement Locations

Figure 5.13-2  
Approximate Countywide Noise Monitoring Locations (Map 1 of 5)



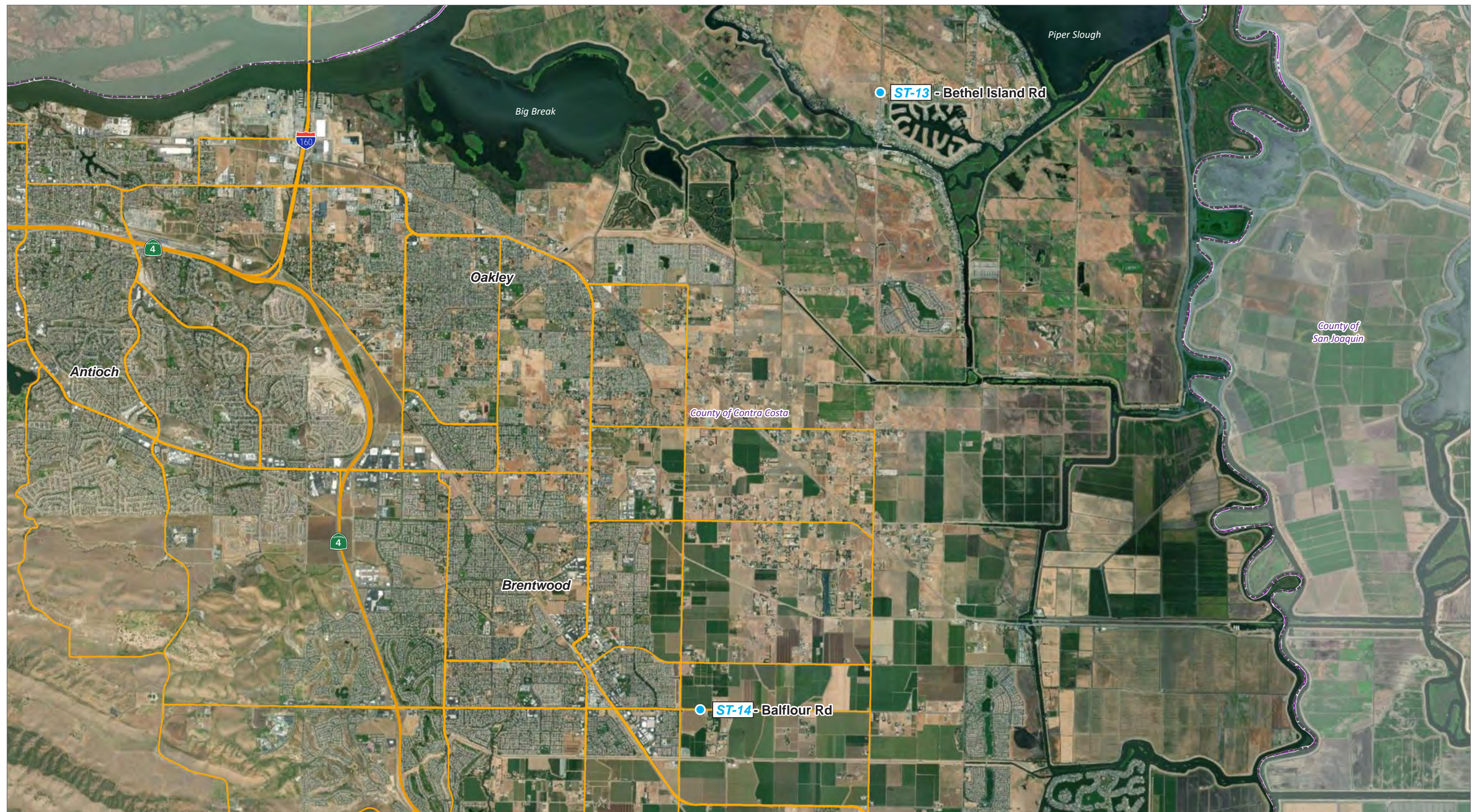
Source: ESRI, 2022



--- Contra Costa County Boundary

- **ST-X** Short-Term Noise Measurement Locations
- **LT-X** Long-Term Noise Measurement Locations

Figure 5.13-3  
Approximate Countywide Noise Monitoring Locations (Map 2 of 5)



Source: ESRI, 2022



--- Contra Costa County Boundary

● ST-X Short-Term Noise Measurement Locations

Figure 5.13-4  
Approximate Countywide Noise Monitoring Locations (Map 3 of 5)



Source: ESRI, 2022

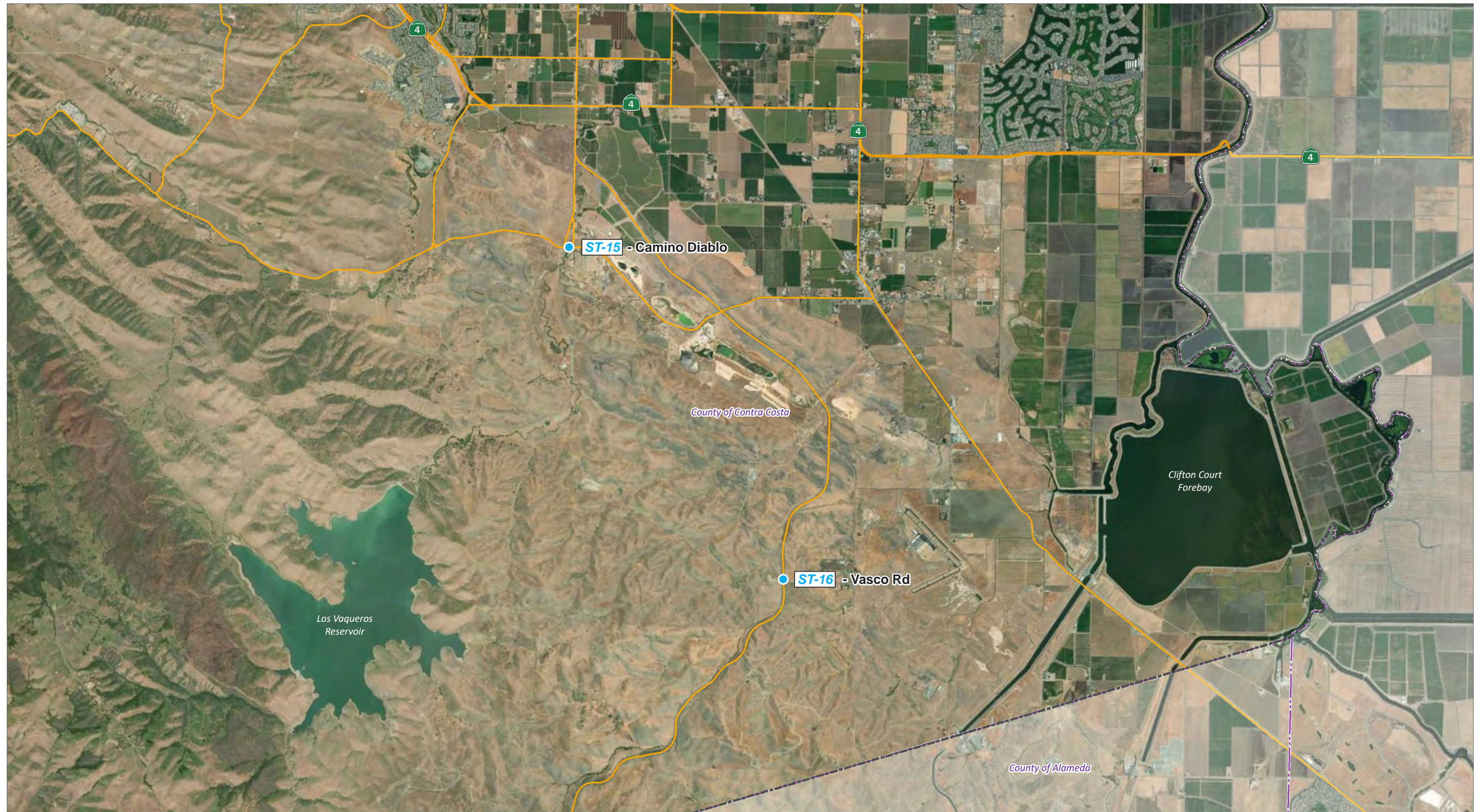


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● ST-X Short-Term Noise Measurement Locations

Figure 5.13-5

Approximate Countywide Noise Monitoring Locations (Map 4 of 5)



Source: ESRI, 2022



--- Contra Costa County Boundary

- - - County Boundary

● **ST-X** Short-Term Noise Measurement Locations

Figure 5.13-6  
Approximate Countywide Noise Monitoring Locations (Map 5 of 5)



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- **Short-Term Location 1 (ST-1)** was at Lone Tree Point Park in Rodeo. The measurement location was approximately 25 feet south of the park's property line with the Union Pacific right-of-way. A 15-minute noise measurement was conducted, beginning at 8:52 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by light local traffic, wildlife such as birds, and occasional train pass-bys. In addition to the 15-minute ambient noise measurement, a train pass-by was measured, which consisted of an Amtrak with one engine and six cars. The train did not sound its horn while passing by.
- **Short-Term Location 2 (ST-2)** was at the dead end of Mariposa Avenue east of Dempsey Way near the Phillips 66 Refinery. A 15-minute noise measurement was conducted, beginning at 9:19 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by a low ambient noise levels with a distant industrial hum, occasional small plane flyovers, distant traffic, and distant dogs barking.
- **Short-Term Location 3 (ST-3)** was on Cummings Skyway north of SR-4. The measurement location was approximately 20 feet west of the Cummings Skyway southbound centerline. A 15-minute noise measurement was conducted, beginning at 9:49 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds.
- **Short-Term Location 4 (ST-4)** was on San Pablo Avenue north of Shamrock Drive. The measurement location was approximately 18 feet east of the San Pablo Avenue northbound centerline. A 15-minute noise measurement was conducted, beginning at 8:35 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds.
- **Short-Term Location 5 (ST-5)** was on Market Avenue east of 5th Street. The measurement location was approximately 20 feet south of the Market Avenue eastbound centerline. A 15-minute noise measurement was conducted, beginning at 7:36 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds, dogs, and occasional train pass-bys.
- **Short-Term Location 6 (ST-6)** was on San Pablo Dam Road north of Tri Lane. The measurement location was approximately 20 feet west of the San Pablo Road southbound centerline. A 15-minute noise measurement was conducted, beginning at 9:17 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds.
- **Short-Term Location 7 (ST-7)** was in front of 1636 Fred Jackson Way. The measurement location was approximately 25 feet east of the Fred Jackson northbound centerline. A 15-minute noise measurement was conducted, beginning at 7:00 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds.
- **Short-Term Location 8 (ST-8)** was in front of 1174 Bear Creek Road. A 15-minute noise measurement was conducted, beginning at 9:51 am on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by low-volume traffic. Secondary noise sources included birds, horses, and aircraft overflights.
- **Short-Term Location 9 (ST-9)** was in front of 3907 Pacheco Boulevard. The measurement location was approximately 20 feet north of the Pacheco Boulevard westbound centerline. A 15-minute noise measurement was conducted, beginning at 3:08 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic.

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- **Short-Term Location 10 (ST-10)** was on Olympic Boulevard east of Newell Court. The measurement location was approximately 25 feet south of the Pacheco Boulevard westbound centerline. A 15-minute noise measurement was conducted, beginning at 3:08 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included aircraft overflights.
- **Short-Term Location 11 (ST-11)** was on Kirker Pass Road north of Hess Road. The measurement location was approximately 20 feet south of the Kirker Pass eastbound centerline. A 15-minute noise measurement was conducted, beginning at 4:03 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by traffic along Kirker Pass Road.
- **Short-Term Location 12 (ST-12)** was on Camino Tassajara Road east of Rassani Drive. The measurement location was approximately 20 feet north of the Camino Tassajara westbound centerline. A 15-minute noise measurement was conducted, beginning at 6:06 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic.
- **Short-Term Location 13 (ST-13)** was on Bethel Island Road north of Gateway Road. The measurement location was approximately 8 feet east of the Bethel Island Road northbound centerline. A 15-minute noise measurement was conducted, beginning at 3:50 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by birds, wind, and distant vehicular traffic. local traffic.
- **Short-Term Location 14 (ST-14)** was on Balfour Road east of Sellers Avenue. The measurement location was approximately 18 feet south of the Balfour road eastbound centerline. A 15-minute noise measurement was conducted, beginning at 4:34 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds when quiet (no traffic).
- **Short-Term Location 15 (ST-15)** was on Camino Diablo east of Walnut Boulevard. The measurement location was approximately 14 feet north of the Camino Diablo westbound centerline. A 15-minute noise measurement was conducted, beginning at 5:01 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic. Secondary noise sources included birds and house pumps.
- **Short-Term Location 16 (ST-16)** was on Vasco Road between Camino Diablo and the county boundary line. The measurement location was approximately 25 feet west of the Vasco Road southbound centerline. A 15-minute noise measurement was conducted, beginning at 5:34 pm on Tuesday, April 23, 2019. The noise environment of this site is characterized primarily by local traffic.
- **Short-Term Location 17 (ST-17)** was on San Miguel Road north of Systron Drive and in close proximity to the Antioch BART line at the transition from an embankment to an elevated platform. A 5-minute noise measurement was conducted, beginning at 3:30 pm on Thursday, April 25, 2019. The noise environment of this site is characterized primarily by BART rail noise.
- **Short-Term Location 18 (ST-18)** was at grade near the BART line along Minert Road east of Weaver Lane. A 5-minute noise measurement was conducted, beginning at 3:41 pm on Thursday, April 25, 2019. The noise environment of this site is characterized primarily by BART rail noise.

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- **Short-Term Location 19 (ST-19)** was on between Coggind Drive (north of Las Juntas Way) and the BART above ground rail line. A 5-minute noise measurement was conducted, beginning at 4:11 pm on Thursday, April 25, 2019. The noise environment of this site is characterized primarily by BART rail noise

## Existing Traffic Noise

On-road vehicles are the most prominent source of noise in the Plan Area. Traffic data provided by Fehr and Peers, which included 225 study roadway segments, average daily traffic volumes (ADT), vehicle mix (auto, medium duty and heavy duty), and day, evening, and night splits were used to model existing traffic noise levels. The modeled roadways and existing noise contours for 60 dBA CNEL, 65 dBA CNEL, and 70+ dBA CNEL can be found in Appendix 5.13-1.

## Aircraft Noise

Aircraft noise in the Plan Area can be intrusive to sensitive receptors in the immediate vicinity of the two public airports in Contra Costa County—Buchanan Field Airport and Byron Airport.

*Buchanan Airport*

The Buchanan Field Airport is a general aviation airport in Contra Costa County and serves portions of adjacent counties. The Contra Costa Airport Land Use Compatibility Plan (ALUCP) has seen a decrease in aircraft operations from 350,000 per year in 1975 to approximately 235,000 aircraft operations in 1999 (Contra Costa 2000). Heliports account for approximately 35 percent of flight activity, which is primarily flight training. It is projected that nonhelicopter aircraft will increase by approximately 37 percent, which is consistent with the county's projected growth. Total operations are expected to reach no more than 320,000 operations per year, which would remain below the 1975 historic high of 350,000 annual operations. As shown in Figure 5.13-7, *Buchanan Field Airport Noise Contours*, the 55 to 60 and 60 to 65 dB CNEL noise contours extend to portions of residential communities to the northeast and southwest.

*Byron Airport*

The Byron Airport is a county-owned airport that serves a variety of flying activities, including sky diving, sailplane, flights, and ultralight aircraft operations. Although future urbanization of the east county area is anticipated to lead to greater business use of the Byron Airport, current planning envisions the airport's predominant role to remain as a location for personal and recreational flying (Contra Costa 2000). Currently 120 aircraft are based at the Byron airport. At full buildout, the airport's capacity is approximately 380 aircraft. Currently, approximately 61,000 aircraft operations take place annually. Of those, approximately 15 percent are helicopters operations (which are mostly for training) and approximately 200 operations are from historic military jets (Contra Costa 2000). Figure 5.13-8, *Byron Airport Noise Contours*, shows the projected airport noise contours.

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#### Railroad Noise

Railroad operations are also a substantial source of noise in some parts of the Plan Area. Day-night average noise levels vary throughout the Plan Area depending on the number of trains per day along a given rail line, the timing and duration of train pass-by events, and whether or not trains must sound their warning whistles near “at-grade” crossings. Noise levels commonly range from 65 to 75 dBA CNEL at land uses adjoining a railroad right-of-way. When trains approach a passenger station or at-grade crossing, they are required to sound their warning whistle within a quarter mile. Train warning whistles typically generate maximum noise levels of 105 to 110 dBA at 100 feet. The day-night average noise level at locations immediately adjacent to at-grade crossings and exposed to multiple train pass-by events per day can exceed 85 dBA L<sub>dn</sub>/CNEL. Below is a description of the existing rail lines and subdivisions in the county. Additionally, Table 5.13-7, *Existing Railroad Noise Levels*, contains the calculated distances to the 65 dBA CNEL contours from existing railroad noise, both from the main line and within a quarter mile of grade crossings where horn warnings are required.

Table 5.13-7 Existing Railroad Noise Levels

Operator	Subdivision	Distance (feet) to 65 dBA CNEL Contour (Main Line)	Distance (feet) to 65 dBA CNEL Contour (Within ¼ Mile of Grade Crossing)
BNSF	Stockton Subdivision	210	382
BNSF	Stockton Subdivision west of Port of Chicago	210	355
RPRC	Chevron Lead	5	69
RPRC	Cutting Lead	5	69
RPRC	Harbor Lead	15	195
RPRC	LRT Lead	20	241
UP	Martinez Subdivision	175	NA <sup>1</sup>
UP	Martinez Subdivision south of Pinole	220	NA <sup>1</sup>
UP	Tracy Subdivision	10	73

Notes: Calculated using the FTA CREATE Model and FRA Grade Crossing Horn Model. See Appendix 5.13-1.  
 NA: Not Applicable because there are no at-grade crossings and therefore no horns.

#### *Union Pacific: Tracy Subdivision*

There currently is no freight traffic on the Union Pacific (UP) Tracy Subdivision from Mococo (Martinez) to the eastern boundary of Contra Costa County. The UP Tracy has been inactive for over 30 years but, according to Union Pacific, freight traffic may be reactivated in the future. Amtrak San Joaquin passenger trains travel on these tracks starting near Port Chicago where they cross over from the Burlington Northern and Santa Fe Railway (BNSF) Stockton Subdivision. The trains continue west on the UP Tracy Subdivision until joining with the UP Martinez Subdivision in Martinez. Only a short section between Port Chicago and Martinez is currently active with Amtrak San Joaquin passenger trains. There are 10 Amtrak San Joaquin passenger trains per day.

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#### *Burlington Northern Santa Fe: Stockton Subdivision*

The BNSF Santa Fe Railway has freight traffic and Amtrak San Joaquin passenger traffic from the Port Chicago to the eastern boundary of Contra Costa County. At Port Chicago, the westbound Amtrak San Joaquin trains switch to the UP Tracy Subdivision, from which point the BNSF only has freight traffic and the tracks terminate in Richmond.

#### *Union Pacific: Martinez Subdivision*

The UP Martinez Subdivision has freight traffic and passenger traffic. The Amtrak San Joaquin runs 10 trains per day, Amtrak Capitol Corridor runs 22 trains per day, Amtrak Coast Starlight runs 2 trains per day, and Amtrak California Zephyr runs 2 trains per day. The tracks enter Contra Costa County at the Benicia-Martinez Bridge and continue west. The UP Tracy Subdivision with Amtrak San Joaquin trains end at Ferry Street and merge onto the UP Martinez Subdivision.

#### *Richmond Pacific and Western Plant Services Railroad*

The Richmond Pacific Railroad (RPRC) and Western Plant Services Railroad (WPSX) are tracks with switching trains that serve the Chevron refinery, the Richmond Yard, and other industrial customers in Richmond. Depending on the locations of the tracks, there are between 2 and 22 switching trains per day.

#### *Quiet Zones*

There are designated “quiet zones” in Richmond at Parchester Village and at select locations along the RPRC tracks in and around Richmond Harbor. In these locations, trains are not required to sound their warning whistle (though still may if the conductor deems it necessary for safety reasons).

#### Stationary Source Noise

Stationary sources of noises may occur from all types of land uses. Residential uses would generate noise from landscaping, maintenance activities, and air conditioning systems. Commercial uses would generate noise from heating, ventilation, air conditioning (HVAC) systems, loading docks and other sources. Industrial uses may generate HVAC systems, loading docks and oil refinery machinery and activity. Noise generated by residential or commercial uses are generally short and intermittent. Industrial uses may generate noise on a more continual basis due to the nature of its activities. Nightclubs, outdoor dining areas, gas stations, car washes, fire stations, drive-throughs, swimming pool pumps, school playgrounds, athletic and music events, and public parks are other common noise sources.

#### Existing Vibration

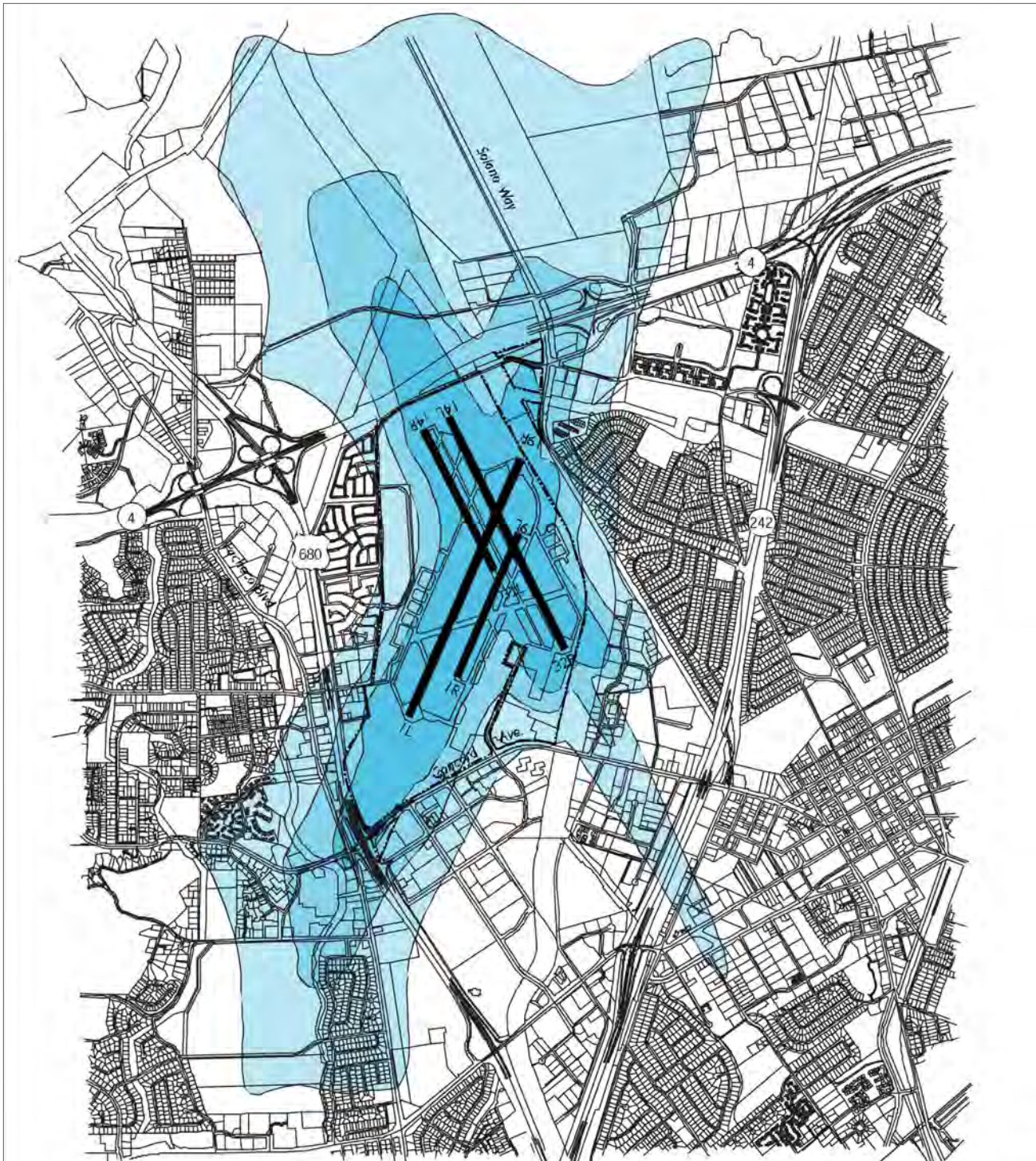
Commercial and industrial operations in the Plan Area can generate varying degrees of ground vibration, depending on the operational procedures and equipment. Such equipment-generated vibrations spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the vibration source varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds

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and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. In addition, future sensitive receptors could be placed within close proximity to existing railroad lines through buildout in the Plan Area.

NOISE



Source: Contra Costa, County of. December 13, 2000. Contra Costa County Airport Land Use Compatibility Plan.  
<https://www.contracosta.ca.gov/DocumentCenter/View/851/Cover-Introduction-and-County-wide-Policies?bidId=>

**Future Activity Assumptions**

- » 320,000 Total Annual Aircraft Operations
- » 90,000 Helicopter Operations (84,000 Training Operations)
- » 20,000 Regional Jet Airline Operations
- » See Exhibit 5C for Details

**Note:**

- » These composite contours also reflect current noise in puts in locations where they exceed projected future noise levels

- 55-60 dBCNEL
- 60-65 dBCNEL
- 65+ dBCNEL

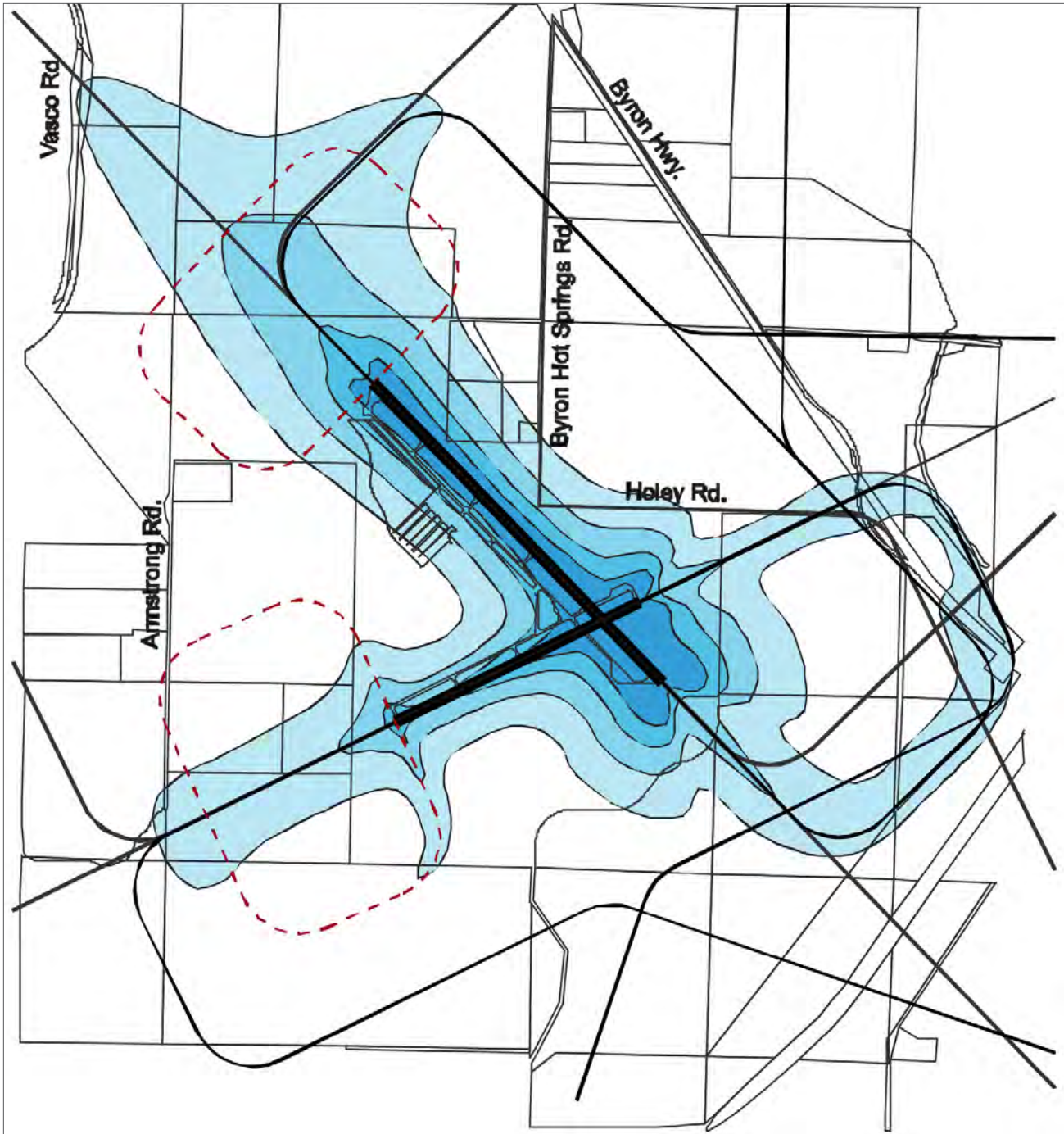
--- Airport Property Boundary



Figure 5.13-7

Buchanan Field Airport Noise Contours

NOISE



Source: Contra Costa, County of. December 13, 2000. Contra Costa County Airport Land Use Compatibility Plan.  
<https://www.contracosta.ca.gov/DocumentCenter/View/851/Cover-Introduction-and-County-wide-Policies?bidId=>

**Activity Assumptions**

- » 160,200 Total Annual Aircraft Operations
- » 20,000 Helicopter Operations Included
- » 200 Historic Military Jet Operations Included

**Note:**

- » Future operations projection represents the activity level associated with planned capacity of 380 based aircraft.

- Typical Helicopter Touch & Go Flight Tracks
- Typical Airplane Flight Tracks
- 55-60 dBCNEL
- 60-65 dBCNEL
- 65-70 dBCNEL
- 70+ dBCNEL



Figure 5.13-8  
 Byron Airport Noise Contours



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5.13.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

- N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- N-2 Generation of excessive groundborne vibration or groundborne noise levels.
- N-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

Construction Noise and Vibration Thresholds

As mentioned above, the County does not have specific limits or thresholds for construction noise. Therefore, the FTA construction noise criterion of 80 dBA  $L_{eq(8hr)}$  is used in this analysis to assess construction noise impacts at sensitive receptors.

Stationary Noise Thresholds

The County does not provide exterior noise standards for operational stationary noise sources. However, it does provide maximum allowable exterior noise levels for special events (shown in Table 5.13-3) between the hours of 9:00 am and 8:00 pm and 8:00 pm and 10:00 pm. For the purposes of this analysis, these standards are used to determine significant stationary noise impacts with revised hours to include both daytime and nighttime periods as shown in Table 5.13-8, *Allowable Exterior Noise Levels*.

Table 5.13-8 Allowable Exterior Noise Levels

Time Period	Noise Level (dBA)				
	L <sub>50</sub>	L <sub>25</sub>	L <sub>8</sub>	L <sub>2</sub>	L <sub>max</sub>
Daytime, 7:00 am–7:00 pm <sup>1</sup>	60	65	70	75	80
Nighttime, 7:00 pm–7:00 am <sup>1</sup>	55	60	65	70	75

Notes

<sup>1</sup> Standard daytime and nighttime hours.

Transportation Noise Thresholds

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment. Based on this, the following thresholds of significance

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similar to those recommended by the Federal Aviation Administration (FAA), are used to assess traffic noise impacts at sensitive receptor locations. A significant impact would occur if traffic noise increase would exceed:

- 1.5 dBA in ambient noise environments of 65 dBA CNEL and higher
- 3 dBA in ambient noise environments of 60 to 64 dBA CNEL
- 5 dBA in ambient noise environments of less than 60 dBA CNEL

#### Vibration Thresholds

As mentioned above, the County does not have specific limits or thresholds for construction vibration. Therefore, the recommended criteria by the FTA for vibration damage shown in Table 5.13-4 are used in this analysis.

### 5.13.3 Proposed Housing Element Policies

The following proposed Housing Element policies are applicable to noise:

- **Policy HE-P8.2.** Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

### 5.13.4 Environmental Impacts

Traffic noise levels for existing and project conditions were estimated using the FHWA traffic noise prediction model methodology. The FHWA model predicts noise levels through a series of adjustments to a reference sound level. These adjustments account for distances from the roadway, volumes vehicle mix (auto, medium-duty truck, heavy-duty truck), time of day split (day, evening, night), speeds, and number of lanes data were provided by Fehr & Peers for highway and roadway segments in the county for existing and future project conditions. The complete distances to the 70, 65, and 60 dBA CNEL noise contours for roadway segments in the county are included in Appendix 5.13-1.

As a result of the California Supreme Court decision regarding the assessment of the environment's impacts on projects (*California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while the noise from existing sources is taken into account as part of the baseline, the direct effects of exterior noise from nearby noise sources relative to land use compatibility of a future project as a result of implementation of the project is typically no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required except for certain school projects, projects affected by airport noise, and projects that would exacerbate existing conditions (i.e., projects that would have a significant operational impact). As required by the current General Plan Policy 11-1, new projects shall be required to meet acceptable exterior noise levels standards as established in the Noise and Land Use Compatibility Guidelines from the General

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Plan. These guidelines, along with the future noise levels shown in the General Plan noise contour maps, should be used by the County as a guide for evaluating the compatibility of noise sensitive projects in potentially noisy areas.

5.13.4.1 DISCUSSION OF NO NOISE IMPACTS

All impacts would be less than significant or potentially significant.

5.13.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

Impact 5.13-1: Construction activities would result in temporary noise increases in the vicinity of the proposed project. [Threshold N-1]

As part of implementing the proposed project, various individual developments of future dwelling units, would generate temporary noise level increases on and adjacent to individual construction sites in the County. Construction is performed in distinct steps, each of which has its own mix of equipment, and, consequently, its own noise characteristics. Table 5.13-9, *Reference Construction Equipment Noise Levels*, lists typical construction equipment noise levels recommended for noise-impact assessments based on a distance of 50 feet between the equipment and noise receptor.

Table 5.13-9 Reference Construction Equipment Noise Levels

Construction Equipment	Typical Max Noise Level at 50 feet (dBA L <sub>max</sub> ) <sup>1</sup>	Construction Equipment	Typical Max Noise Level at 50 feet (dBA L <sub>max</sub> ) <sup>1</sup>
Air Compressor	80	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	95
Ballast Equalizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	77
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	95
Concrete Pump	82	Roller	85
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	85
Dozer	85	Shovel	82
Generator	82	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	80	Truck	84
Paver	85		

Source: FTA 2018.

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As shown, construction equipment generates high levels of noise, with maximums ranging from 76 to 101 dBA. Construction of individual developments associated with implementation of the proposed project would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive land uses in the vicinity of an individual project.

Construction noise levels are highly variable and dependent upon the specific locations, site plans, construction details of individual projects, and the presence or absence of any natural or human-made barriers with potential acoustic dampening effects (e.g., the presence of vegetation, berms, walls, or buildings). Significant noise impacts may occur from operation of heavy earth-moving equipment and truck-haul operations that would occur with construction of individual development projects, which have not yet been developed, particularly if construction techniques, such as impact or vibratory pile driving, are proposed. The time of day that construction activity is conducted would also determine the significance of each project, particularly during the more sensitive nighttime hours. However, construction would be localized and would occur intermittently for varying periods of time.

Because specific project-level information is inherently not available at this time, it is not possible nor appropriate to quantify the construction noise impacts at specific sensitive receptors. In most cases, construction of individual developments associated with implementation of the project would temporarily increase the ambient noise environment in the vicinity of each individual project, potentially affecting existing and future nearby sensitive uses. However, because construction activities associated with any individual development may occur near noise-sensitive receptors and because, depending on the project type, equipment list, time of day, phasing, and overall construction durations, noise disturbances may occur for prolonged periods of time or during the more sensitive nighttime hours, construction noise impacts associated with implementation of the project are considered potentially significant.

***Level of Significance Before Mitigation:*** Impact 5.13-1 would be potentially significant.

#### *Mitigation Measures*

N-1 The construction contractors shall implement the following measures for construction activities conducted in the County of Contra Costa. Construction plans submitted to the County shall identify these measures on demolition, grading, and construction plans submitted to the County and the County's Planning and Building Department(s) shall verify that submitted grading, demolition, and/or construction plans include these notations prior to issuance of demolition, grading, and/or building permits:

- Construction activity is limited to the daytime hours of 7:00 a.m. to 7:00 p.m.
- During the entire active construction period, equipment and trucks used for project construction shall use the best-available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) available.

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- Impact tools (e.g., jack hammers and hoe rams) shall be hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Stationary equipment, such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.
- Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.
- Construction traffic shall be limited, to the extent feasible, to approved haul routes established by the County Planning and Building Department(s).
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the County's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they shall investigate, take appropriate corrective action, and report the action to the County.
- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.
- During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.
- Erect temporary noise barriers (at least as high as the exhaust of equipment and breaking line-of-sight between noise sources and sensitive receptors), as necessary and feasible, to maintain construction noise levels at or below the performance standard of 80 dBA  $L_{eq}$ . Barriers shall be constructed with a solid material that has a density of at least 4 pounds per square foot with no gaps from the ground to the top of the barrier.

***Level of Significance After Mitigation:*** Impact 5.13-1 would be significant and unavoidable.

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Impact 5.13-2 Project implementation would generate a substantial traffic noise increase on local roadways and could locate sensitive receptors near rail in areas that exceed established noise standards. [Threshold N-1]

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#### Transportation Noise

Land use development that results in traffic increases can also result in long-term traffic noise increases on roadways and freeways in the county. New development and associated traffic noise increases could result in exposure of existing receptors or future planned development to substantial permanent noise increases. The proposed project would allow for an increase in housing within the county. As a result, traffic volumes are anticipated to increase on some roads. Depending on the proximity of future housing to other land use types and existing major freeways/roadways, traffic noise increases could expose sensitive receptors to substantial traffic noise levels that would exceed applicable noise standards. It should be noted that the calculated traffic noise increases are conservative because ADT volumes were based on anticipated future buildout for all land uses in the county and not just for housing.

Significant traffic noise increases are estimated along numerous study roadway segments from implementation of the proposed project. Traffic noise modeling inputs and outputs can be found in Appendix 5.13-1 and show the existing and future estimated distances to the 70, 65, and 60 dBA CNEL noise contours and traffic noise increases as a result of implementation of the proposed project. The traffic noise increase is the difference between the projected future noise level and the existing noise level. The model also shows that along several roadway segments, a decrease in traffic noise levels is anticipated from implementation of the proposed project. Housing Element Policy HE-P8.2 would help minimize interior noise levels at existing and future housing. However, traffic noise increases would still be potentially significant.

#### Rail and Airport Noise

Table 5.13-10 contains the calculated distances to the 65 dBA  $L_{dn}$ /CNEL contours from future railroad noise. The same methodology that was used to estimate existing railroad noise contours was used for future railroad activity. Though implementation of the proposed project would not cause a direct increase in rail activity, future residential development could be placed located within distances to rail that could expose them to noise levels that exceed the applicable noise standard for the respective land use type.

In addition, future noise-sensitive land uses could be in areas that exceed the “Normally Acceptable” noise standards due to airport operations (see Figure 5.13-7 and 5.13-8 for airport noise contours). Current General Plan Policies 11-1, 11-2, 11-3, 11-4, 11-5, 11-9, and 11-10 would help minimize noise impacts. However, impacts would still be potentially significant.

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Table 5.13-10 Future Railroad Noise Levels

Operator	Subdivision	Distance (feet) to 65 dBA CNEL Contour (Main Line)	Distance (feet) to 65 dBA CNEL Contour (Within ¼ Mile of Grade Crossing)
BNSF	Stockton Subdivision	265	449
BNSF	Stockton Subdivision west of Port of Chicago	265	421
RPRC	Chevron Lead	6	87
RPRC	Cutting Lead	6	87
RPRC	Harbor Lead	20	236
RPRC	LRT Lead	28	289
UP	Martinez Subdivision	230	NA <sup>1</sup>
UP	Martinez Subdivision south of Pinole	285	NA <sup>1</sup>
UP	Tracy Subdivision	270	413

Source: Calculated using the FTA CREATE Model and FRA Grade Crossing Horn Model. See Appendix 5.13-1.  
NA: Not Applicable because there are no at grade crossings, and therefore, there are no noise horns.

**Level of Significance Before Mitigation:** Impact would be potentially significant.

Mitigation Measures Considered for Impact 5.13-2

In compliance with CEQA, “each public agency shall mitigate or avoid the significant effects on the environment of project it carries out or approves whenever it is feasible to do so” (Public Resources Code Section 21002.1(b)). The term “feasible” is defined in CEQA to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors” (Public Resources Code Section 21061.1). A number of measures were considered for mitigating or avoiding traffic noise impacts (Impact 5.13-2).

*Special Roadway Paving*

Notable reductions in tire noise have been achieved via the implementation of special paving materials, such as rubberized asphalt or open-grade asphalt concrete overlays. For example, the California Department of Transportation conducted a study of pavement noise along Interstate 80 in Davis (Caltrans 2011) and found an average improvement of 6 to 7 dBA compared to conventional asphalt overlay.

Although this amount of noise reduction from rubberized/special asphalt materials would be sufficient to avoid the predicted noise increase due to traffic in some cases, the potential up-front and ongoing maintenance costs are such that the cost versus benefits ratio<sup>2</sup> may not be feasible and reasonable and would not mitigate noise to a level of less than significant in all cases. In addition, the study found that noise levels increased over time due to pavement raveling, with the chance of noise-level increases higher after a 10-year period.

<sup>2</sup> Cost versus benefit considerations are in terms of the number of households benefited, per the general methodology employed by Caltrans in the evaluation of highway sound walls.

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#### *Sound Barrier Walls*

Some (if not most) residences in the Plan Area have direct access (via driveways) to the associated impacted roadways. Therefore, barrier walls would prevent access to individual properties and would be infeasible. Further, these impacted homes are on private property outside of the control of future project developers, so there may be limited admittance onto these properties to construct such walls. Lastly, the costs versus benefits ratio in relation to the number of benefitted households may not be feasible and reasonable in all cases.

#### *Sound Insulation of Existing Residences and Sensitive Receptors*

Exterior-to-interior noise reductions depend on the materials used, the design of the homes, and their conditions. To determine what upgrades would be needed, a noise study would be required for each house to measure exterior-to-interior noise reduction. Sound insulation may require upgraded windows, upgraded doors, and a means of mechanical ventilation to allow for a “windows closed” condition. There are no funding mechanisms and procedures that would guarantee that the implementation of sound insulation features at each affected home would offset the increase in traffic noise to interior areas and ensure that the state’s 45 dBA CNEL standard for multifamily residences would be achieved.

***Level of Significance After Mitigation:*** Impact 5.13-2 would be significant and unavoidable.

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Impact 5.13-3: Individual construction developments for future housing may expose sensitive uses to excessive levels of groundborne vibration. [Threshold N-2]

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#### Construction Vibration Impacts

Construction activity at projects within the plan area would generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from construction activities rarely reaches the levels that can damage structures but can achieve the audible and perceptible ranges in buildings close to the construction site. Table 5.13-11, *Vibration Levels for Construction Equipment*, lists reference vibration levels for construction equipment.



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Table 5.13-11 Vibration Levels for Construction Equipment

Equipment	Approximate PPV Vibration Level at 25 Feet (in/sec)
Pile Driver, Impact (Upper Range)	1.518
Pile Driver, Impact (Typical)	0.644
Pile Driver, Sonic (Upper Range)	0.734
Pile Driver, Sonic (Typical)	0.170
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Source: FTA 2018.  
 PPV = peak particle velocity.

As shown in Table 5.13-11, vibration generated by construction equipment has the potential to be substantial, since it has the potential to exceed the FTA criteria for architectural damage. (E.g., 0.12 inches per second [in/sec] PPV for fragile or historical resources, 0.2 in/sec PPV for nonengineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry.) Construction details and equipment for future project-level developments under the proposed project are not known at this time but may cause vibration impacts. As such, this would be a potentially significant impact.

Operational Vibration Impacts

Operational vibration is typically associated with commercial and industrial uses which can generate varying levels of groundborne vibration, depending on operational procedures and equipment. Other sources of groundborne vibration include rail traffic and subways. The proposed project would allow for the future development of residential uses which would not generate significant levels of operational vibration. Therefore, impacts would be less than significant.

Rail Vibration Impacts

Placement of new receptors near existing or future rail right-of-way could expose people to substantial vibration levels, depending on the proximity to rail alignments and depending on the type of rail and daily frequency of service. Regarding rail vibration, it is extremely rare for operations to cause substantial or even minor cosmetic damage to buildings. However, due to the programmatic nature of this analysis, specific distances from transit types to future residential uses cannot be determined at this time because project-specific details are unknown. Therefore, this impact would be potentially significant.

**Level of Significance Before Mitigation:** Impact 5.13-3 would be potentially significant.

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#### *Mitigation Measures*

- N-2 Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures, such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); or a vibratory roller within 25 feet of any structure, the future project applicant shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed Federal Transit Administration (FTA) architectural damage thresholds (e.g., 0.12 inches per second [in/sec] peak particle velocity [PPV] for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving and static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure vibration thresholds are not exceeded.
- N-3 New residential projects (or other noise-sensitive uses) located within 200 feet of existing railroad lines shall be required to conduct a groundborne vibration and noise evaluation consistent with Federal Transit Administration (FTA)-approved methodologies.
- N-4 During the project-level California Environmental Quality Act (CEQA) process for industrial developments under the General Plan Update or other projects that could generate substantial vibration levels near sensitive uses, such as residential uses, a noise and vibration analysis shall be conducted to assess and mitigate potential noise and vibration impacts related to the operations of that individual development. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer and shall follow the latest CEQA guidelines, practices, and precedents.

***Level of Significance After Mitigation:*** Impact 5.13-3 would be less than significant.

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Impact 5.13-4: Implementation of the proposed project could expose future residents to excessive levels of airport-related noise. [Threshold N-3]

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Aircraft noise in the county is typically characterized as occasional, and the majority of flights served by the Buchanan Field Airport and Byron Airport are for recreational purposes. Pursuant to Section 21096 of the Public Resources Code, the lead agency must consider whether the project will result in a safety hazard or noise problem for persons using the airport or for persons residing or working in the project area. Future housing development or redevelopment uses could be located in areas that exceed the 60 dBA CNEL as a result of implantation of the proposed project. However, the following current General Plan Policies would reduce impacts to a less than significant impact:

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- **Policy 11-1** would require new projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines
- **Policy 11-4**, references Title 24, Part 2, of the California Code of Regulations which requires that new multiple family housing projects, hotels, and motels exposed to a DNL of 60 dB or greater have a detailed acoustical analysis describing how the project will provide an interior DNL of 45 dB or less. The County also shall require new single-family housing projects to provide for an interior DNL of 45 dB or less.

**Level of Significance Before Mitigation:** Impact 5.13-4 would be less than significant.

### *Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.13-4 would be less than significant.

### 5.13.5 Cumulative Impacts

Implementation of the proposed project would result in an increase in housing units across the County. This growth would result in an increase in residents and therefore an increase in roadway traffic volumes and associated noise levels for major arterial and collector roadways throughout the County. Cumulative development conditions would result in increased cumulative roadways noise levels.

Future cumulative transportation noise levels are projected to exceed the established noise standards which are considered to be a significant cumulative impact. While traffic volumes would likely increase regardless of the implementation of the proposed project, the proposed project would introduce future housing development that would contribute to cumulative traffic volumes. Consequently, the proposed project's contribution would be cumulatively considerable. Implementation of the mitigation measures identified below would reduce the project's contribution to cumulative traffic noise impacts, but not to a level that is less than significant.

### 5.13.6 Level of Significance Before Mitigation

The following impacts would be less than significant before mitigation: 5.13-4.

Without mitigation, the following impacts would be **potentially significant**:

- Impact 5.13-1: Because construction activities associated with any individual development may occur near noise-sensitive receptors and because, depending on the project type, equipment list, time of day, phasing and overall construction durations, noise disturbances may occur for prolonged periods of time or during the more sensitive nighttime hours, construction noise impacts associated with implementation of the proposed project are considered potentially significant.

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- Impact 5.13-2: Traffic noise increases would be significant along several roadway segments throughout the County.
- Impact 5.13-3: The potential for sensitive receptors in the County to be exposed to excessive levels of vibration from future housing construction development and existing railroad lines, vibration impacts are considered potentially significant.

### 5.13.7 Mitigation Measures

#### Impact 5.13-1

N-1

Construction contractors shall implement the following measures for construction activities conducted in the County of Contra Costa. Construction plans submitted to the County shall identify these measures on demolition, grading, and construction plans submitted to the County: The County's Planning and Building Agency shall verify that grading, demolition, and/or construction plans submitted to the County include these notations prior to issuance of demolition, grading, and/or building permits.

- Construction activity is limited to the daytime hours of 7:00 a.m. to 7:00 p.m.
- During the entire active construction period, equipment and trucks used for project construction shall use the best-available noise control techniques (e.g., improved mufflers, equipment re-design, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible.
- Impact tools (e.g., jack hammers and hoe rams) shall be hydraulically or electrically powered wherever possible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Stationary equipment, such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.
- Stockpiling shall be located as far as feasible from nearby noise-sensitive receptors.
- Construction traffic shall be limited, to the extent feasible, to approved haul routes established by the County Planning and Building Agency.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the County's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they shall investigate, take appropriate corrective action, and report the action to the County.

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- Signs shall be posted at the job site entrance(s), within the on-site construction zones, and along queueing lanes (if any) to reinforce the prohibition of unnecessary engine idling. All other equipment shall be turned off if not in use for more than 5 minutes.
- During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only. The construction manager shall use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.
- Erect temporary noise barriers (at least as high as the exhaust of equipment and breaking line-of-sight between noise sources and sensitive receptors), as necessary and feasible, to maintain construction noise levels at or below the performance standard of 80 dBA Leq. Barriers shall be constructed with a solid material that has a density of at least 4 pounds per square foot with no gaps from the ground to the top of the barrier.

### Impact 5.13-2

#### *Mitigation Measures Considered for Impact 5.13-2*

Notable reductions in tire noise have been achieved via the implementation of special paving materials, such as rubberized asphalt or open-grade asphalt concrete overlays. For example, the California Department of Transportation conducted a study of pavement noise along Interstate 80 in Davis (Caltrans 2011) and found an average improvement of 6 to 7 dBA compared to conventional asphalt overlay.

Although this amount of noise reduction from rubberized/special asphalt materials would be sufficient to avoid the predicted noise increase due to traffic in some cases, the potential up-front and ongoing maintenance costs are such that the cost versus benefits ratio<sup>3</sup> may not be feasible and reasonable and would not mitigate noise to a level of less than significant in all cases. In addition, the study found that noise levels increased over time due to pavement raveling, with the chance of noise-level increases higher after a 10-year period.

#### ***Sound Barrier Walls***

Some (if not most) residences in the Plan Area have direct access (via driveways) to the associated impacted roadways. Therefore, barrier walls would prevent access to individual properties and would be infeasible. Further, these impacted homes are on private property outside of the control of future project developers, so there may be limited admittance onto these properties to construct such walls. Lastly, the costs versus benefits ratio in relation to the number of benefitted households may not be feasible and reasonable in all cases.

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<sup>3</sup> Cost versus benefit considerations are in terms of the number of households benefited, per the general methodology employed by Caltrans in the evaluation of highway sound walls.

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### NOISE

#### ***Sound Insulation of Existing Residences and Sensitive Receptors***

Exterior-to-interior noise reductions depend on the materials used, the design of the homes, and their conditions. To determine what upgrades would be needed, a noise study would be required for each house to measure exterior-to-interior noise reduction. Sound insulation may require upgraded windows, upgraded doors, and a means of mechanical ventilation to allow for a “windows closed” condition. There are no funding mechanisms and procedures that would guarantee that the implementation of sound insulation features at each affected home would offset the increase in traffic noise to interior areas and ensure that the state’s 45 dBA CNEL standard for multifamily residences would be achieved.

#### Impact 5.13-3

- N-2            Prior to issuance of a building permit for a project requiring pile driving during construction within 135 feet of fragile structures, such as historical resources, 100 feet of non-engineered timber and masonry buildings (e.g., most residential buildings), or within 75 feet of engineered concrete and masonry (no plaster); or a vibratory roller within 25 feet of any structure, the future project applicant shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer. The vibration levels shall not exceed Federal Transit Administration (FTA) architectural damage thresholds (e.g., 0.12 inches per second [in/sec] peak particle velocity [PPV] for fragile or historical resources, 0.2 in/sec PPV for non-engineered timber and masonry buildings, and 0.3 in/sec PPV for engineered concrete and masonry). If vibration levels would exceed this threshold, alternative uses such as drilling piles as opposed to pile driving and static rollers as opposed to vibratory rollers shall be used. If necessary, construction vibration monitoring shall be conducted to ensure vibration thresholds are not exceeded.
- N-3            New residential projects (or other noise-sensitive uses) located within 200 feet of existing railroad lines shall be required to conduct a groundborne vibration and noise evaluation consistent with Federal Transit Administration (FTA)-approved methodologies.
- N-4            During the project-level California Environmental Quality Act (CEQA) process for industrial developments under the General Plan Update or other projects that could generate substantial vibration levels near sensitive uses, such as residential uses, a noise and vibration analysis shall be conducted to assess and mitigate potential noise and vibration impacts related to the operations of that individual development. This noise and vibration analysis shall be conducted by a qualified and experienced acoustical consultant or engineer and shall follow the latest CEQA guidelines, practices, and precedents.

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### 5.13.8 Level of Significance After Mitigation

#### Impact 5.13-1

Implementation of Mitigation Measure N-1 would reduce potential noise impacts during construction to the extent feasible. However, due to the potential for proximity of construction activities to sensitive uses, the number of construction projects occurring simultaneously, and the potential duration of construction activities, Impact 5.13-1 (construction noise) could result in a temporary substantial increase in noise levels above ambient conditions. Therefore, impacts would remain **significant and unavoidable**. It should be noted that the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level.

#### Impact 5.13-2

As demonstrated under the heading “Mitigation Measures Considered for Impact 5.13-2,” there are no feasible or practical mitigation measures available to reduce project-generated traffic noise to less-than-significant levels for existing residences along the affected roadway. No individual measure and no set of feasible or practical mitigation measures are available to reduce project-generated traffic noise to less-than-significant levels in all cases. Thus, traffic noise would remain a **significant and unavoidable** impact in the Plan Area. It should be noted that the identification of this program-level impact does not preclude the finding of less-than-significant impacts for subsequent projects analyzed at the project level.

#### Impact 5.13-3

With implementation of Mitigation Measures N-2, N-3, and N-4, coupled with adherence to associated performance standards, Impact 5.13-3 would be reduced to less-than-significant levels. Specifically, Mitigation Measure N-2 would reduce potential vibration impacts during construction below the pertinent thresholds, and Mitigation Measures N-3 and N-4 (operations-related vibration) would reduce potential vibration impacts from proposed sensitive uses near existing railroads and facilities to less-than-significant levels. No significant and unavoidable vibration impacts would remain.

## 5. Environmental Analysis

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#### 5.13.9 References

- Caltrans (California Department of Transportation). 2011. *I-80 Davis OGAC Pavement Noise Study*.
- . 2013a, September. *Technical Noise Supplement (“TeNS”)*.
- . 2013b. *Transportation and Construction Vibration Guidance Manual*.
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- FHWA (Federal Highway Administration). 1978, December. Federal Highway Traffic Noise Prediction Model. United States Department of Transportation Report No. FHWA-RD77-108.
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- Governor’s Office of Planning and Research. 2017. *State of California General Plan Guidelines*.
- Harris, Cyril M. 1998. Handbook of Acoustical Measurements and Noise Control. 3rd edition. Woodbury, NY: Acoustical Society of America.
- U.S. Environmental Protection Agency (EPA). 1974, April. *EPA Identifies Noise Levels Affecting Health and Welfare*.



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### 5.14 POPULATION AND HOUSING

This section of the Draft Environmental Impact Report (DEIR) examines the potential for impacts of the proposed Housing Element Update on Contra Costa County, including changes in population, employment, and demand for housing, particularly housing cost/rent ranges defined as “affordable.”

#### 5.14.1 Environmental Setting

##### 5.14.1.1 REGULATORY BACKGROUND

State

###### *Housing Accountability Act*

The Housing Accountability Act (HAA) was passed in 1982 and amended under Assembly Bill 678 and Senate Bill 167 in 2017 with the aim to limit the ability of local government to restrict the development of new housing. Specifically, the HAA prohibits a local agency from disapproving, or conditioning approval in a manner than renders infeasible, a housing development project for very low, low-, or moderate-income households or an emergency shelter unless the local agency makes specified written findings based on a preponderance of evidence in the record.

###### *Housing Crisis Act*

Senate Bill 330 (SB 330), or the Housing Crisis Act of 2019 aims to address California’s housing shortage by expediting the approval process for housing development of all types, particularly in regions suffering the worst housing shortages and highest rates of displacements. To address the crisis, this bill prohibits some local discretionary land use controls currently in place and generally requires cities to approve all housing developments that comply with current zoning codes and general plans. SB 330 requires that a housing development project only be subject to the ordinances, policies, and standards adopted and in effect when a preliminary application is submitted, notwithstanding the provisions of the HAA or any other law, subject to certain exceptions.

Local

###### *Association of Bay Area Governments (ABAG)*

The Association of Bay Area Governments (ABAG) is a regional planning agency incorporating various local governments in the San Francisco Bay Area in California. It encompasses nine counties surrounding the San Francisco Bay, including Contra Costa County. ABAG is responsible for conducting the Bay Area’s Regional Housing Needs Allocation (RHNA) process every eight years via the Housing Methodology Committee in conjunction with local elected officials and staff, stakeholders, and residents from around the region.

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### POPULATION AND HOUSING

The California Department of Housing and Community Development (HCD) has approved the ABAG Regional Housing Needs Allocation (RHNA) Plan. HCD's approval comes after action by the ABAG Executive Board to approve the Final RHNA, which occurred in December 16, 2021. The Final RHNA Plan distributes the Bay Area's portion of the state housing needs to local within the nine-county region and reports the methodology used for determining the RHNA (ABAG 2021).

#### *Affordable Housing Finance Committee (AHFC)*

The Affordable Housing Finance Committee (AHFC) works with the Contra Costa County Department of Conservation and Development to develop recommendations for the Board of Supervisors concerning the allocation of Community Development Block Grant, HOME Investment Partnership Program, Housing Opportunities for Persons with AIDS (HOWPWA), and State and local funds among eligible affordable housing programs and projects in the County (DCD 2021).

#### *Contra Costa County Ordinance Code*

##### **Chapter 822-2 – Residential Density Bonus**

The purposes of this chapter are to provide incentives to produce housing for very low income, lower income, moderate income, or senior households; to facilitate the development of affordable housing; to implement the goals, objectives, and policies of the county general plan's housing element; and to establish procedures for complying with Government Code Section 65915.

##### **Chapter 822-4 – Inclusionary Housing Ordinance (IHO)**

The goal of this chapter is to ensure that affordable housing units are added to the county's housing stock in proportion to the increase in new housing units in the county, in accordance with Goal 3 of the housing element of the county general plan. In November 2019 and February 2022, the Contra Costa County Board of Supervisors updated the Inclusionary Housing Regulations. The inclusionary unit requirements outline the minimum number of inclusionary units that the County's Ordinance Code requires at each income level per quantity of housing units developed by each project that includes five or more units.

#### *Contra Costa County Housing Element*

Contra Costa County will adopt the Housing Element for the County General Plan. The housing element is required to identify and analyze existing and projected housing needs, and include statements of the county's goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. State law (Government Code Sections 65580–65589.8) mandates the content of the Housing Element and requires an analysis of:

- Population and employment trends.
- The fair share of the regional housing needs;
- Household characteristics;
- An inventory of land suitable for residential development;

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- Governmental and non-governmental constraints on the improvement, maintenance, and development of housing;
- Special housing needs;
- Opportunities for energy conservation; and
- Publicly assisted housing developments that may convert to non-assisted housing developments.

The purpose of these requirements is to demonstrate adequate housing resources to meet the assigned RHNA for all housing categories.

5.14.1.2 EXISTING CONDITIONS

Population

Contra Costa County is in the San Francisco Bay Area in Northern California. The county is bordered by the San Francisco Bay to the west, San Pablo Bay and Suisun Bay to the north, Alameda County to the south, and San Joaquin County to the east.

Contra Costa County has 19 cities and 35 unincorporated communities and are divided in to five districts. Table 5.14-1, *Contra Costa County Population and Growth Rate (2010 and 2020)*, shows Contra Costa’s incorporated and unincorporated population and growth rate based on the 2020 U.S. Census. As shown by Table 5.14-1, the incorporated Contra Costa County experienced a 9.75 percent change within while the unincorporated Contra Costa County experienced an 8.80 percent change within the last decade.

Table 5.14-1 Contra Costa County Population and Growth Rate (2010 and 2020)

Contra Costa County	2010 Population	2020 Population	Growth Rate	Percent Change
Incorporated	889,240	975,944	+86,704	9.75
Unincorporated	159,785	173,851	+14,066	8.80
County Total	1,049,025	1,149,795	+100,770	9.60

Source: DOF 2020

Housing

Table 5.14-2, *Contra Costa County’s Unincorporated Housing Units (2010 and 2020)*, summarizes the estimated housing units in the unincorporated Contra Costa County’s total housing from 2010 to 2020. The Department of Finance (DOF) estimates a total of 62,401 housing units in 2010 and 64,481 in 2020 for the unincorporated portions of Contra Costa County. The unincorporated communities in Contra Costa County experienced a growth rate of 2,080 additional housing units or a 3.33 percent change in the last decade.

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### POPULATION AND HOUSING

Table 5.14-2 Contra Costa County's Unincorporated Housing Estimates – Occupancy/Type (2010 and 2020)

Housing Units	2010	2020	Growth Rate	Percent Change
Total Housing Units	62,401	64,481	2,080	3.33
Single Family	50,098	51,546	1,448	2.89
Multi Family	9,485	10,119	634	6.68
Mobile Homes	2,818	2,816	-2	-0.07
Occupied	57,706	60,575	2,869	4.97
Vacancy Rate	7.5%	6.1%	--	--
Persons per Household	2.75	2.86	--	--

Source: DOF 2020

<sup>1</sup> Single- Family includes Single Detached and Single Attached categories

<sup>2</sup> Multi-Family contains Two to Four and Five Plus categories

The California Department of Housing and Community Development (HCD) has approved the ABAG Regional Housing Needs Allocation (RHNA) Plan. Table 5.14-3, *2023-2031 Regional Housing Needs Assessment*, shows Contra Costa's Regional Housing Needs Allocation for the 2023 to 2031 period. If the County cannot demonstrate that there is adequate land to support the development of the RHNA, then additional lands would need to be designated and/or rezoned to accommodate the use. The RHNA determines 7,610 total housing units will need to allocate throughout the unincorporated portions of Contra Costa County.

Table 5.14-3 2023-2031 Regional Housing Needs Allocation (RHNA)

Income Category	Area Median Income Percentage	2023-2031 RHNA
Very Low	<50%	2,072
Low	50-80%	1,194
Moderate	80-120%	1,211
Above Moderate	>120%	3,133
Total		7,610

Source: ABAG 2021

### Employment

Table 5.14-4, *Unincorporated Contra Costa County Employment Status (5-Year Increment)*, shows employment estimates and percent changes in the unincorporated communities of Contra Costa County from 2010 to 2020. As shown by the table below, the rate of employment in Contra Costa has increased over the last decade, growing a total of 16.41 percent. The number of employed residents increased 11,795 from 2010 to 2015 and 685 from 2015 to 2020.

Table 5.14-4 Unincorporated Contra Costa County Employment Status (5-Year Increment)

Year	Employed Residents	Percent Change
2010	76,035	--
2015	87,830	11,795
2020	88,515	685

Source: ABAG 2022

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As shown in Table 5.14-5, *Unincorporated Contra Costa County; Industry by Occupation (2010 and 2020)*, Contra Costa County had a total employed civilian workforce (16 years and older) of 72,641 in 2010 and 85,951 in 2020. The largest occupational sector in both 2010 and 2020 was Educational Services, and Health Care and Social Assistance which experienced a 16.77 percent increase within the last decade. The second largest sector in both years was Professional, Scientific, and Management, and Administrative and Waste Management Services which experienced a 41.67 percent increase in that decade. The third largest sector was Retail trade which experienced a 6.50 percent increase between 2010 and 2020.

Table 5.14-5 Unincorporated Contra Costa County; Industry by Occupation (2010 and 2020)

Industry/Occupation	Estimated Employees 2010 (Percent of Total)		Estimated Employees 2020 (Percent of Total)		Percent Change
Agriculture, forestry, fishing and hunting, and mining	285	0.39	469	0.55%	64.56%
Construction	6,130	8.44	8,108	9.43%	32.27%
Manufacturing	5,551	7.64	5,844	6.80%	5.28%
Wholesale trade	2,143	2.95	2,133	2.48%	-0.47%
Retail trade	7,985	10.99	8,504	9.89%	6.50%
Transportation and warehousing, and utilities	3,810	5.24	4,338	5.05%	13.86%
Information	2,005	2.76	2,049	2.38%	2.19%
Finance and insurance, and real estate and rental and leasing	7,969	10.97	7,037	8.19%	-11.70%
Professional, scientific, and management, and administrative and waste management services	10,358	14.26	14,674	17.07%	41.67%
Educational services, and health care and social assistance	15,145	20.85	17,685	20.58%	16.77%
Arts, entertainment, and recreation, and accommodation and food services	4,527	6.23	7,487	8.71%	65.39%
Other services, except public administration	3,831	5.27	4,111	4.78%	7.31%
Public administration	2,902	3.99	3,512	4.09%	21.02%
TOTAL	72,641	100%	85,951	100%	--

Source: Census 2010a; Census 2020b

Growth Projections

Plan Bay Area 2040 was adopted by the ABAG Executive Board and the Metropolitan Transportation Commission on July 26, 2017. Table 5.14-6, *Summary of the Unincorporated Contra Costa County's Projected Growth (5-Year Increments)*, shows the Plan Bay Area 2040 Growth Pattern projected household and job growth for the unincorporated communities in Contra Costa County looking out to 2040. Contra Costa County's unincorporated population is expected to increase 19.92 percent by 2040. Households are expected to increase by 13.77 percent, number of housing units by 12.11 percent and employment by 6.52 percent by the year 2040.

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Table 5.14-6 Summary of the Unincorporated Contra County's Projected Growth (5-Year Increments)

Year	2020	2025	2030	2035	2040	Percent Growth (2020-2040)
Population	166,030	178,900	184,585	189,455	199,105	+19.92%
Households	59,480	62,780	64,195	65,195	67,670	+13.77%
Housing Units <sup>1</sup>	62,020	64,265	65,050	66,475	69,530	+12.11%
Employment	50,025	50,030	50,300	51,365	53,285	+6.52%

Source: ABAG 2022

<sup>1</sup> Housing Units includes Single Family and Multi-Family Units

#### 5.14.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- P-1 Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- P-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

#### 5.14.3 Proposed Housing Element Policies

The following goals, policies, and programs in the proposed housing element are applicable to population and housing:

- **Policy HE-P1.4:** Ensure that the County's condominium conversion ordinance (Chapter 926-2.202) mitigates impacts to displaced tenants and ensures the quality of units being sold to homeowners.
- **Policy HE-P1.5:** Preserve existing affordable housing developments at risk of converting to market-rate housing through promotion of bond refinancing and other mechanisms.
- **Policy HE-P2.1:** Support development of affordable housing by non-profit and for-profit developers through affordable housing funding sources, regulatory incentives such as density bonus, and/or flexible development standards through planned unit developments.
- **Policy HE-P2.3:** Increase the supply of affordable housing and mixed-income housing through the Inclusionary Housing Ordinance.
- **Policy HE-P2.4:** Encourage accessory dwelling unit (ADU) and junior accessory dwelling unit (JADU) construction as a viable means of meeting affordable housing needs by design.
- **Policy HE-P2.5:** Encourage innovative housing design and building types to lower housing costs and provide high quality options for affordable housing.
- **Policy HE-P3.1:** Expand affordable housing opportunities for households with special needs, including but not limited to seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, persons with development disabilities, farmworkers, and persons experiencing homelessness.

## 5. Environmental Analysis POPULATION AND HOUSING

- **Policy HE-P3.2:** Continue to support non-profit service providers that help meet the diverse housing and supportive service needs of the community.
- **Policy HE-P3.3:** Continue to require inclusion of ADA accessible units in all new construction projects receiving County financing.
- **Policy HE-P3.4:** Encourage housing programs that provide wrap-around social and supportive services for residents in need of services.
- **Policy HE-P4.2:** Continue to support the provision of rental assistance to extremely low-, very low-, and low-income households.
- **Policy HE-P4.3:** Prioritize and encourage financial support to non-profit organizations that own or operate housing for persons with developmental disabilities.
- **Policy HE-P4.4:** Designate additional land to address the County's Regional Housing Needs Assessment (RHNA) allocation.
- **Policy HE-P6.1:** Establish and maintain development standards that streamline housing development while protecting quality of life goals.
- **Policy HE-P6.2:** Provide financial and/or regulatory incentives where feasible and appropriate to offset or reduce the costs of affordable housing development, including density bonuses and flexibility in site development standards.
- **Policy HE-P6.3:** Encourage P-1 zoning in areas with significant numbers of non-conforming parcels and uses.
- **Policy HE-P7.1:** Prohibit discrimination in the sale or rental of housing to anyone on the basis of race, color, ancestry, national origin, religion, disability, gender identity sexual orientation, familial status, marital status, or other such arbitrary factors.
- **Policy HE-P7.2:** Provide financial support to non-profit organizations providing fair housing services.
- **Policy HE-P7.4:** Ensure that housing programs prioritize the needs of underserved communities, benefit lower-income residents, and avoid gentrification as neighborhoods are improved.

### 5.14.4 Environmental Impacts

#### 5.14.4.1 DISCUSSION OF NO POPULATION AND HOUSING IMPACTS

All the impacts would be less than significant.

#### 5.14.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.14-1: The proposed project would directly result in population growth in the Plan Area.  
[Threshold P-1]

---

As part of the Housing Element Update (HEU), Contra Costa County is proposing to redesignate/rezone approximately 548 acres of land to meet its RHNA. The Housing Element Inventory sites that are evaluated in this DEIR have been identified as potential sites to meet the County's RHNA and may not all be redesignated as they are shown in Tables 3-3, 3-4, and 3-5 in Chapter 3, *Project Description*, of the DEIR. While the Housing Element itself is a planning document and would not contribute unplanned growth within the

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### POPULATION AND HOUSING

21 unincorporated communities of the County with identified Housing Element Inventory sites, the growth that could occur if all sites are developed to 100% capacity is shown in Table 5.14-7, *Housing Element Update Proposed Maximum Units*. This scenario is highly conservative as it is unlikely that 100 percent of sites would be developed at 100 percent of their capacity.

As shown in Table 5.14-7, the combined total of all sites the Housing Element Sites Inventory would allow for 20,417 units maximum allowable units under the Maximum Unit scenario. The population added to each community is based on the 2010 Census Table P-17 average persons per household for each community. The estimated increase in population under Maximum Units scenario is approximately 63,471 residents. The conservative estimate (Maximum Units scenario) assumes that all residents are new residents to the County though a portion of the project residents may be existing city residents who decide to relocate to the project site.

Tables 5.14-7 Housing Element Update Proposed Maximum Units

Community	Persons/Household	Total Maximum Units	Net Total Population Growth
Alamo	2.82	503	1,419
Bay Point	3.41	10,701	36,491
Bayview	3.04	1,198	3,642
Bethel Island	2.07	206	426
Byron	3.03	301	911
Clyde	2.73	2	6
Contra Costa Centre	1.79	429	767
Crockett	2.14	59	127
Discovery Bay	2.83	2,087	5,906
East Richmond Heights	2.37	687	1,628
El Sobrante	2.65	1,613	4,274
Saranap	2.38	260	618
North Richmond	3.62	1,020	3,692
Pacheco	2.35	147	344
Pleasant Hill <sup>1</sup>	2.38	9	21
Reliez Valley	2.47	2	5
Rodeo	2.96	826	2,445
Montalvin Manor	3.51	532	1,866
San Pablo	3.28	22	72
Tara Hills	3.08	24	75
Vine Hills	2.94	984	2,893
Walnut Creek <sup>2</sup>	2.08	1,187	2,469
Total	--	20,417	63,471

Source: Census 2010b

<sup>1</sup> The City of Pleasant Hill's persons per household was used to calculate the population for the housing sites in the unincorporated periphery of the City

<sup>2</sup> The City of Walnut Creek's persons per household was used to calculate the population for the housing sites in the unincorporated periphery of the City



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As shown in Table 5.14-6, the unincorporated population of Contra Costa is projected to increase to 199,105 people by 2040, which represents an increase of 19.92 percent from the 2020 population of 166,030. The proposed project could result in the development of housing units accommodating an additional 63,471 residents. When added to the incorporated County's 2022 population of 176,941, the resulting population of the unincorporated County would be 240,412 residents, an increase of 41,307 residents above ABAG 2040 projection (DOF 2022). However, due to the State's housing shortage, additional housing units are needed across the State to meet demand. In 2019, Governor Newsom signed several bills aimed to address the need for more housing, including the Housing Crisis Act of 2019 (Senate Bill 330). The proposed project addresses the need for additional housing to accommodate population growth in Contra Costa County. Implementation of the HEU would result in additional housing, though impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.14-1 would be less than significant.

### *Mitigation Measures*

No mitigation measures required.

***Level of Significance After Mitigation:*** Impact 5.14-1 would be less than significant.

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Impact 5.14-2: The proposed project would not result in the displacement of people and/or housing.  
 [Threshold P-2]

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The sites in the Housing Element's Sites Inventory were selected based on land availability and capacity. The factors considered to choose these sites consisted of many elements including but not limited to, vacancy status, City ownership, site size, proximity to existing residential services, and amenities, few or limited physical constraints, expressed property owner interest, and community input received. These sites are distributed across the County within 21 unincorporated communities and are primarily infill. While 97 of the 529 parcels in the inventory are non-vacant, proposed redesignations and rezoning would contribute a net increase in housing units. The HEU would not displace people or housing as it would contribute additional housing on sites that are vacant or increase housing density in residential zones.

Additionally, the proposed project includes policies aimed at preventing displacing people and homes as well as provision of affordable housing options. For example, Policy HE-P1.4 states to maintain a condominium conversion ordinance aimed at mitigating the impacts to displaced tenants and ensuring the quality of the units being sold to homeowners. Also, Policy HE-P1.5 states to preserve existing affordable housing developments at risk of converting to market-rate housing through bond refinancing and other mechanisms. The policies and goals outlined in the HEU would help to prevent people and homes from being displaced with the implementation of new housing sites in Contra Costa County.

Furthermore, according to the RHNA for the 2023 to 2031 Housing Element Cycle, the County's share of regional housing needs is a total of approximately 7,610 new units. The proposed project would increase the number of allowable housing units in Contra Costa County by approximately 20,417 maximum allowable units, thereby increasing the County's housing supply. The HEU's inventory sites presents suitable areas in

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Contra Costa County where infill of housing units can occur. The inventory sites coupled with the proposed HEU policies would not displace people or housing but increase the number of housing units in the County.

***Level of Significance Before Mitigation:*** Impact 5.14-2 would be less than significant.

#### *Mitigation Measures*

No mitigation measures required.

***Level of Significance After Mitigation:*** Impact 5.14-2 would be less than significant.

### 5.14.5 Cumulative Impacts

The indirect impacts of the proposed project actions would not result in considerable contributions to any significant cumulative impacts. While the proposed project would indirectly induce population and housing growth as described in the discussion of Impact 5.14-1 and 5.14-2 above, this growth is necessary to meet population growth and housing needs in the region because the current supply of housing allowed under the current General Plan and Zoning Code is not adequate. Implementation of the proposed project would remedy this situation in a manner that would not result in significant adverse impacts on the environment. Therefore, cumulative population and housing impacts would be less than cumulatively considerable.

### 5.14.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, all impacts would be less than significant.

### 5.14.7 Mitigation Measures

No mitigation measures are required.

### 5.14.8 Level of Significance After Mitigation

Impact would be less than significant.

## 5. Environmental Analysis POPULATION AND HOUSING

### 5.14.9 References

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## 5. Environmental Analysis POPULATION AND HOUSING

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### 5.15 PUBLIC SERVICES AND RECREATION

This section addresses the proposed Housing Element Update's impacts to public services providing fire protection and emergency services, police protection, school services, library services, and park services. The proposed project includes the potential redesignating and rezoning of approximately 548 acres to meet the County's RHNA. The development of these sites at increased densities may increase the need for services such as fire protection, police protection, schools, libraries and parks, resulting in the construction of new facilities. Public and private utilities and service systems, including water, wastewater, and solid waste services and systems, are addressed in Section 5.17, *Utilities and Service Systems*.

#### 5.15.1 Fire Protection and Emergency Services

##### 5.15.1.1 ENVIRONMENTAL SETTING

###### Regulatory Background

###### *State Regulations*

###### ***California Fire Code***

The 2007 California Fire Code (Title 24, Part 9 of the California Code of Regulations) establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California (CBSC 2008). The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

###### ***California Health and Safety Code***

Additional state fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which include regulations for building standards, fire protection and notification systems, fire protection devices such as extinguishers, smoke alarms, high-rise building and child-care facility standards, and fire suppression training.

###### ***California Occupational Safety and Health Administration***

In accordance with the California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Fighting Equipment, the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

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#### *Local Regulations*

##### ***Mutual Aid Agreements***

Fire protection mutual aid is defined as an agreement between two fire agencies in which they commit to respond to calls for services in the other agency's jurisdiction when they are called, at no cost to the requesting agency. Automatic aid is not only predetermined, but one or more additional departments are automatically dispatched to certain locations or types of alarms at the same time as the home department.

##### ***Contra Costa County General Plan***

The County's Public Facilities/Services Element of the General Plan includes the following goals and policies that apply to the provision of fire protection in the County.

- **Goal 7-Y:** To ensure a high standard of fire protection, emergency, and medical response services for all citizens and properties throughout Contra Costa County.
- **Goal 7-AA:** To incorporate requirements for fire-safe construction into the land use planning and approval process.
- **Goal 7-AD:** To provide special fire protection for high-risk land uses and structures.
- **Policy 7-62:** The County shall strive to reach a maximum running time of 3 minutes and/or 1.5 miles from the first-due station, and a minimum of 3 firefighters to be maintained in all central business district (CBD), urban and suburban areas. (These areas are defined in Section 4).
- **Policy 7-63:** The County shall strive to achieve a total response time (dispatch plus running and set-up time) of five minutes in CBD, urban and suburban areas for 90 percent of all emergency responses.
- **Policy 7-64:** New development shall pay its fair share of costs for new fire protection facilities and services.
- **Policy 7-65:** Needed upgrades to fire facilities and equipment shall be identified as part of project environmental review and area planning activities, in order to reduce fire risk and improve emergency response in the County.
- **Policy 7-66:** Sprinkler systems may be required in new residential structures, where necessary to protect health, safety and welfare.
- **Policy 7-68:** Factors such as response times and distance, call volume and type, population, fire flow requirements, land use, development density and valuation, and access shall be considered when evaluating proposed station locations.
- **Policy 7-69:** The factors identified in the policy above shall also be used when considering conversion from volunteer to part-paid to full-paid service.
- **Policy 7-70:** The effectiveness of existing and proposed fire protection facilities shall be maximized by incorporating analysis of optimum fire and emergency service access into circulation system design.
- **Policy 7-72:** Special fire protection measures shall be required in high risk uses (e.g. mid-rise and high-rise buildings, and those developments in which hazardous materials are used and/or stored) as conditions of approval or else be available by the district prior to approval.
- **Policy 7-73:** Firefighting equipment access shall be provided to open space areas in accordance with the Fire Protection Code and to all future development in accordance with Fire Access Standards.

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The County's Transportation Element also requires that developments design for emergency vehicle access with the following policy.

- **Policy 5-17:** Emergency response vehicles shall be accommodated in development project design.

Additionally, the County's growth management standard for fire protection, as expressed in its Growth Management Element, requires that fire stations be located within one and one-half mile of developments in urban, suburban, and central business district areas. The Growth Management Element also contains the following policy and implementation measures to regulate the approval of development and ensure that service is provided.

- **Policy 4-2:** If it cannot be demonstrated prior to project approval that levels of service will be met, development will be temporarily deferred until the standards can be met or assured. Projects which do not, or will not, meet the standards shall be scheduled for hearing before the appropriate hearing body with a staff recommendation for denial, on the grounds that the project is inconsistent with the goals, policies, and objectives of the Growth Management Element of the County General Plan.
- **Implementation Measure 4-1:** The County will adopt a development mitigation program to ensure that new development pays its fair share of the cost of providing police, fire, parks, water, sewer and flood control facilities.
- **Implementation Measure 4-o:** All new development shall contribute to, or participate in, improvement of the parks, fire, police, sewer, water, and flood control systems in reasonable proportion to the demand impacts and burdens generated by project occupants and users.

The Land Use Element also includes the following policies that ensures the provision of services in urban areas.

- **Policy 3-5:** New development within unincorporated areas of the County may be approved, provided growth management standards and criteria are met or can be assured of being met prior to the issuance of building permits in accordance with the Growth Management Element.
- **Policy 3-6:** Development of all urban uses shall be coordinated with provision of essential community services or facilities including, but not limited to, roads, law enforcement and fire protection services, schools, parks, sanitary facilities, water, and flood control.

Furthermore, the County's Safety Element, which discusses the County's goals and policies related to disaster response and hazard planning, includes Implementation Measure 10-au which further implements Policy 4-2 and Policy 3-6 in the Growth Management Element and Land Use Element, respectively.

- **Implementation Measure 10-au:** Major developments will not be approved if firefighting services are not available or are not adequate for the area.

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### PUBLIC SERVICES AND RECREATION

#### ***Contra Costa County Ordinance Code***

Under Chapter 818-2, the County requires a fire protection facilities fee as a condition of approval for the issuance of any building permit for new construction within the unincorporated portion of any service area for which existing fire protection facilities are overextended. An additional administration fee is also collected prior to the issuance of a building permit. These fees are used for the purposes of acquiring or improving fire protection facilities serving the service area.

Additionally, the County Code Title 9 Subdivisions, includes several provisions relevant to fire protection and suppression as they apply to subdivision map approval. These include street design (turning radius, width, slope, etc.) and provision of fire hydrants. Furthermore, the County has adopted the 2019 California Fire Code which contains fire-safety-related building standards, such as construction standards, vehicular and emergency access, fire hydrants and fire flow, sprinkler requirements, etc.

#### Existing Conditions

##### *Contra Costa County Fire Protection District*

The Contra Costa County Fire Protection District (CCCFPD) provides fire protection and emergency medical response services for approximately 628,200 people within Contra Costa County. CCCFPD is an all-hazards fire district providing traditional fire protection, wildland firefighting, emergency medical services, Advanced Life Support (ALS), ambulance transport, various special operations (e.g., water rescue, hazardous materials response, marine firefighting, technical rescue, etc.), and a comprehensive life-safety and prevention program that includes inspections, a dedicated fire investigation unit, code enforcement, plan reviews, and public education.

In 2016, CCCFPD developed a unique arrangement with American Medical Response, Inc. (AMR) that they refer to as the “Alliance.” The program utilizes AMR emergency medical services personnel to staff CCCFPD’s ALS ambulances, assisted by CCCFPD firefighters certified as EMTs or Paramedics and functioning in a first-responder capacity.

CCCFPD operates the Contra Costa Regional Fire Communications Center (CCRFCC), which serves as a secondary Public Safety Answering Point (PSAP) for most fire and EMS 911 calls in the County. CCRFCC provides dispatch to its district, plus the East Contra Costa Fire Protection District, the Rodeo-Hercules Fire District, and four other fire agencies. The Center dispatches more than 140,000 emergency and non-emergency fire and EMS incidents annually. CCCFPD currently maintains approximately 435 funded positions, including staff in the dispatch center.

CCCFPD currently maintains 26 fire stations throughout the County. CCCFPD personnel includes 335 operations staff, 21 dispatchers, 26 fire prevention staff, and 40 administrative/support staff. In 2020, CCCFPD responded to over 47,000 fire, emergency medical services, and other incidents. CCCFPD follows the National Fire Protection Association Standard 1710 (NFPA) for providing an effective firefighting force of at least 17 personnel on the initial response to a single family residential structure fire. Across the District, the travel time for the full first alarm contingent of 17 personnel is 12 minutes, 90 percent of the time, for suburban areas. The average travel time for all priority incidents is just over 8 minutes. The number of



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priority incidents within six-minutes travel of a fire station for each agency during 2020 for CCCFPD was 96 percent, or 31,074 of 32,161 total priority incidents (CCCFPD, 2021).

### *Independent Fire Protection Districts*

Several other independent fire districts also provide fire protection services to both incorporated and unincorporated areas of the County. The East Contra Costa Fire Protection District (ECCFPD) covers approximately 249 square miles and services approximately 128,000 residents with three fire stations staffed by three firefighters each (ECCFPD 2022). In March of 2022, the Contra Costa Local Agency Formation Commission unanimously approved the annexation of ECCFPD to the CCCFPD and the dissolution of ECCFPD (CCLAFCO 2022). The Kensington Fire Protection District provides fire suppression and emergency services to the town of the Kensington, with one operating station. The District also receives aid from the El Cerrito Fire Department (KFPD 2019). The Moraga-Orinda Fire Protection District provides services to the cities of Moraga and Orinda with five stations operating in the district. The Rodeo-Hercules Fire Protection District services approximately 32 square miles that contain 34,000 residents in the City of Hercules and the Town of Rodeo (RHFPD 2022). The San Ramon Valley Fire Protection District services the cities of San Ramon and Danville and the unincorporated communities of Tassajara, Blackhawk, and Alamo with ten fire stations. The Crockett-Carquinez Fire Protection District is a volunteer fire department that serves the communities of Crockett, Valona, Port Costa, and Tormey. The boundaries of these fire protection districts are shown in Figure 5.15-1 *Fire Protection District Boundaries in Contra Costa County*. Note that this figure includes shows the recently annexed ECCFPD as part of CCCFPD.

### *Response Times and ISO Ratings*

Table 5.15-1, *Response Times and ISO Ratings (2014) for Fire Districts in Contra Costa County*, shows the response times that were reported by each fire protection district to the Contra Costa County Local Agency Formation Commission in 2015 (CCLAFCO). It also shows the Insurance Services Office ratings that were received by each district in 2014. This rating is intended to reflect a community's local fire protection capacity for property insurance rating purposes. ISO classifies communities from 1 (the best) to 10 (the worst) based on how well the community scores on the ISO Fire Suppression Rating Schedule, which grades such features as water distribution, fire department equipment, manpower and fire alarm facilities (CCCLAFCO 2016). As shown in the table, none of the fire service providers reported response times achieve the County's General Plan standard of 5 minutes 90% of the time (see regulatory background below).

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 PUBLIC SERVICES AND RECREATION

Table 5.15-1 Response Times and ISO Ratings (2014) for Fire Districts in Contra Costa County

Area/Agency	90 Percent of Responses	ISO Rating
<b>WEST COUNTY</b>		
Kensington FPD	7:37	2
City of Richmond	8:20	2
City of El Cerrito	6:51	2
City of Pinole	8:38	3
Rodeo-Hercules FPD	9:43	2/2X
Crockett-Carquinez FPD	9:40	3/10
<b>CENTRAL COUNTY</b>		
San Ramon Valley FPD	7:01	02/2Y
Moraga-Orinda FD	8:20	3/9
<b>EAST COUNTY</b>		
East Contra Costa FPD	11:58	4/10
<b>OTHER</b>		
Contra Costa County FPD	(8:20) <sup>1</sup>	3/8

Source: CCCLAFCO 2016

<sup>1</sup> Source: CCCFPD 2021

HOUSING ELEMENT

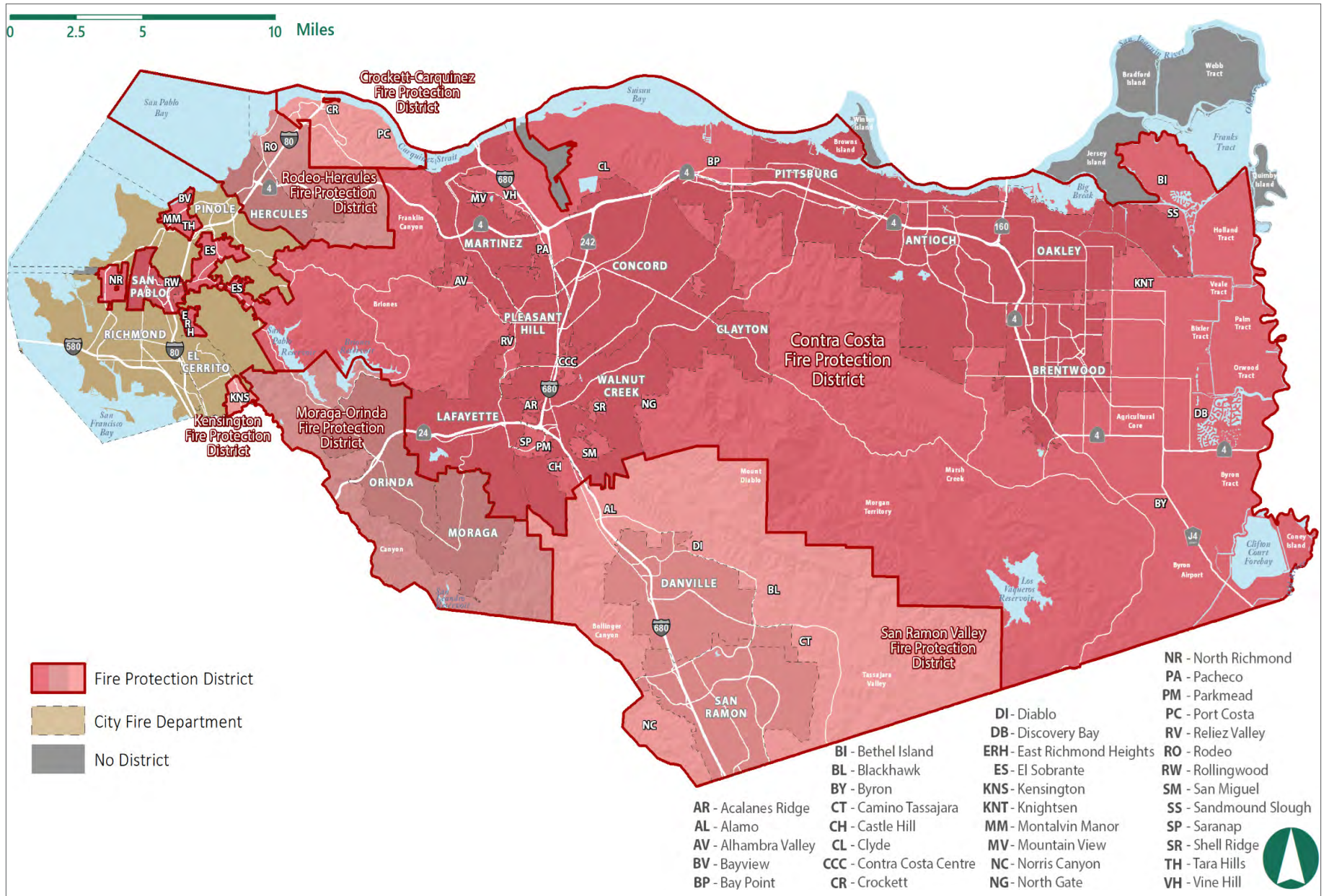


Figure 5.15-1

Contra Costa Fire Protection Districts

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### Mutual Aid Agreements

All fire agencies in the County have signed the California State Master Mutual Aid Agreement that is administered by the State Office of Emergency Services. All agencies have also signed the Contra Costa County Fire Chief’s Mutual Aid Plan, which was last updated in 1997. The County Fire Chiefs are assigned the responsibility to establish and manage the County Mutual Aid Plan that governs day-to-day interagency cooperation when an emergency exceeds the operational capability of any fire agency, by the State Office of Emergency Services, under the State Master Mutual Aid Agreement (CCCLAFCO 2016). Table 5.15-2, *Overview of Mutual Aid Agreements* shows these agreements for fire protection in the County. Note that this information was sourced from the CCCLAFCO Municipal Services Review of Fire and EMS Services which was released in 2016. The recent annexation of ECCFPD will likely lead to changes in these agreements.

Table 5.15-2 Overview of Mutual Aid Agreements

Boundary	Automatic Aid Provided to	Automatic Aid Received from	Mutual Aid Partners
City of Cerrito FD	Cities of Albany, Berkely, Pinole and Richmond, ConFire, MOFPD, RHFPD	Cities of Albany, Berkeley, and Richmond	Cities of Berkeley and Oakland, CCCFPD, EBRPD <sup>1</sup> , and CAL FIRE <sup>2</sup>
City of Pinole FD	City of El Cerrito, ConFire, CCCFPD, RHFPD	ConFire, CCCFPD, RHFPD	EBRPD and CAL FIRE
City of Richmond	Cities of El Cerrito and Pinole, ConFire, RHFPD	Cities of El Cerrito and Pinole, ConFire, RHFPD	ECCFPD, CAL FIRE, CCCFPD, EBRPD, MOFD, SRVFPD
Contra Costa FPD (ConFire)	Cities of Benecia, Pinole and Richmond, ECCFPD, MOFD, RHFPD, SRVFPD	Cities of Richmond and Pinole, ECCFPD, MOFD, RHFPD, SRVFPD	EBRPD, CAL FIRE
Crockett-Carquinez FPD (CCFPD)	City of Vallejo, RHFPD	RHFPD	City of Vallejo, EBRPD, CAL FIRE
East Contra Costa FPD (ECCFPD)	ConFire	ConFire, CAL FIRE	Alameda County FD, CAL FIRE, EBRPD, Stockton, Tracy
Moraga-Orinda FD (MOFPD)	City of Oakland, ConFire	Cities of Oakland and El Cerrito, ConFire	Cities of Berkeley and Oakland, CAL FIRE, Alameda County
Rodeo-Hercules FD (RHFPD)	City of Pinole, ConFire, CCCFPD	City of Pinole, ConFire, CCCFPD	EBRPD, and CAL FIRE
San Ramon Valley FPD (SRVFPD)	Alameda County, ConFire	Alameda County, ConFire	Cities of El Cerrito, Richmond and Pinole, Alameda County, ECCFPD, CAL FIRE, CCCFPD, MOFD, RHFPD

Source: CCCLAFCO 2016

<sup>1</sup> East Bay Regional Parks District

<sup>2</sup> California Department of Forestry and Fire Protection

### 5.15.1.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- FP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

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### PUBLIC SERVICES AND RECREATION

#### 5.15.1.3 PROPOSED HOUSING ELEMENT POLICIES

There are no applicable policies for fire protection and emergency services.

#### 5.15.1.4 ENVIRONMENTAL IMPACTS

##### DISCUSSION OF NO FIRE PROTECTION SERVICES IMPACTS

Impacts would be less than significant or potentially significant.

##### DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.15-1: The proposed project could introduce new structures and residents into the CCCFPD, HRPD, SRVFD, and the Crockett-Carquinez Fire Protection District's service boundaries, thereby increasing the requirement for fire protection facilities and personnel. [Threshold FP-1]

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While no specific development proposals are directly associated with the Housing Element Update, theoretical development would result in an increase in population of up to 63,471<sup>1</sup> based on the maximum number of units allowed on each parcel that the County is considering for redesignation and rezoning. The increase in population as a result of the HEU would be expected to generate the typical range of service calls, including fire, emergency medical service, and other incidents. New fire personnel, vehicles, and equipment would be required to provide adequate response times to serve future development. Therefore, the CCCFPD's, HRPD, SRVFD, and Crockett-Carquinez FPD's respective costs to maintain equipment and facilities and to train and equip personnel would also increase. However, the additional personnel and materials costs would likely be gradual as the increase in population as a result of development under the HEU would occur incrementally over time.

In accordance with General Plan Policy 4-2 and Implementation Measure 10-au, which are discussed under the regulatory section of section 5.15.1.1 above, project applicants and the County would be required to ensure that there are adequate fire services at the time that specific development projects are proposed. As such, it would be possible to assess the need for additional fire and emergency medical service personnel and equipment and address these needs to ensure that adequate fire service response time standards are maintained. However, as a matter of information, if and when the construction or expansion of facilities to accommodate additional personnel or equipment should become necessary, CEQA review, General Plan provisions, Ordinance Code regulations, and payment of impact fees would all be required. Additional fire facilities are not expected to be required to serve the population as a result of the HEU however the Board of Supervisors will continue to monitor service needs and construct facilities as needed over time. The impact on fire protection and emergency medical response services would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.15-1 would be less than significant.

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<sup>1</sup> Refer to the methodology in Section 5.14, *Population and Housing*

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### *Mitigation Measures*

No mitigation measures would be required.

***Level of Significance After Mitigation:*** Impact 5.15-1 would be less than significant.

#### 5.15.1.5 CUMULATIVE IMPACTS

Buildout of the proposed HEU, combined with existing, planned, proposed, approved, and reasonably foreseeable development within the service area of CCCFPD, HRFPD, SRVFPD, and Crockett-Carquinez FPD, would increase the demand on fire protection and emergency medical services. This increased demand may result in increased requests for mutual aid from CALFIRE, EBRPD or other agencies shown in Table 5.15-2. It is not anticipated that increased mutual aid requirements would result in the need for additional fire protection facilities because mutual aid would be provided via existing facilities, equipment, and personnel at the time of the mutual aid request. In addition, future development projects, including fire protection facilities, would be subject to subsequent project-level CEQA review at such time as an application is submitted.

All new development proposed in the county, would be subject to the California Building Code and California Fire Code, which would help to prevent and minimize the occurrences of fire, increasing the ability of the County's fire service providers to provide adequate fire protection services. Subsequent project-level CEQA review of future development, along with compliance with the California Building and Fire codes, would ensure that cumulative environmental impacts associated with the continue provision of fire protection and emergency medical response services would be less than cumulatively considerable.

#### 5.15.1.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.15-1.

#### 5.15.1.7 MITIGATION MEASURES

No mitigation measures are required.

#### 5.15.1.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact 5.15-1 would be less than significant.

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### 5.15.2 Police Protection

#### 5.15.2.1 ENVIRONMENTAL SETTING

##### Regulatory Background

###### *State Regulations*

###### ***Emergency Response/Evacuation Plans***

Government Code Section 8607(a) directs the California Emergency Management Agency (formerly the Governor's Office of Emergency Services) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. The program is intended to provide effective management of multi-agency and multijurisdictional emergencies in California. SEMS consists of five organizational levels, which are activated as necessary: (1) Field Response, (2) Local Government, (3) Operational Area, (4) Regional, and (5) State. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The Contra Costa County has adopted an Emergency Operations Plan that is consistent with the SEMS.

###### *Local Regulations*

###### ***Contra Costa General Plan***

The County's Public Facilities/Services Element of the General Plan includes the following goals, policies, and implementation measures that apply to the provision of police protection in the County. The goal, policy, and implementation labels seen below correspond to the goal, policy and implementation labels on pages 7-23 through 7-24 of the Public Facilities/Services Element.

- **Goal 7-V:** To provide a high standard of police protection services for all citizens and properties throughout Contra Costa County.
- **Goal 7-W:** To incorporate police protection standards and requirements into the land use planning process.
- **Policy 7-57:** A sheriff facility standard of 155 square feet of station area per 1,000 population shall be maintained within the unincorporated area of the County.
- **Policy 7-58:** Sheriff patrol beats shall be configured to assure minimum response times and efficient use of resources.
- **Policy 7-59:** A maximum response time goal for priority 1 or 2 calls of five minutes for 90 percent of all emergency responses in central business district, urban and suburban areas, shall be strived for by the sheriff when making staffing and beat configuration decisions.
- **Policy 7-60:** Levels of service above the county-wide standard requested by unincorporated communities shall be provided through the creation of a County Service Area or other special governmental unit.
- **Implementation Measure 7-aq:** In developing areas the Sheriff protection service standard shall be achieved by creation of a County Service Area and special tax and/or creation of a Mello Roos Community Facilities District that generates special tax revenue to support additional increments of Sheriff patrol necessary to meet the adopted service standard. Developers, prior to receiving



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development approvals, should agree (via a Development Agreement or a landowner election) to participate in such special funding districts.

Additionally, the County's growth management standard for police protection, as expressed in its Growth Management Element, requires that police support facilities per 1,000 population be maintained within the unincorporated area of the county. As discussed under section 5.15.1.1 above, the Growth Management Element and Land Use Element include policies and an implementation measure that requires all development seeking approval to have a level of service that meets each service's growth management standard. New development is also required to pay the appropriate level of fees to fund these services.

### ***County Ordinance 42-2: Disaster Council and Emergency Services***

Under County Ordinance Code 42-2.602, Administrator of Emergency Services, the County Administrator is the administrator of emergency services, and in charge of the county's emergency operations center. The administrator of emergency services assumes the ultimate responsibility and authority for directing the Contra Costa Operational Area's emergency management organization (including emergency response and recovery). The administrator of emergency services is responsible for implementing the Emergency Operations Plan. The administrator of emergency services is also director of the emergency operations center (EOC) (Contra Costa 2016).

The Contra Costa Emergency Services Policy Board (ESPB) functions as the Contra Costa County Disaster Council, as described in County Ordinance Code 42-2.404, Emergency Services Policy Board. The ESPB is an advisory body providing assistance and advice to the County Administrator and as appropriate to the director of emergency services on emergency preparedness planning efforts and the coordination of such planning efforts throughout the county. The ESPB reviews and makes recommendations on emergency and mutual aid plans and agreements and such ordinances, resolutions and regulations as are necessary to implement those plans and agreements.

Additionally, the operational area council serves as an advisory council to the emergency services policy board. The operational area council consists of emergency managers from incorporated cities, special districts, key utilities and businesses and staff of the sheriff's office, office of emergency services. It discusses and considers countywide emergency management areas and issues and makes recommendations to the emergency services policy board through the office of emergency services.

### Existing Conditions

#### *Contra Costa Office of the Sheriff*

The Contra Costa County Office of the Sheriff (CCCOS) is the largest law enforcement agency in Contra Costa with 720 sworn officers and over 1,000 total personnel providing a full range of services to over one million residents in the 715-square mile county. The Office provides uniformed law enforcement services to approximately 517,454 residents in the unincorporated areas of the County, with the exception of Kensington. CCCOS also provides services to contract cities (Danville, Lafayette, and Orinda) and special districts. CCCOS oversees air support (helicopters), marine patrol, dispatch, investigations, coroners, county detention facilities, custody alternative, court security, forensic services, the police academy, and the Office of

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Emergency Services (CCCOS 2022a). According to a report made by the Contra Costa Civil Grand Jury in 2020, the staffing ratio of patrol deputies serving the population in the unincorporated part of the County per 1,000 residents is 1.06. The state average is 1.46 sworn officers per 1,000 residents (CC Civil Grand Jury 2020). Additionally, the report claims that there were 65 unfilled sworn officer positions in the Sheriff's Office, which accounts for approximately 10 percent of the Office's capacity.

#### *Contra Costa Emergency Management*

The Contra Costa Emergency Services Division is a branch of the Sheriff's Office that provides disaster planning services, coordinates disaster outreach for public agencies and contract cities in the County and helps County Departments with emergency preparedness, disaster mitigation and recovery. It also serves as a liaison with the State Office of Emergency Services for all County agencies. In addition to providing preparedness training, oversees responsibility for county staff in the Emergency Operations Center (CCCOS 2022b).

The County Sheriff's Office is also aided by the Contra Costa Community Emergency Response Team (CERT). CERT facilitates the training of community members by emergency personnel in basic response skills to allow community members to help effectively and efficiently in an emergency and apply their training to help those in need of emergency services when emergency personnel are overwhelmed (CCCCERT 2022).

#### 5.15.2.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- PP-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

#### 5.15.2.3 PROPOSED HOUSING ELEMENT POLICIES

There are no applicable policies for police protection.

#### 5.15.2.4 ENVIRONMENTAL IMPACTS

##### DISCUSSION OF NO POLICE PROTECTION IMPACTS

Impacts would be less than significant or potentially significant.

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DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.15-2: The proposed project could introduce new structures and residents into the Contra Costa Office of the Sheriff's service boundaries, thereby potentially increasing the requirement for police protection facilities and personnel. [Threshold PP-1]

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While no specific development proposals are directly associated with the HEU, theoretical development would result in an increase in population and thus an increase in demand for police protection services from the Contra Costa County Sheriff's Office. As discussed in Section 4.15.2.1, the Police Department has 720 sworn officers. The staffing ratio of patrol deputies serving the population in the unincorporated part of the County per 1,000 residents in 2020 was 1.06. With the potential addition of up to an estimated 63,471 residents under the HEU, there would be an increase in calls for service which may require additional police personnel. Future development is expected to generate the typical range of service calls. Additional police personnel, vehicles, and equipment would likely be required to provide adequate response times to serve future growth. Therefore, the County's costs to maintain equipment and facilities and to train and equip personnel would also increase. However, the additional personnel and materials costs would likely be gradual as the increase in population would occur incrementally over time.

Several policies and programs implemented by the County would ensure that development under the HEU would be provided police services and contribute to the funding of such services. General Plan Public Facilities/Services Element Policy 7-57 provides a framework for evaluating the potential impact of development on the delivery of police protection services. Additionally, Growth Management Policy 4-2 requires that levels of service are met before a development is approved. Land Use Policy 3-5 reiterates policy 4-2, requiring that the County's growth management standards for services be met before building permits are issued. Public Facilities/Services Element Implementation Measure 7-aq requires that in developing areas the Sheriff protection service standard be achieved by creation of a County Service Area and special tax and/or creation of a Mello Roos Community Facilities District that generates special tax revenue to support additional increments of Sheriff patrol necessary to meet the adopted service standard. The County also levies land development impact fees to fund police services (Contra Costa 2022).

As such, it would be possible to assess the need for additional police personnel and equipment and address these needs to ensure that the law enforcement response time standards in the community are maintained. However, as a matter of information, if and when the construction or expansion of facilities to accommodate additional personnel or equipment could become necessary, CEQA review, General Plan provisions, Ordinance Code regulations, and payment of impact fees would all be required. Therefore, the impact on police protection services would be less than significant.

**Level of Significance Before Mitigation:** Impact 5.15-2 would be less than significant.

*Mitigation Measures*

No mitigation measures would be required.

**Level of Significance After Mitigation:** Impact 5.15-2 would be less than significant.

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#### 5.15.2.5 CUMULATIVE IMPACTS

Cumulative increases in residential development in the County would require increased law enforcement services to serve new development. The increase in demand for law enforcement services from implementation of cumulative projects would have the potential to result in the need to construct or expand existing police facilities, which would have the potential to create an adverse impact on the environment. While the majority of cumulative projects require discretionary actions and would be required to demonstrate compliance with CEQA prior to project approval, they would incrementally increase the need for law enforcement services. Operational funding for the CCCOS is derived from various sources of tax revenue that contribute to the General Fund and development impact fees. Provided that staff and facilities are expanded to serve future development in the unincorporated County, the HEU would contribute less than significant cumulative impacts.

#### 5.15.2.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.15-2.

#### 5.15.2.7 MITIGATION MEASURES

No mitigation measures are required.

#### 5.15.2.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact 5.15-2 would be less than significant.

### 5.15.3 School Services

#### 5.15.3.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *State Regulations*

##### ***Development Impact Fees/SB 50***

Proposition 1A, the Kindergarten–University Public Education Facilities Bond Act of 1998, or Senate Bill (SB) 50, was approved by the voters in November 1998. Senate Bill (SB) 50 provides a comprehensive school facilities financing and reform program and enables a statewide bond issue to be placed on the ballot. Under the provisions of SB 50, school districts are authorized to collect fees to offset the costs associated with increasing school capacity as a result of development and related population increases. The funding goes to acquiring school sites, constructing new school facilities, and modernizing existing school facilities. SB 50 establishes a process for determining the amount of fees developers would be charged to mitigate the impact of development on school districts from increased enrollment. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be “full and complete school facilities mitigation.”

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Under this legislation, there are three levels of developer fees that may be imposed upon new development by the governing school district. Level I fees are assessed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level II fees require the developer to provide one-half of the costs of accommodating students in new schools, and the state provides the remaining half. To qualify for Level II fees, the governing board of the school district must adopt a School Facilities Needs Analysis and meet other prerequisites in accordance with Section 65995.6 of the California Government Code. Level III fees apply if the state runs out of bond funds, allowing the governing school district to impose 100 percent of the cost of school facility or mitigation on the developer, minus any local dedicated school monies.

### *Local Regulations*

#### ***Contra Costa County General Plan***

The Public Facilities/Services Element of the Contra Costa General Plan includes the following goals, policies, and implementation measures related to the provision of school services in the County. The goals, policies, and implementation measure labels seen below correspond to the goal and policy labels on pages 7-44 through 7-47 of the Public Facilities/Services Element.

- **Goal 7-AO:** To assure the provision of adequate primary, secondary, and college facilities in the County.
- **Goal 7-AP:** To provide new schools in optimal locations to serve planned growth.
- **Goal 7-AR:** To assure that primary and secondary school facilities are adequate or committed to be adequate, prior to approvals of major applications for residential growth.
- **Policy 7-136:** The environmental review process shall be utilized to monitor the ability of area schools to serve development.
- **Policy 7-137:** To the extent possible, new residential development General Plan Amendments or Rezoning shall, in the absence of the Planning Agency's satisfaction that there are overriding considerations (e.g. provision of low or moderate cost housing), be required to adequately mitigate impacts on primary and secondary school facilities.
- **Policy 7-138:** The development of quality schools shall be supported by coordinating development review with local school districts including such activities as designating school sites, obtaining dedications of school sites, and supporting local fees, special taxes, and bond issues intended for school construction.
- **Policy 7-139:** The hearing body in reviewing residential projects shall consider the availability of educational facility capacity.
- **Policy 7-140:** School site donation by developers shall be encouraged through the use of density transfer or other appropriate land use alternatives.
- **Policy 7-142:** Adequate provision of schools and other public facilities and services shall be assisted by coordinating review of new development with school districts the cities and other service providers through the Growth Management Program (see Chapter IV), the environmental review process, and other means.
- **Implementation Measure 7-cp:** Work with the interested school districts to ensure that new development contributes, to the extent allowable under State law, its fair and full share of the cost of additional facilities which are necessary, irrespective of jurisdictional boundaries.

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As previously mentioned in the Regulatory Background section of the Fire Protection and Police Protection sections above (sections 5.15.1.1 and 5.15.2.1), the County’s Growth Management Element and Land Use Element include additional policies and implementation measures that ensure a number of services, including capacity in schools is provided or available to new development.

#### *Contra Costa Ordinance Code- Division 812 School Facility Dedications*

The purpose of the School Facilities Dedication Ordinance of Contra Costa County is to provide a method for financing interim school facilities necessitated by new residential developments causing conditions of overcrowding. The ordinance states that, in an attendance area that has been considered overcrowded according to Chapter 812-6 of the code, the owner of a proposed residential development as a condition of approval or the obtaining of a building permit shall dedicate land, pay fees in lieu thereof, or do a combination of both, for classroom and related facilities for elementary and/or high schools including all mandated educational programs.

#### Existing Conditions

Contra Costa has the ninth largest public-school population in the state, containing 18 public school districts and 285 total schools including both public and private schools. The Contra Costa Office of Education (CCOE) provides support services including budget approval and fiscal support, technology infrastructure and communication support to schools and school districts in the County. Table 5.15-3, *Contra Costa County School Enrollment 2011-2022* shows the trends in enrollment over the last decade, as reported by CCOE. As seen below, the County experienced 0.92 percent growth in school enrollment over this time.

Table 5.15-3 Contra Costa County School Enrollment 2011-2022

School Year	Enrollment	Percent Change
2011-2012	169,394	--
2012-2013	171,418	1.19%
2013-2014	173,020	0.93%
2014-2015	174,802	1.03%
2015-2016	176,413	0.92%
2016-2017	177,370	0.54%
2017-2018	177,770	0.23%
2018-2019	177,516	-0.14%
2019-2020	178,406	0.5%
2020-2021	173,021	-3.02%
2021-2022	170,955	-1.19%

Source: CCCOE 2021, NCES 2022

According to the California Department of Education’s Overcrowded School Program, 20 schools in Contra Costa County are considered critically overcrowded. These include 16 schools in West Contra Unified, two in Antioch Unified, and two in San Ramon Valley Unified (DOE 2022).

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Table 5.15-4, *Contra Costa School Districts Characteristics*, shows the current enrollment and latest available capacity of each district. The capacities shown below were retrieved from publicly available school impact fee justification studies that twelve of the eighteen public school districts in the County conducted between the years of 2016 and 2022. Moraga School District provided a capacity estimate in its 2015 School District Master Plan. As indicated by the table, Brentwood Union Elementary, Liberty Union High, Pittsburg Unified, Martinez Unified and West Contra Costa Unified have enrollments that exceed the districts’ estimated capacities according to their respective school fee justification reports and the enrollment for the districts during the 2021 to 2022 school year.

Table 5.15-4 Contra Costa School Districts Characteristics

School District	Number of Schools <sup>1</sup>	Students <sup>1</sup>	Student-Teacher Ratio <sup>1</sup>	Capacity
Acalanes Union High	5	5,535	19.5	5,892 <sup>2</sup>
Antioch Unified	25	15,652	22.4	--
Brentwood Union Elementary	11	9,023	24.3	9,015 <sup>3</sup>
Byron Union Elementary	4	1,319	22.9	--
Canyon Elementary	1	72	24	--
John Swett Unified	4	1,312	20.1	--
Knightsen Elementary	2	608	21.7	--
Lafayette Elementary	5	3,261	20.8	3,706 <sup>4</sup>
Liberty Union High	5	8,222	22.4	6,840 <sup>5</sup>
Martinez Unified	9	3,983	21.3	3,976 <sup>14</sup>
Moraga Elementary	4	1,769	21.7	2,280 <sup>13</sup>
Mt. Diablo Unified	53	29,908	22.9	34,411 <sup>6</sup>
Oakley Union Elementary	9	4,939	22.8	6,483 <sup>7</sup>
Orinda Union Elementary	5	2,478	20.2	3,087 <sup>8</sup>
Pittsburg Unified	13	11,015	21.8	10,208 <sup>9</sup>
San Ramon Valley Unified	37	30,726	22.6	30,938 <sup>10</sup>
Walnut Creek Elementary	7	3,467	22.9	3,976 <sup>11</sup>
West Contra Costa Unified	54	27,383	23.5	24,464 <sup>12</sup>

Source:

<sup>1</sup> NCES 2022

<sup>2</sup> Acalanes Union High School District 2020

<sup>3</sup> Brentwood Union Elementary School District 2020

<sup>4</sup> Lafayette Elementary School District 2020

<sup>5</sup> Liberty Union High School District 2016

<sup>6</sup> Mt. Diablo Unified School District 2020

<sup>7</sup> Oakley Union School District 2020

<sup>8</sup> Orinda Union School District 2020

<sup>9</sup> Pittsburg Unified School District 2018

<sup>10</sup> San Ramon Valley Unified School District 2018

<sup>11</sup> Walnut Creek Elementary School District 2018

<sup>12</sup> West Contra Costa Unified School District 2020

<sup>13</sup> Moraga School District 2015

<sup>14</sup> Martinez Unified School District 2022

Shaded fields indicate school districts whose capacity is exceeded by current enrollment

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The following schools listed in Table 5.15-5, *Schools 0.5 Mile from Housing Element Sites*, are the public elementary schools, middle schools and high schools that are located within 0.5-mile of the sites that are included in the County’s HEU Sites Inventory. The schools listed below are those most likely to see an increase in enrollment as a result of the potential increase in allowable density for the housing element sites.

Table 5.15-5 Schools 0.5 Mile from Housing Element Sites

School Name	District	Address	City
<b>Elementary Schools</b>			
Byron Institute for Independent Study	Byron Union Elementary	1700 Willow Lake Rd.	Discovery Bay
Discovery Bay Elementary	Byron Union Elementary	1700 Willow Lake Rd.	Discovery Bay
Timber Point Elementary	Byron Union Elementary	40 Newbury Ln.	Discovery Bay
Rodeo Hills Elementary	John Swett Unified	545 Garretson St.	Rodeo
Las Juntas Elementary	Martinez Unified	4105 Pacheco Blvd.	Martinez
Morello Park Elementary	Martinez Unified	1200 Morello Park Dr.	Martinez
Bel Air Elementary	Mt. Diablo Unified	663 Canal Rd.	Bay Point
Pleasant Hill Elementary	Mt. Diablo Unified	2097 Oak Park Blvd.	Pleasant Hill
Valhalla Elementary	Mt. Diablo Unified	530 Kiki Dr.	Pleasant Hill
Rio Vista Elementary	Mt. Diablo Unified	611 Pacifica Ave.	Bay Point
Summer Lake Elementary	Oakley Union Elementary	4320 East Summer Lake Dr.	Oakley
Willow Cove Elementary	Pittsburg Unified	1880 Hanlon Way	Pittsburg
West County Mandarin	West Contra Costa Unified	6028 Ralston Ave.	Richmond
Ellerhorst Elementary	West Contra Costa Unified	3501 Pinole Valley Rd.	Pinole
Kensington Elementary	West Contra Costa Unified	90 Highland Blvd.	Kensington
Mira Vista Elementary	West Contra Costa Unified	6397 Hazel Ave.	Richmond
Montalvin Manor Elementary	West Contra Costa Unified	300 Christine Dr.	San Pablo
Murphy Elementary	West Contra Costa Unified	4350 Valley View Rd.	El Sobrante
Olinda Elementary	West Contra Costa Unified	5855 Olinda Rd.	El Sobrante
Riverside Elementary	West Contra Costa Unified	1300 Amador St.	Richmond
Shannon Elementary	West Contra Costa Unified	685 Marlesta Rd.	Pinole
Sheldon Elementary	West Contra Costa Unified	2601 May Rd.	Richmond
Stewart Elementary	West Contra Costa Unified	2040 Hoke Dr.	Pinole
Tara Hills Elementary	West Contra Costa Unified	2300 Dolan Way	San Pablo
Valley View Elementary	West Contra Costa Unified	3416 Maywood Dr.	Richmond
Verde Elementary	West Contra Costa Unified	2000 Giaramita St.	Richmond
Creekside Elementary	San Ramon Valley Unified	6011 Massara St.	Danville
Alamo Elementary	San Ramon Valley Unified	100 Wilson Rd.	Alamo
Rancho Romero Elementary	San Ramon Valley Unified	180 Hemme Ave.	Alamo
Tassajara Hills Elementary	San Ramon Valley Unified	4675 Camino Tassajara Rd.	Danville
Buena Vista Elementary	Walnut Creek Elementary	2355 San Juan Ave.	Walnut Creek
Indian Valley Elementary	Walnut Creek Elementary	551 Marshall Dr.	Walnut Creek
Murwood Elementary	Walnut Creek Elementary	2050 Vanderslice Ave.	Walnut Creek
Parkmead Elementary	Walnut Creek Elementary	1920 Magnolia Way	Walnut Creek
Walnut Heights Elementary	Walnut Creek Elementary	4064 Walnut Blvd.	Walnut Creek
Central County Special Education Programs	Contra Costa County Office of Education	2964 Miranda Ave.	Alamo



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Table 5.15-5 Schools 0.5 Mile from Housing Element Sites

School Name	District	Address	City
<b>Middle Schools</b>			
Carquinez Middle	John Swett Unified	1099 Pomona St.	Walnut Creek
Riverview Middle	Mt. Diablo Unified	205 Pacifica Ave.	Crockett
Crespi Junior High	West Contra Costa Unified	1121 Allview Ave.	Crockett
Pinole Middle	West Contra Costa Unified	1575 Mann Dr.	Pinole
Stone Valley Middle	San Ramon Valley Unified	3001 Miranda Ave.	San Pablo
<b>High Schools</b>			
Acalanes Center for Independent Study	Acalanes Union High	1963 Tice Valley Blvd.	Crockett
John Swett High	John Swett Unified	1098 Pomona St.	Bay Point
Willow High	John Swett Unified	1098 Pomona St.	El Sobrante
Vista High (Alternative)	West Contra Costa Unified	2625 Barnard Rd.	Alamo
De Anza High	West Contra Costa Unified	5000 Valley View Rd.	Crockett
Pinole Valley High	West Contra Costa Unified	2900 Pinole Valley Rd.	Pinole
Monte Vista High	San Ramon Valley Unified	3131 Stone Valley Rd.	Bay Point

Source: CCCOE 2021, NCES 2022

Pursuant to SB 50 and County Ordinance 812 (discussed in detail under Regulatory Background above) all school districts in the County levy a school development impact fee to offset costs associated with increasing school capacity. Antioch USD, Livermore USD, Mt. Diablo USD, Oakley UESD, Pittsburg USD, San Ramon Valley USD, and West Contra Costa USD directly collect fees directly for development within the jurisdiction of the district. The remaining twelve districts levy fees through the County Building Inspection Division (Contra Costa 2021).

As mentioned above, twelve of the eighteen districts in the County have conducted developer fee studies for the purposes of calculating and justifying the appropriate developer impact fee for development within the district. The studies include a student generation factor (SGF) that was used to estimate the amount of students that will be added to the district through the development of new housing. These rates represent the students per residential housing unit and are shown for each of the districts with available data in Table 5.15-6 *Single Family and Multi-Family Student Generation Factor for Contra Costa County School Districts*.

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Table 5.15-6 Single Family and Multi-Family Student Generation Factor for Contra Costa County School Districts.

School District	Single-Family SGF	Multi-Family SGF
Acalanes Union High <sup>1</sup>	0.1579	0.0679
Brentwood Union Elementary <sup>2</sup>	0.407	0.397
Lafayette Elementary <sup>3</sup>	0.3459	0.1658
Liberty Union High <sup>4</sup>	0.1436	0.056
Martinez Unified <sup>12</sup>	0.3649	0.1668
Mt. Diablo Unified <sup>5</sup>	0.3546	0.3049
Oakley Union Elementary <sup>6</sup>	0.4033	0.3516
Orinda Union Elementary <sup>7</sup>	0.3495	0.1772
Pittsburg Unified <sup>8</sup>	0.6671	0.3637
San Ramon Valley Unified <sup>9</sup>		0.746
Walnut Creek Elementary <sup>10</sup>	0.3334	0.1237
West Contra Costa Unified <sup>11</sup>		0.131

Source:

- <sup>1</sup> Acalanes Union High School District 2020
- <sup>2</sup> Brentwood Union Elementary School District 2020
- <sup>3</sup> Lafayette Elementary School District 2020
- <sup>4</sup> Liberty Union High School District 2016
- <sup>5</sup> Mt. Diablo Unified School District 2020
- <sup>6</sup> Oakley Union School District 2020
- <sup>7</sup> Orinda Union School District 2020
- <sup>8</sup> Pittsburg Unified School District 2018
- <sup>9</sup> San Ramon Valley Unified School District 2018
- <sup>10</sup> Walnut Creek Elementary School District 2018
- <sup>11</sup> West Contra Costa Unified School District 2020
- <sup>12</sup> Martinez Unified School District 2022

#### 5.15.3.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

SS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for school services.

#### 5.15.3.3 PROPOSED HOUSING ELEMENT POLICIES

There are no applicable policies for school services.

#### 5.15.3.4 ENVIRONMENTAL IMPACTS

#### DISCUSSION OF NO SCHOOL SERVICES IMPACTS

Impacts would be less than significant or potentially significant.

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DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.15-3: Buildout of the proposed project could generate new students who would impact the school enrollment capacities of area schools and result in the need for new and/or expanded school facilities, the construction of which could result in environmental impacts.

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Of the 529 sites included in the Housing Element Sites Inventory, 376 sites are proposed to allow an increase in their allowable density. If all parcels in the Housing Element sites inventory were to redesignated as noted in Tables 3-3, 3-4, and 3-5 of Chapter 3, *Project Description*, and then developed to their maximum allowable capacity (as explained in Impact 5.15-1), the resulting dwelling units would be expected to generate a maximum of 6,113<sup>2</sup> students across all school districts in the County that contain Housing Element sites, or an average of 764 students per year over the eight-year life cycle of this Housing Element. Table 5.15-7, *Students Added to School Districts*, below shows an estimate of the number of students that would be added to each district based the average of on each district's respective single-family and multiple-family school generation factors and the maximum units that would be allowed on the Housing Element Inventory sites that are within the boundaries each district. It should be noted that this analysis is conservative as it operates under the assumption that not only will all sites be redesignated as specified in the Housing Element and developed to their maximum allowable density, but that all students generated by these developments will attend schools in the district in which each site is located. Some students may attend non-public schools or schools within districts that are not evaluated in this analysis.

As shown in Table 5.15-7, no school districts' capacities will be exceeded as a result of the potential units allowed under the proposed HEU, with the exception of three districts, West Contra Costa USD, Martinez Unified SD, and Liberty Union High SD, which currently have enrollments that exceeds their capacities. The students added by the development of units under the HEU could exacerbate school capacity issues if the facilities of these two districts are not updated. Byron Union Elementary SD and John Swett USD do not have publicly available data for their respective district capacities. To estimate the number of students that could be added from development in these districts, student generation factors were derived using the methods described in the first footnote of Table 5.15-7.

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<sup>2</sup> As shown in Table 5.15-7, *Students Added to School Districts*, these student increase estimates were generated by using each the average of each district's single-family and multiple family student generation factors shown in Table 5.15-6, and multiplying it by the maximum allowable units allowed in each district.

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Table 5.15-7 Students Added to School Districts

School District	Maximum Students Generated <sup>1</sup>	Students Generated Added to Current Enrollment (2021-2022)	Percent Increase in Enrollment <sup>4</sup>	Historic Enrollment Trends <sup>3</sup>	District Capacity	Capacity Exceeded? <sup>2</sup>
Acalanes Union High	101	5,567	1.84%	1.18%	5,892	No
Liberty Union High	137	8,437	13.33%	2.63%	6,840	Yes
Mt. Diablo Unified	3,971	33,760	1.33%	-6.68%	34,411	No
San Ramon Valley Unified	399	30,467	6.08%	-5.90%	30,938	No
Walnut Creek Elementary	203	3,533	2.03%	-7.71%	3,976	No
West Contra Costa Unified	610	30,681	1.84%	-1.72%	24,464	Yes
Byron Union Elementary	427	2,598	19.68%	10.60%	--	--
John Swett Unified	135	1,375	10.91%	-27.02%	--	--
Martinez Unified	130	4,113	3.26%	-8.10%	3,976	Yes

<sup>1</sup> Calculated by multiplying each district's average SGF (average of single-family and multiple-family SGF's, see Table 5.15-6) by the maximum allowed units for parcels in each district. The SGF's for school districts without an available SGF were substituted with the SGF of an overlapping district (Byron Elementary used Liberty Union's SGF) or the average of all SGF's in the County (0.3 SGF used for John Swett and Martinez Unified).

<sup>2</sup> Shaded values indicate districts whose capacity has already been exceeded by current enrollment.

<sup>3</sup> The percent change in enrollment for all schools in the district between school years 2014-2015 and 2021-2022 (Source: DOE 2022)

<sup>4</sup> Percent increase between enrollment in school year 2021-2022 and the potential students generated under the maximum units added to the district

Existing funding mechanisms would lessen potential impacts related to an increase in the student population. As detailed in Section 5.15.3.1, all districts in the County are funded through the payment of development fees pursuant to SB 50/Government Code Section 65995 and County Ordinance 812. These fees are required to be paid by future development prior to issuance of building permits and would be used to offset the impact of the number of new students generated by the anticipated population increase resulting from the redesignating and rezoning program. According to SB 50, payment of these fees constitutes adequate mitigation related to impacts to school facilities.

Furthermore, a school district and a development have the option of entering into various alternative mitigation agreements to ensure the timely construction of school facilities to house students from new residential development. The primary financing mechanism authorized in these mitigation agreements is the formation of a community facilities district, pursuant to the Mello-Roos Community District Act of 1982. In lieu of an alternative mitigation agreement, state-mandated school facilities fees, which help maintain adequate school facilities and levels of service may also reduce potential impacts. Ultimately, the provision of schools is the responsibility of the school district. SB 50 provides that the statutory fees found in the Government and Education Codes are the exclusive means of considering and mitigating for school impacts. Imposition of the statutory fees constitutes full and complete mitigation (Government Code Section 65995[b]).

The existing regulatory setting, including funding mechanisms, would ensure that potential impacts to school facilities and services with implementation of the HEU would be less than significant. Furthermore, the General Plan includes goals and policies to maintain adequate levels of service for schools. Therefore, impacts would be less than significant.

**Level of Significance Before Mitigation:** Impact 5.15-3 would be less than significant.

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### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.15-3 would be less significant.

#### 5.15.3.5 CUMULATIVE IMPACTS

Implementation of the HEU is expected to result in population growth that would increase student enrollment in eleven or more school districts in the County. Current state law requires that the environmental impact of new development on grade school facilities is considered fully mitigated through the payment of required development impact fees. All new development associated with the proposed project would be required to pay the applicable development impact fees. Furthermore, any significant expansion of school facilities or development of new school facilities would be subject to the appropriate CEQA environmental review, which would identify any site-specific impacts and provide mitigation to reduce those impacts. Therefore, cumulative impacts on school facilities are considered less than cumulatively considerable.

#### 5.15.3.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.15-3.

#### 5.15.3.7 MITIGATION MEASURES

No mitigation measures are required.

#### 5.15.3.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact 5.15-3 would be less than significant.

### 5.15.4 Library Services

#### 5.15.4.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *Local Regulations*

##### ***Contra Costa General Plan***

The Contra Costa County Public Facilities and Services Element includes the following policy relating to the provision of library services in the County.

- **Policy 7-159:** Services provide by the County Library System shall be maintained and improved by providing adequate funding for ongoing operations, and by providing new library facilities to meet the needs of County residents, particularly in growing areas where library service standards are not being met.

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#### Existing Conditions

The Contra Costa County Library System was founded in 1913 and currently contains 26 community libraries with an approximate 650,000 cardholders. In 2019, Contra Costa County Library became the first county library in California and largest in the state to eliminate overdue fines on library materials (CCC Library 2018). The library system also digital resources for residents, including in such areas as newspapers, kid literature and learning, homework help, novels, and research (CCC Library 2022).

#### 5.15.4.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

LS-1 Result in a substantial adverse physical impact associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for library services.

#### 5.15.4.3 PROPOSED HOUSING ELEMENT POLICIES

There are no policies applicable to library services.

#### 5.15.4.4 ENVIRONMENTAL IMPACTS

##### DISCUSSION OF NO LIBRARY SERVICES IMPACTS

Impacts would be less than significant or potentially significant.

##### DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.15-4: Buildout of the proposed project could generate new residents in the County and result in the need for new and/or expanded library facilities, the construction of which could result in environmental impacts. [Threshold LS-1]

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Implementation of the HEU would result in the potential for increased demand for library services within the County to the extent that expansion and construction of new facilities could be required. Under the conservative assumption that all sites included in the Housing Element sites inventory would be redesignated and rezoned as presented in Tables 3-3, 3-4, and 3-5 of Chapter 3, *Project Description* of this DEIR and then developed to their maximum capacity, the resulting population added to the County would be approximately 63,471. Policy 7-159 in the Public Facilities Element of the General Plan states that services provided by the County Library System shall be maintained and improved by providing adequate funding for ongoing operations, and by providing new library facilities to meet the needs of County residents, particularly in growing areas where library service standards are not being met.

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Future development would generate new tax revenues and funding sources for the Contra Costa Library System consist of property taxes, state assistance, and revenue from fines, fees, and other miscellaneous revenue. Furthermore, development or expansion of libraries would be subject to the County's policies that protect environmental resources including environmental review and impact mitigation per CEQA. Impacts associated with development of new libraries are therefore determined to result in less than significant impacts.

***Level of Significance Before Mitigation:*** Impact 5.15-4 would be less than significant.

### *Mitigation Measures*

No mitigation measures would be required.

***Level of Significance After Mitigation:*** Impacts 5.15-4 would be less than significant.

### 5.15.4.5 CUMULATIVE IMPACTS

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.15-4. However, Policy 7-159 in the Public Facilities Element of the General Plan states that services provided by the County Library System shall be maintained and improved by providing adequate funding for ongoing operations, and by providing new library facilities to meet the needs of County residents, particularly in growing areas where library service standards are not being met.

Future development would generate new tax revenues and funding sources for the Contra Costa Library System consist of property taxes, state assistance, and revenue from fines, fees, and other miscellaneous revenue. Furthermore, development or expansion of libraries would be subject to the County's policies that protect environmental resources including environmental review and impact mitigation per CEQA. Cumulative impacts associated with development of new libraries are therefore determined to result in less than significant impacts.

### 5.15.4.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.15-4.

### 5.15.4.7 MITIGATION MEASURES

No mitigation measures are needed.

### 5.15.4.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact 5.15-4 would be less than significant.

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### 5.15.5 Recreation

#### 5.15.5.1 ENVIRONMENTAL SETTING

##### Regulatory Background

###### *State Regulations*

###### ***Quimby Act***

The Quimby Act, also known as Government Code Section 66477, Subdivision Map Act was established in 1965 and provides provisions in the State Subdivision Map Act for the dedication of parkland and/or payment of in-lieu fees as a condition of approval of certain types of residential projects. Previously, a city or county could only use these fees to provide parks that served the developer's proposed subdivision. However, Assembly Bill 1359 (AB 1359), signed in 2013, allows cities and counties to use developer-paid Quimby Act fees to provide parks in neighborhoods other than the one in which the developer's subdivision is located. Overall, AB 1359 provides cities and counties with opportunities to improve parks and create new parks in areas that would not have benefited before. It also allows a city or county to enter a joint/shared use agreement with one or more public districts to provide additional park and recreational access.

###### ***Mello-Roos Community Facilities Act (California Government Code Sections 53311 et seq.)***

This law allows any county, city, special district, school district, or joint powers authority to establish a Mello-Roos Community Facilities District (CFD) that can finance parks, cultural facilities, libraries, schools, fire and police protection, streets, sewer systems, and other basic infrastructure. By law, the CFD is also entitled to recover expenses needed to form the CFD and administer the annual special taxes and bonded debt.

###### ***Mitigation Fee Act***

The Mitigation Fee Act allows cities to establish fees that will be imposed on development projects to mitigate the impact on the jurisdiction's ability to provide specified public facilities to serve proposed development projects. In order to comply with the Mitigation Fee Act, a jurisdiction must follow four requirements: 1) Make certain determinations regarding the purpose and use of a fee and establish a nexus or connection between a development project or class of project and the public improvement being financed with the fee; 2) Segregate fee revenue from the general fund in order to avoid commingling of capital facilities fees and general funds; 3) For fees that have been in the possession of the jurisdiction for five years or more and for which the dollars have not been spent or committed to a project, the jurisdiction must make findings each fiscal year describing the continuing need for the money; and 4) Refund any fees with interest for which the findings noted above cannot be made.

###### *Regional Regulations*

###### ***EBPRD Master Plan***

The EBRPD provides and manages the regional parks for Alameda and Contra Costa Counties, a 1,400 square mile area that is home to 2.6 million people. The EBPRD Master Plan (2013) defines the overall mission and vision for the Park District. It contains policies and descriptions of programs in-place for



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achieving the highest standards of service in resource conservation, management, interpretation, public access, and recreation. The goal is to maintain a careful balance between the need to protect and conserve resources and the need to provide opportunities for recreational use of the parklands, both currently and in the future (EBRPD 2013).

### ***East Bay Watershed Master Plan***

The East Bay Municipal Utility District (District) owns and manages approximately 29,000 acres of watershed land in the East Bay area. These lands surround five reservoirs (Briones, San Pablo, Upper San Leandro, Chabot, and Lafayette) and one basin area that does not contain a reservoir (Pinole Valley). The East Bay Watershed Master Plan provides long-term management direction for EBMUD owned lands and reservoirs to ensure the protection of the EBMUD water resources and preserve environmental resources on EBMUD-owned lands (EBMUD 2018). The Plan also addresses EBMUD's response to a number of rising issues in the watershed including climate change, invasive mussels and toxic algae. It also incorporates plans for habitat conservation, grazing and fire protection, and proposes changes to allow access to specific watershed trails by cyclists.

### *Local Regulations*

#### ***Contra Costa County General Plan***

The County's Open Space Elements provides the following goals, policies, and implementation measures to ensure the provision of park and recreation facilities in the County. As listed in Table 9-1, *County Park Criteria*, of the Open Space Element, the County's standard for neighborhood parks (3-17 acres) is 2.5 acres per 1,000 population and 1.5 acres per 1,000 population for community parks (15-20 acres). The following labels correspond to the numbering used in the Open Space Element from pages 9-24 to 9-26.

- **Goal 9-H:** To develop a sufficient amount of conveniently located, properly designed, park and recreational facilities to serve the needs of all residents.
- **Goal 9-K:** To achieve a level of park facilities of four acres per 1,000 population.
- **Policy 9-32:** Major park lands shall be reserved to ensure that the present and future needs of the county's residents will be met and to preserve areas of natural beauty or historical interest for future generations. Apply the parks and recreation performance standards in the Growth Management Element.
- **Policy 9-33:** A well-balanced distribution of local parks, based on character and intensity of present and planned residential development and future recreation needs, shall be preserved.
- **Policy 9-34:** Park design shall be appropriate to the recreational needs and access capabilities of all residents in each locality.
- **Policy 9-35:** Regional-scale public access to scenic areas on the waterfront shall be protected and developed, and water-related recreation, such as fishing, boating, and picnicking, shall be provided.
- **Policy 9-40:** Recreational activity shall be distributed and managed according to an area's carrying capacity, with special emphasis on controlling adverse environmental impacts, such as conflict between uses and trespass. At the same time, the regional importance of each area's recreation resources shall be recognized.

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- **Implementation Measure 9-r:** Require that new development meet the park standards and criteria included in the Growth Management Program and set forth in Table 9-1. Ensure that credit for the park dedication ordinance requirements be given for private recreation facilities only after a finding has been adopted that the facilities will be open to and serve the public.

As discussed in sections 5.15.1.1 and 5.15.2.1, the County's Growth Management Element includes implementation measures 4-1 and 4-o which require new development to contribute to the costs of providing services such as parks. As expressed in this Element, the County's growth management standard for neighborhood parks is 3 acres per 1,000 persons.

#### ***County Ordinance Code***

Pursuant to Government Code Section 66001, the County adopted the uncodified Ordinance No. 2007-17, which allows the County to collect impact fees on all residential projects on a per dwelling unit basis for the purpose of funding parks and recreation facilities identified in the Capital Improvement Program. Additionally, pursuant to Government Code Section 66477, the County requires as a condition of approval of a preliminary or final development plan, tentative or final parcel map, that developers dedicate land or pay a fee in lieu thereof under Division 920 *Park Dedications* of the Ordinance Code.

#### ***Parks & Recreation Services Municipal Service Review***

Government Code Section 56425 and Section 56430 state that Local Agency Formation Commissions (LAFCOs) must conduct regional analysis of municipal services (Municipal Service Reviews, or MSRs) every five years or as necessary to support reviews of city, district and jurisdictional spheres of influence (SOIs). Pursuant to this legislation, Contra Costa LAFCO is required to conduct a comprehensive review of municipal service delivery and update the spheres of influence of all agencies under LAFCO's jurisdiction. The MSR reviews services provided by public agencies—cities and special districts—whose boundaries and governance are subject to LAFCO. The latest MSR for the County was updated in 2021 and reviews the boundaries and services provided by four recreation and parks districts, nineteen of the County's incorporated cities and towns, eight county service areas, and four community service districts. It additionally identifies and provides recommendations for the County's disadvantaged communities.

#### ***Recreation and Parks District Master Plans***

In February 2020, Pleasant Hill Recreation and Parks District adopted a Parks, Facilities, and Recreation Master Plan that provides a thorough inventory of the District's parks and facilities and a summary of recreation programming and lays out a vision for future park and recreation facilities and investment priorities.

#### Existing Conditions

The County's parks and recreational areas are managed and operated by a number of different entities. These include the U.S. National Parks Service, the California State Parks Department, the California Department of Water Resources, the East Bay Regional Parks District, the East Bay Municipal Utility District, the Contra Costa Water District, independent Parks and Recreation Service Districts, County Service Districts, the Contra Costa County Public Works Department, and the incorporated cities and towns in the County.

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#### *National & State Parks*

The U.S. National Parks Service (NPS) manages two historic sites in the County. The John Muir National Historic Site is located in Martinez and consists of the Muir House and the 336 acres Strentzel-Muir fruit ranch (NPS 2020a). Additionally, the Eugene O'Neill National Historic Site on the western edge of Danville contains the Tao House in addition to other historic buildings and 13.9 acres of open and landscaped land (NPS 2020b). NPS also owns the 326-acre area of Mt. Wanda in the Briones Hills which offers hiking trails (NPS 2021). The California State Parks Department operates three state parks in the County for recreational uses including Frank Tracts State Recreation Area on Bethel Island in the Delta at 3,523 acres, the Marsh Creek State Historic Park located south of Brentwood at 3,673 acres, and the Mount Diablo State Park at 20,124 acres (CSP 2019). The State Department of Water Resources operates the Clifton Court Forebay on the southeastern edge of the County which provides water-based recreational opportunities (CSWRD 2022).

#### *East Bay Municipal Utility District & Contra Costa Water District*

Additional outdoor recreation facilities are provided by the East Bay Municipal Utility District (EBMUD) which owns approximately 29,000 acres of land and reservoir surface areas in the East Bay Area including the San Pablo Reservoir, the Lafayette Reservoir and the Briones Reservoir. The San Pablo and Lafayette Reservoirs allow public access for boating, fishing and swimming while the Briones Reservoir is limited to college crew team practice (EBMUD 2018).

The Contra Costa Water District (CCWD) also provides recreational opportunities to the County through the Los Vaqueros Watershed and Reservoir. CCWD offers boat rentals and allows fishing on the 1,900-acre reservoir in addition to trails and picnic facilities on the surrounding lands (CCWD 2022).

#### *Parks Districts*

Several independent parks and recreation districts operate within the County providing services to portions of the incorporated and unincorporated County. These include the Ambrose Recreation and Park District (RPD) which serves Bay Point; the Green Valley Recreation and Parks District which serves an area of northeast Danville; and the Pleasant Hill Recreation and Park District which serves a portion of Pleasant Hill, Walnut Creek and the unincorporated area of Walden/Contra Costa Centre. The boundaries of these districts also overlap with those of nearby towns and cities, resulting in shared and jointly maintained facilities. Ambrose PRD's service boundary overlaps with the City of Pittsburg, Green Valley PRD's service boundary overlaps with the Town of Danville and Pleasant Hill PRD's service boundary overlaps with the City of Pleasant Hill. Ambrose RPD provides two passive parks which include picnic areas and paths, and seven active parks with facilities including playgrounds, sport fields, basketball courts, etc. Green Valley RPD maintains a 70-year-old swimming pool. Pleasant Hill RPD maintains thirteen parks including five open space areas (CCCLAFCO 2021). Further information about these districts is provided in Table 5.15-8, *Contra Costa County Parks and Recreation Services Summary*.

The East Bay Regional Parks District (EBRPD) provides recreation services to both Contra Costa County and Alameda County with nearly 125,000 acres across 73 parks. The district's lands are visited more than 25 million times each year, providing a variety of recreational opportunities including archery, biking, boating,

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kayaking, sailing, camping, day camps, resources for dogs, field trips, fishing, geocaching, golfing, hiking, horseback riding, movie nights, naturalist programs, outdoor recreation programs, and more (CCCLAFCO 2021). EBRPD maintains 30 parks in the County and manages hundreds of additional acres of land in its land bank, which the district holds until the property is made suitable for public access (CCCLAFCO 2021, EBRPD 2013).

#### *Community Services Districts & County Service Areas*

Of the six Community Service Districts (CSD) within the County, four offer park and recreation services to residents: Crockett CSD, Diablo CSD, Discovery Bay CSD, and the Kensington Police and Community Services District. Further information about the CSD's service areas and service ratios is provided in Table 5.15-8.

The County's Public Works Department maintains 63 acres of parks and recreational facilities in the unincorporated areas of the County (CCCPW 2022).<sup>3</sup> There are eight County Service Areas (CSA) in Contra Costa County that provide funding for enhanced park and recreation services in a specific area. CSA's M-16 (Clyde), M-17 (Tara Hills/Montalvin Manor), R-7 (Alamo), R-9 (El Sobrante), and R-10 (Rodeo) are administered by Contra Costa County, and CSAs M-29 (San Ramon), M-30 (Alamo Springs) and R-4 (Moraga) are administered by the City of San Ramon, the Town of Danville and the Town of Moraga, respectively, for enhanced park and recreation services provided within the city limits (CCCLAFCO 2021).

#### *Service District Ratios*

As part of its Municipal Services Review (MSR) (see Regulatory Section below), the Contra Costa County Local Agency Formation Commission (CCCLAFCO) prepared an assessment of the capacity and quality of park services that are operated in the County. Table 5.15-8, *Contra Costa County Parks and Recreation Services Summary*, summarizes the acreage managed by each park district/CSD/CSA, the current and projected population in each service area that was used for the MSR, and the amount of park and recreation acreage per 1,000 residents as reported in the MSR. The table also includes a calculation of the acreage needed for each district/CSD/CSA to meet its applicable park and recreation facilities service standard. Goal 9-K in the Public Services Element of the County's General Plan states that the County should achieve a level of park facilities of four acres per 1,000 population. In addition, the Pleasant Hill RPD 2020 Master Plan recommends a service standard of 3.5 acres per 1,000, which is currently exceeded by the district. Furthermore, EBRPD exceeds the National Recreation and Park Association's municipal park system standard of 6.25 to 10.5 acres per 1,000 residents with its 44 acres per 1,000 residents across its service area and 17.7 acres per 1,000 residents in Contra Costa County. No other district, CSD, or CSA in the County currently implement a park and recreation facilities service standard, and therefore their acre deficits have been calculated using the County's four acres per 1,000 residents standard (CCCLAFCO 2021).

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<sup>3</sup> This calculation includes parks that are maintained by the County and located within the service areas of other districts including two parks in Discovery Bay and six parks in Bay Point, one park in Contra Costa Centre, and two parks in North Richmond.

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Table 5.15-8 Contra Costa County Parks and Recreation Services Summary

Park District/Community Service District/County Service Area	Population		Acres <sup>1</sup>	Acres per 1,000 Residents	Acres Needed to Meet Service Standard
	2020	2040			
Ambrose RPD	28,240	35,377	28.7	1	84.7
Green Valley RPD	1,205	1,244	1.2	1	3.6
Pleasant Hill RDP	41,552	43,975	270	6.2	Standard Met
East Bay Regional PD	1,153,561	1,332,206	50,352.50	17.7	Standard Met
Crockett CSD	3,309	3,465	6.2	1.87	7
Diablo CSD	808	835	1	1.24	2.2
Discovery Bay CSD	15,215	15,754	29.8	1.96	31
Kensington Police and CSD	5,270	5,449	10	1.9	11.1
M-16 (Clyde)	733	750	2.4	3.3	0.51
M-17 (Tara Hills/ Montalvin Manor)	9,757	10,058	11	1.1	28.3
M-29 (San Ramon)	33,057	34,228	--	4.5	Standard Met
M-30 (Alamo Springs)	140	145	--	3.8	0.03
R-4 (Moraga)	17,916	18,474	--	3.4	10.7
R-7 (Alamo)	15,587	16,111	31	2	31.2
R-9 (El Sobrante)	14,546	16,217	0.1	0	58.2
R-10 (Rodeo)	9,141	9,393	11	1.2	25.6

Source: CCCLAFCO 2021

<sup>1</sup> There are no County owned parks in service areas M-29, M-30, and R-4. Parks and recreation services are provided to M-29 by the City of San Ramon, M-30 by service area R-7, and R-4 by the Town of Moraga.

The MSR concludes that additional parks and recreation space is needed within all districts except the Pleasant Hill RPD to meet County General Plan’s goal of 4.0 acres per 1,000 residents. However, MSR notes that there are park and open space areas that are either within the jurisdictions’ boundaries or in close proximity, granting residents access to additional parkland and open space. These additional park and open space areas, most of which are owned/operated by EBRPD or EBMUD, effectively increase the parkland acreage per resident for each jurisdiction.

5.15.5.2 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- R-1 Would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- R-2 Includes recreational facilities or requires the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

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#### 5.15.5.3 PROPOSED HOUSING ELEMENT POLICIES

There are no applicable policies to parks and recreation services.

#### 5.15.5.4 ENVIRONMENTAL IMPACTS

##### DISCUSSION OF NO RECREATION IMPACTS

Impacts would be less than significant or potentially significant.

##### DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.15-5: The proposed project could generate additional residents that would increase the use of existing park and recreational facilities but would not require the immediate provision of new and/or expanded recreational facilities. [Thresholds R-1 and R-2]

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The proposed project includes an inventory of 529 parcels that the County will consider redesignating and rezoning in order to meet its 6<sup>th</sup> Cycle RHNA allocation. This action would likely increase the number of residential units built in the County by 2031. If all parcels in the Housing Element sites inventory were to be developed to their maximum allowable capacity, the resulting dwelling units would be expected to generate a maximum of 63,471 new residents throughout various areas of the unincorporated county.

The anticipated increase in population in twenty communities in the County would result in an increase in demand for recreational facilities in these areas. Additionally, increases in population in areas that currently do not have adequate recreational facilities would have the potential to accelerate deterioration of existing facilities from intensified overuse. As discussed in section 5.15.5.1, almost all local parks and recreation providers in the County do not provide enough parks and recreation facilities to meet the County's four acres per 1,000 residents standard (Open Space Element, Goal 9-K). Development of the sites in the Housing Element Sites Inventory would increase the amount of residents in many service districts and county service areas including R-7, Ambrose Recreation and Parks District, M-17, M-16, R-10, Pleasant Hill Parks and Recreation District, Crockett Community Services District, Discovery Bay Community Services District, and EBPRD.

With the exception of Pleasant Hill Recreation and Parks District and EBPRD, these listed parks and recreation providers do not currently provide enough facilities to meet their demand as detailed in the 2021 MSR. To offset impacts from future development, all new projects must adhere to County Code Division 720, Ordinance No. 2007-17 which collects impact fees from new development to fund the County's parks and recreation services. The County's continued implementation of park improvement and development projects would ensure that the adequate amount of parkland would be available. Each recreation and parks district and community service district (of those that provide parks and recreation services) also collect revenue from property taxes, assessments and service charges to fund improvement, which in turn would serve to reduce the potential for deterioration of existing facilities. General Plan Growth Management Policy 4-2 and Implementation Measures 4-1 and 4-o would also mitigate impacts to parks and recreation services. Adherence to existing regulations would reduce impacts to less than significant.

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Furthermore, it should be noted that while the service capacities of local parks and recreation providers are exceeded by current demand, the total acreage of all park facilities provided in the County meet and exceed the County’s goal. As noted in the Existing Conditions section, there are a variety of parks and recreation providers in the County including the recreation and parks districts, county service areas and community service districts, EBPRD, EBMUD, CCWD, the California State Parks System, and other County operated facilities. When considered together, the acreage per 1,000 residents, using the Census 2020 estimate of 1,147,788 residents in the County, is 94 acres per 1,000 residents. While this calculation includes facilities that are meant to service the region or state in addition to the County’s population, it shows that the County currently exceeds its overall service goal of four acres per 1,000 residents. The projected maximum increase of 63,471 new residents under the HEU would decrease this service ratio to 89 acres per 1,000 residents, which still meets the County’s standard.

**Level of Significance Before Mitigation:** Impact 5.15-5 would be less than significant.

*Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.15-5 would be less than significant.

5.15.5.5 CUMULATIVE IMPACTS

Future development, along with other existing, planned, proposed, approved, and reasonably foreseeable development in the region, would increase the use of existing parks and would contribute to the cumulative demand for regional and local parks and recreational facilities and services in the County. Future development would be required to provide adequate park facilities to meet the demand of proposed development. Environmental impacts resulting from the provision of park and recreational facilities would be identified by subsequent project-level environmental review in conjunction with individual development projects.

Individual development projects would be subject to development impact fees to fund the provision of physical parkland, community recreation, and other public purposes. These fees and policy provisions would ensure that the parks districts, community service districts, and county service areas would adequately provide for park and recreation needs for residents, while environmental review of new development would mitigate any environmental impacts of park and recreation facilities. Therefore, the proposed project would have a less than cumulatively considerable impact on parks and recreation services.

5.15.5.6 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

Upon implementation of regulatory requirements and standard conditions of approval, the following impact would be less than significant: 5.15-5.

5.15.5.7 MITIGATION MEASURES

No mitigation measures are required.

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#### 5.15.5.8 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impact 5.15-5 would be less than significant.



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This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Contra Costa Housing Element Update to result in transportation and traffic impacts in Contra Costa County. Vehicle miles traveled (VMT) data for this Section was provided by Fehr and Peers. Note that this analysis was modeled based on the change areas identified in the upcoming General Plan Update.

#### 5.16.1 Environmental Setting

##### 5.16.1.1 REGULATORY BACKGROUND

###### State Regulations

###### *Assembly Bill 1358 (California Complete Streets Act)*

Assembly Bill 1358 (AB 1358) or the California Complete Streets Act, was signed into law on September 30, 2008. Since January 1, 2011, AB 1358 has required circulation element updates to address the transportation system from a multimodal perspective. The Act states that streets, roads, and highways must “meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the General Plan.” The Act requires a circulation element to plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit. In addition, the Act requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. Contra Costa County adopted its complete streets ordinance in 2016.

###### *Assembly Bill 32 (Global Warming Solutions Act)*

Assembly Bill 32 (AB 32) or the Global Warming Solutions Act was signed into law on September 27, 2006. AB 32 established a comprehensive program to reduce greenhouse gas emissions to combat climate change. This Bill requires the California Air Resources Board (CARB) to develop regulations that reduce greenhouse gas emissions to 1990 levels by 2020. On January 1, 2012, the greenhouse gas rules and market mechanisms, adopted by CARB, took effect and became legally enforceable. The reduction goal for 2020 is to reduce greenhouse gas emissions by 25 percent of the current rate in order to meet 1990 levels, and a reduction of 80 percent of current rates by 2050. The AB 32 Scoping Plan contains the main strategies California will use to reduce the greenhouse gases. The scoping plan has a range of greenhouse gas reduction actions, which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, and an AB 32 program implementation regulation for funding. In 2016, the Legislature passed SB 32, which codifies a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB recognizes cities as “essential partners” in reducing greenhouse gas emissions. The Air Resources Board has developed a Local Government Toolkit with guidance for GHG reduction strategies such as improving transit, developing bicycle/pedestrian infrastructure, increasing city fleet vehicle efficiency, and other strategies.

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#### *Senate Bill 375 (Sustainable Communities and Climate Protection Act)*

Senate Bill 375 (SB 375) or the Sustainable Communities and Climate Protection Act, provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal is to reduce the number and length of automobile commuting trips, helping to meet the statewide targets for reducing greenhouse gas emissions set by AB 32.

SB 375 requires each MPO to add a broader vision for growth to its transportation plan — called a Sustainable Communities Strategy (SCS). The SCS must lay out a plan to meet the region’s transportation, housing, economic, and environmental needs in a way that enables the area to lower greenhouse gas emissions. The SCS should integrate transportation, land-use, and housing policies to plan for achievement of the emissions target for each region. The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) Regional Transportation Plan (RTP) and SCS were adopted in 2017 and updated under the title Plan Bay Area 2050 in 2020.

#### *Senate Bill 743 (SB 743)*

Passed in 2013, California Senate Bill (SB) 743 changes the focus of transportation impact analysis in CEQA from measuring impacts to drivers, to measuring the impact of driving. The change is being made by replacing vehicle delay-based metrics (e.g., Level of Service [LOS]) with a vehicle miles traveled (VMT) approach. This shift in transportation impact focus is intended to better align transportation impact analysis and mitigation outcomes with the State’s goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through development of multimodal transportation networks. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of land use entitlement review and impact fee programs. In December 2018, the Natural Resources Agency finalized updates to Section 15064.3 of the CEQA Guidelines, including the incorporation of SB 743 modifications. The Guidelines’ changes were approved by the Office of Administrative Law and as of July 1, 2020 are now in effect statewide.

To help aid lead agencies with SB 743 implementation, the Governor’s Office of Planning and Research (OPR) produced the Technical Advisory on Evaluating Transportation Impacts in CEQA that provides guidance about the variety of implementation questions they face with respect to shifting to a VMT metric. Key guidance from this document includes:

- VMT is the most appropriate metric to evaluate a project’s transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a “per rate” basis.
- OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. OPR notes that this threshold is supported by evidence that connects this level of reduction to the State’s emissions goals.

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- OPR recommends that where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.
- Lead agencies have the discretion to set or apply their own significance thresholds.

### Regional/Local Regulations

#### *Contra Costa County Congestion Management Program*

The Contra Costa Transportation Authority (CCTA) is Contra Costa County’s designated Congestion Management Agency (CMA). It is responsible for implementing programs to ensure traffic levels remain manageable. As the CMA, CCTA is in charge of coordinating land use, air quality, and transportation planning among local jurisdictions. A Congestion Management Program (CMP) was created to spend the funds allocated to these projects, known as Measure J. This measure is a one-half cent Countywide sales tax used for transportation improvements within the County. The revenue must be spent on projects and programs included in the CCTA Transportation Expenditure Plan (Expenditure Plan). The Expenditure Plan designates 18 percent of the annual sales tax revenue as “return-to-source” funds (CCTA 2021a).

#### *Contra Costa Countywide Transportation Plan*

The Countywide Transportation Plan (CTP) is intended to carry out the following Countywide transportation goals:

- Enhance the movement of people and goods on highways and arterial roads.
- Manage the impacts of growth to sustain Contra Costa’s economy and preserve its environment.
- Provide and expand safe, convenient, and affordable alternatives to the single-occupant vehicle; and
- Maintain the transportation system.

The CTP incorporates five sub-regional Action Plans for Routes of Regional Significance (Action Plans). This is one of the primary vehicles for implementing achieving the Measure J Growth Management Program’s goal of reducing the cumulative impacts of growth. The Action Plans also fulfill a key requirement of CCTA’s Congestion Management Program. This is a State mandated program for evaluating the impact of land use decisions on the regional transportation system and establishing performance measures. Each Action Plan contains these components:

- Long range assumptions about future land uses based on local general plans and travel demand based on household and job growth.
- Regional transportation objectives that can be measured and timed.
- Specific actions to be implemented by each jurisdiction.
- A process for consultation on environmental documents.
- A procedure for reviewing the impacts of local General Plan amendments that could affect the transportation objectives.
- A schedule for reviewing and updating the Action Plans.

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#### *Growth Management Program and CCTA VMT Guidance*

The CCTA has developed guidance for member jurisdictions to use in developing their own VMT analysis methods, metrics, and thresholds of significance. This document addresses the procedures a jurisdiction should undergo when evaluating the impacts of new development, CCTA's process for assessing compliance with the growth management program requirement, and the tools and procedures that local jurisdictions and the County have to be in compliance with the Growth Management Program.

#### *Contra Costa County Transportation Analysis Guidelines*

The Contra Costa County Transportation Analysis Guidelines (“TAG” or “Guidelines”) are provided to aid in the preparation of traffic analysis for project applicants and staff in light of the passage of SB 743. The purpose of this document is to establish a uniform approach, methodology, and tool set to evaluate the impacts of land use decisions and related transportation projects on the County transportation system. This is a “living document” and will be updated periodically to reflect newly acquired data and relevant policies. The CEQA thresholds of significance (“TOS”) impact criteria provided below require the proposed project’s transportation impact analysis to compare the VMT per person/employee to the VMT per person/employee for the County or Bay Area region. A proposed project should be considered to have a significant impact if the project VMT is greater than:

- Residential Projects: 15% below the Countywide average home-based VMT per capita.
- Employment Projects (office, industrial and institutional projects): 15% below the Bay Area average commute VMT per employee.
- Regional Retail (>50,000 square feet): 15% below Bay Area average total VMT per service population.
- Mixed-Use Projects: 15% below the Countywide average total VMT per service population.

#### *Countywide Bicycle and Pedestrian Plan*

The Contra Costa Countywide Bicycle and Pedestrian Plan (CBPP) was initially produced in 2003 and last updated in 2018 by CCTA. The County relies on this document as its own plan rather than developing and adopting a separate plan, as some other jurisdictions choose to do. The CBPP covers the entire county, including both incorporated and unincorporated areas. It is built upon the CTP, using the strategies and policies of that plan to establish bicycle-specific goals and identify actions the CCTA can take to accomplish them. The plan identifies a network of key low-stress connections that should be implemented to allow people of all ages and abilities to connect across the county on a bicycle. The document also identifies programs and educational guidelines that encourage a greater shift toward bicycle usage.

#### *Contra Costa County Active Transportation Plan*

The Contra Costa County Active Transportation Plan (ATP) provides a comprehensive look at the needs and opportunities to improve bicycling and walking throughout the unincorporated areas of the County. The plan outlines investments in new bicycle facilities, upgraded crossings, enhanced trail connections, and improved walkways. The ATP was adopted by the County on March 29, 2022 (Contra Costa 2022).



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### *Contra Costa Countywide Transportation Safety Policy and Implementation Guide*

CCTA's Countywide Transportation Safety Policy and Implementation Guide was published in August, 2021. CCTA launched their Vision Zero Framework & Systemic Safety Approach effort to serve as the basis for transportation planning, policy, design, construction, and funding throughout Contra Costa. Vision Zero is a strategy to eliminate all fatalities and severe injuries that result from traffic collisions. The Vision Zero approach views transportation-related fatalities as preventable, not inevitable, and relies on multi-disciplinary collaboration that is informed by data and is focused on equity. This document establishes a countywide policy of intent to work with partner agencies to encourage each jurisdiction to adopt and implement Vision Zero by committing to encourage and supports actions toward eliminating transportation-related fatalities and severe injuries using a collaborative, culturally sensitive, and multi-disciplinary approach. Vision Zero (e.g., two-year action plans) is encouraged to be integrated consistently countywide as standard practice in local and regional transportation planning and engineering (CCTA 2021b).

### *Contra Costa County Vision Zero Action Plan*

On March 1, 2022, Contra Costa County adopted the Action Plan from the Vision Zero Final Report that was developed collaboratively between the County's Public Works Department, the Department of Conservation and Development, and the Department of Health Services. The purpose of the Plan is to identify opportunities to enhance safety for all modes through implementation of a Safe System approach. The report builds upon the engineering- focused Systemic Safety Analysis Report (SSAR) to provide a comprehensive, multidisciplinary, and holistic approach to safety.

### *Complete Streets Policy of Contra Costa County*

The County's Complete Streets Policy was adopted by Resolution No. 2016/374 by the Board of Supervisors of Contra Costa County on July 12, 2016. This ordinance requires that as feasible, and as opportunities arise, Contra Costa County shall incorporate Complete Streets infrastructure into existing streets to improve the safety and convenience of users, with the particular goal of creating a connected network of facilities accommodating each category of users, increasing connectivity across jurisdictional boundaries, and for accommodating existing and anticipated future areas of travel origination or destination. A well connected network should include non-motorized connectivity to schools, parks, commercial areas, civic destinations and regional non-motorized networks on both publicly owned roads/land and private developments (or redevelopment areas).

### *Contra Costa Accessible Transportation Strategic Plan*

The Accessible Transportation Strategic (ATS) Plan was born from the 2017 Contra Costa Countywide Transportation Plan (CTP). The CTP identified a need to address the challenges associated with: (1) different types of accessible transportation services for older adults and people with disabilities; (2) multiple transportation providers, including cities, transit operators, social services agencies, and non-profit organizations; and (3) diverse, and sometimes overlapping, service areas. The ATS Plan is also intended to address the unfulfilled recommendations of three previous studies which were similar in scope. While the 2016 and 2020 Transportation Expenditure Plans (TEP) did not succeed in accessing sales tax measure funds,

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### TRANSPORTATION

they did further set expectations for the Plan to ultimately "implement a customer-focused, user friendly, seamless coordinated system". Finally, the ATS Plan helps fulfill a requirement by the Metropolitan Transportation Commission (MTC) in its Resolution 4321, that CTAs/CMAAs must meet the following mobility management requirement: "Each county must establish or enhance mobility management programs to help provide equitable and effective access to transportation." Mobility management in this context refers to a centralized point of contact that facilitates ease of use of a variety of transportation modes by people with disabilities and older adults (CCTA 2021c).

#### *Community-Based Transportation Plans*

Community-Based Transportation Plans (CBTPs) are sponsored by MTC and intended to improve mobility options for low-income and underserved communities. There are two CBTPs that include unincorporated areas of Contra Costa County, one for the Richmond area that was completed in 2004 and updated in 2020, and another for the Pittsburg-Bay Point area that was completed in 2007 and updated in 2020. Each plan was developed with key stakeholders, transportation service providers, and community members to develop actions toward improving all types of transportation, increasing access to services, improving local quality of life, providing environmental benefits, and adding to the sense of community in the area.

#### *Contra Costa County Area of Benefit (AOB) Program*

An "Area of Benefit" (AOB) is a transportation mitigation program related to a specific geographic area of unincorporated Contra Costa County in which the County imposes transportation mitigation fees. This fee is a type of development impact fee on new development to fund new development's share of the transportation improvements required to satisfy transportation demands within that geographic area. The County has a total of 14 traffic AOB programs.

#### *Regional Transportation Planning Committee 'RTPC' Development Impact Fees*

Development impact fees are levied by four Regional Transportation Planning Committees in the jurisdictions of their member agencies. The Tri-Valley Transportation Council/Southwest Area Transportation Committee oversees the expenditures of development fees for transportation in the Tri-Valley area and includes the Town of Danville, counties of Alameda and Contra Costa and the cities of Dublin, Livermore, Pleasanton and San Ramon as member agencies. The West Contra Costa Transportation Advisory Committee administers the West County Subregional Transportation Mitigation Program and includes the cities of El Cerrito, Hercules, Pinole, Richmond, San Pablo; Contra Costa County; and the transit providers, AC Transit, BART, and WestCAT as member agencies. TRANSPLAN coordinates the regional transportation interests of the communities in eastern Contra Costa County and includes the Cities of Antioch, Brentwood, Oakley and Pittsburg, and the unincorporated communities of Bay Point, Bethel Island, Byron, Discovery Bay and Knightsen as member agencies. TRANSPAC administers the East Contra Costa Regional Fee Program. TRANSPAC (Transportation Partnership and Cooperation) is the Regional Transportation Planning Committee (RTPC) for Central Contra Costa and represents the cities of Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek and the unincorporated area of Central Contra Costa County.

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### *Transportation Demand Management Ordinance*

As adopted in Chapter 82-32 of the County Ordinance Code, the intent of this the TDM program is to further the transportation goals of the County General Plan, the Measure C Growth Management Program, Contra Costa County's Congestion Management Program, and the Bay Area Clean Air Plan. Section 82-32.004 outlines states that the purpose of the program is to implement the provisions of the General Plan to promote a more balanced transportation system that takes advantage of all modes of transportation by:

- Incorporating pedestrian, bicycle, and transit access into improvements proposed in development applications;
- Incorporating the overall intent and purpose of this chapter into the land use review and planning process;
- Allowing requests for reductions in the off-street parking requirements for residential or nonresidential projects that have a conceptual TDM Program;
- Providing information to residents on opportunities for walking, bicycling, ridesharing and transit.

This ordinance applies to all development, both residential and nonresidential (section 82-32.006) and provides requirements for these development types separately.

### *Contra Costa County General Plan*

The County's Transportation and Circulation Element includes the following goals and policies pertinent to consideration of proposed development projects in the County.

- **Goal 5-A:** To provide a safe, efficient and integrated multimodal transportation system.
- **Goal 5-B:** To coordinate the provision of streets, roads, transit and trails with other jurisdictions.
- **Goal 5-C:** To balance transportation and circulation needs with the desired character of the community.
- **Goal 5-D:** To maintain and improve air quality above air quality standards.
- **Goal 5-E:** To permit development only in locations of the County where appropriate traffic level of service standards are ensured.
- **Goal 5-F:** To reduce cumulative regional traffic impacts of development through participation in cooperative, multi-jurisdictional planning processes and forums.
- **Goal 5-G:** To provide access to new development while minimizing conflict between circulation facilities and land uses.
- **Goal 5-H:** To ensure the mutual compatibility of major transportation facilities with adjacent land uses.
- **Goal 5-I:** To encourage use of transit.
- **Goal 5-J:** To reduce single-occupant auto commuting and encourage walking and bicycling.
- **Goal 5-K:** To provide basic accessibility to all residents, which includes access to emergency services, public services and utilities, health care, food and clothing, education and employment, mail and package distribution, freight delivery, and a certain amount of social and recreational activities.

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- **Goal 5-L:** To reduce greenhouse gas emissions from transportation sources through provision of transit, bicycle, and pedestrian facilities.
- **Policy 5-2:** Appropriately planned circulation system components shall be provided to accommodate development compatible with policies identified in the Land Use Element.
- **Policy 5-3:** Transportation facilities serving new urban development shall be linked to and compatible with existing and planned roads, bicycle facilities, pedestrian facilities and pathways of adjoining areas, and such facilities shall use presently available public and semi-public rights of way where feasible.
- **Policy 5-4:** Development shall be allowed only when transportation performance criteria are met and necessary facilities and/or programs are in place or committed to be developed within a specified period of time.
- **Policy 5-5:** Right of way shall be preserved to meet requirements of the Circulation Element and to serve future urban areas indicated in the Land Use Element.
- **Policy 5-7:** Through-traffic along arterials shall be improved by minimizing the number of new intersecting streets and driveways; and, when feasible, by consolidating existing street and driveway intersections.
- **Policy 5-8:** Access points on arterials and collectors shall be minimized.
- **Policy 5-9:** Existing circulation facilities shall be improved and maintained by eliminating structural and geometric design deficiencies.
- **Policy 5-16:** Curbs and sidewalks shall be provided in appropriate areas.
- **Policy 5-17:** Emergency response vehicles shall be accommodated in development project design.
- **Policy 5-20:** New development (including redevelopment and rehabilitation projects) shall contribute funds and/or institute programs to reduce parking demand and/or provide adequate parking.
- **Policy 5-21:** New development shall contribute funds and/or institute programs to provide adequate bicycle and pedestrian facilities where feasible.
- **Policy 5-22:** New subdivisions should be designed to permit convenient pedestrian access to bus transit and efficient bus circulation patterns.
- **Policy 5-23:** All efforts to develop alternative transportation systems to reduce peak period traffic congestion shall be encouraged.
- **Policy 5-24:** Use of alternative forms of transportation, such as transit, bike and pedestrian modes, shall be encouraged in order to provide basic accessibility to those without access to a personal automobile and to help minimize automobile congestion and air pollution.
- **Policy 5-25:** Improvement of public transit shall be encouraged to provide for increased use of local, commuter and intercity public transportation.
- **Policy 5-26:** Rail transit extensions including protection and acquisition of necessary right-of-way, station areas, and potential non-motorized station access routes shall be encouraged along all freeway corridors.
- **Policy 5-27:** Rail transit facilities or additional high occupancy vehicle lanes proposed within a designated transit corridor shall be considered consistent with this General Plan.

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- **Policy 5-30:** Street systems shall be designed and/or modified to discourage additional through traffic in existing residential areas, but not at the expense of efficient bus transit or bikeways.
- **Policy 5-32:** Local road dimensions shall complement the scale and appearance of adjoining properties.
- **Policy 5-34:** Appropriate buffers, such as soundwalls, bermed embankments, depressed alignments, and open space areas along major transportation facilities, shall be provided adjacent to noise sensitive land uses.
- **Policy 5-43:** Provide special protection for natural topographic features, aesthetic views, vistas, hills and prominent ridgelines at "gateway" sections of scenic routes. Such "gateways" are located at unique transition points in topography or land use and serve as entrances to regions of the County.
- **Implementation Measure 5-d:** The County shall establish and maintain an Area of Benefit program to collect fees on new development for roadway and related transportation improvements specified in the Circulation Element. Fees shall be based on the traffic generated by a use and the costs of transportation improvements necessary to maintain acceptable Levels of Service and/or accommodate the use of alternative modes of travel with the cumulative amount of development authorized by adopted plans.
- **Implementation Measure 5-e.** Establishment of assessment districts shall be encouraged to supplement or replace fees on new development.
- **Implementation Measure 5-k.** Design a system of local and collector streets within a development to connect pedestrians and bicyclists with transit stops, activity centers and adjacent neighborhoods.
- **Implementation Measure 5-n:** Enforce County TDM (Transportation Demand Management) Ordinances consistent with State law, and encourage neighboring jurisdictions to adopt similar ordinances.
- **Implementation Measure 5-l.** Reserve rights-of-way to ensure compatibility with transit service in the design of developments on appropriate freeway, expressway, arterial and collector routes.
- **Implementation Measure 5-ak:** Provide safe and convenient pedestrian and bike ways in the vicinity of schools and other public facilities and in commercial areas and provide convenient access to bus routes.
- **Implementation Measure 5-al:** Ensure that pedestrian connectivity is preserved or enhanced in new developments by providing short, direct pedestrian connections between land uses and to building entrances.
- **Implementation Measure 5-be:** Incorporate sidewalks, bike paths, bike lanes, crosswalks, pedestrian cut throughs, or other bicycle pedestrian improvements into new projects.
- **Implementation Measure 5-bg.** Accommodate cyclists and pedestrians during construction of transportation improvements and other development projects.

### 5.16.1.2 EXISTING CONDITIONS

The following information pertaining to the County's existing roadways, transit network and services, and bicycle and pedestrian infrastructure is from the Transportation Baseline Report prepared in 2019 for the County's General Plan Update by Fehr and Peers.

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#### *Roadway Network*

##### ***Freeways***

The freeways in Contra Costa County are I-680, I-80, I-580, SR 4, SR 24, SR 242, and SR 160.

- **I-680** functions as a central spine for Contra Costa County, passing through the entire length of the county from north to south. On the north end, I-680 passes over the Benicia Bridge and connects to Solano County. On the south end, the freeway continues southward through Alameda County and on to Santa Clara County. Most of Contra Costa County's job centers are located along or near I-680, including downtown Walnut Creek, the Contra Costa Centre/Pleasant Hill BART station area, and the Bishop Ranch Business Park. I-680 also serves as a primary commute route for county residents who work in the Tri-Valley portion of Alameda County or in Silicon Valley. Major current and upcoming investments in the I-680 corridor are focused on improving traffic flow through the addition of HOV/Express Lanes, exploring opportunities for applying innovative technologies to better manage demand, and improving the I-680/SR 4 interchange.
- **I-80** passes through the western portion of Contra Costa County from the Alameda County boundary up to the Carquinez Bridge connecting to Solano County. I-80 is a major regional and interregional travel route and is one of the busiest corridors in the region, as the primary connection from San Francisco to Sacramento and continuing on across the country to New York City. The I-80 corridor through western Contra Costa County has long been one of the most congested in the region, as it serves commuters headed to and from the employment centers of Oakland and San Francisco. Recent investments have established the I-80 Smart Corridor, using ramp metering and signal coordination, real-time traveler information, and variable speed advisories to help manage traffic on this critical corridor.
- **I-580** spans a small portion of western Contra Costa County; it separates from I-80 in the Alameda County city of Albany, then proceeds westward through Richmond to the Richmond-San Rafael Bridge, thereby connecting Contra Costa County to Marin County.
- **SR 4** is the primary east-west corridor across Contra Costa County. Starting at I-80 in western Contra Costa County, SR 4 proceeds eastward through the central part of the county and serves as the primary access route for eastern Contra Costa County, eventually connecting across the San Joaquin County boundary. The portion of SR 4 in eastern Contra Costa County was recently expanded, including HOV lanes and a BART extension to Antioch. Upcoming improvements along SR 4 will be focused in the central part of the county, including HOV lanes, targeted mixed-flow lane additions to address current bottlenecks, and improvements to the I-680/SR 4 interchange, as well as exploring options for an integrated corridor mobility program through the central and eastern parts of the county.
- **SR 24** is an east-west freeway in the central part of the county. It connects to Alameda County at the Caldecott Tunnel and travels eastward to connect with I-680 in Walnut Creek.
- **SR 242** is a short freeway segment connecting I-680 to SR 4 in Concord.
- **SR 160** is a very short freeway segment connecting SR 4 in Antioch to the Antioch Bridge and on to Sacramento County.

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Given Contra Costa County's central location and the presence of several major interregional corridors within the county boundaries, several roadways are subject to significant levels of traffic congestion and delay. MTC regularly tracks the most congested commute routes in the region; in their most recent analysis of 2017 data, three of the ten most congested commute corridors in the Bay Area were found in Contra Costa County:

- #2: I-80 westbound in the morning from Hercules to the Bay Bridge
- #5: SR 4 eastbound in the afternoon between Martinez and Concord
- #10: I-680 northbound in the afternoon from Danville to Walnut Creek

Of these three corridors, eastbound SR 4 from Martinez to Concord has experienced the most dramatic change. It was not in the top ten in 2015 but by 2017 it was ranked at #5, reflecting the effects of increased residential development in eastern Contra Costa County and greater levels of commuting through central and western portion of the county.

#### ***Expressways***

The Contra Costa General Plan defines expressways as controlled-access moderate speed roadways serving intercity or intercounty trips. Expressways often have at-grade intersections and typically do not allow direct access to abutting parcels. Some of the roads designated as expressways in the General Plan include Richmond Parkway, Kirker Pass Road, Taylor Boulevard and Vasco Road.

#### ***Arterials***

The primary function of arterial streets is to move traffic relatively long distances and connect freeways to local-serving street networks. Limited access is provided to abutting parcels in many cases. Arterials typically operate at relatively high speeds and can serve between 10,000 and 40,000 vehicles per day; minor arterials may carry fewer than 10,000 vehicles per day. Most intersections along arterials are signalized, often with a coordinated and interconnected signal system. Some of the primary arterials in Contra Costa include San Pablo Avenue, San Pablo Dam Road, Danville Boulevard/San Ramon Valley Boulevard, Camino Tassajara, and Byron Highway.

#### ***Transit Network***

##### ***BART***

Bay Area Rapid Transit (BART) operates two lines in Contra Costa County. The Richmond line serves the western part of the county, with stations at El Cerrito Plaza, El Cerrito del Norte, and Richmond (which offers an opportunity to transfer to Amtrak). Two BART routes use this line; the Richmond-San Francisco route connects to San Francisco and on to Daly City, while the Richmond-Berryessa route connects to the Berryessa community in San Jose. Both routes operate at 15-minute frequencies throughout most of the day.

The Antioch line serves central and eastern Contra Costa County, with stations at Orinda, Lafayette, Walnut Creek, Pleasant Hill/Contra Costa Centre, Concord, North Concord/Martinez, Pittsburg/Bay Point, Pittsburg Center, and Antioch, and connects to San Francisco and on to the San Francisco International Airport and Millbrae. The Antioch-San Francisco-Millbrae route is heavily utilized and operates at as little as

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5-minute frequencies during peak commute hours, including some limited-service trains that operate only between Pleasant Hill and downtown San Francisco.

The two most utilized of the 12 BART stations in Contra Costa County are El Cerrito del Norte and Pleasant Hill/Contra Costa Centre. In 2015, El Cerrito del Norte averaged approximately 8,800 daily riders, and Pleasant Hill/Contra Costa Centre averaged about 7,400 daily riders. The mode of access to Contra Costa County BART stations varies widely depending on the station's local context. For example, none of the top ten BART stations system-wide for walking and biking are in Contra Costa County. Most of the stations in the county exist in a suburban and vehicle-oriented part of the region, and thus are more frequently accessed by personal vehicle. Some of the top stations system-wide for vehicle drop-offs are in Contra Costa County, including Pittsburg/Bay Point, Walnut Creek, Lafayette, and El Cerrito del Norte. North Concord/Martinez, Orinda, Walnut Creek, Concord, and Lafayette are among the top ten stations system-wide for driving and parking at the station. Vehicle parking at most local BART stations is heavily utilized, and the parking lots typically fill up between 7:30 and 8:00 AM.

#### ***Amtrak***

Amtrak service in Contra Costa County occurs along the San Joaquin line, which connects the Bay Area and south to Bakersfield, and along the Capitol Corridor line, which connects southward to San Jose and northward to Sacramento. These services are locally administered by joint powers authorities (JPAs), the San Joaquin JPA and Capitol Corridor JPA, respectively. In California, Caltrans administered these Amtrak lines until transferring these duties to the local JPAs in 2015.

There are multiple departures daily on both lines. The San Joaquin line serves all three of the stops within Contra Costa: Richmond (allowing a transfer to BART), Martinez, and Antioch. The Capitol Corridor stops at Richmond and Martinez. Amtrak also provides access to further destinations, with the California Zephyr line connecting Martinez to Chicago, and the Coast Starlight line connecting Martinez to Los Angeles and Seattle.

Parking is available at all three Contra Costa County Amtrak stations, with pricing and hours varying by location. The Martinez station parking lot is owned by the City of Martinez and includes 136 regular spaces. The Richmond station parking lot is owned by BART and includes 20 regular spaces for Amtrak users. Parking at the Antioch station is provided in public parking lots owned by the City of Antioch, with 42 regular spaces in the nearest lot.

The City of Hercules is planning a regional intermodal transportation center, which would include a rail station, ferry terminal, and bus service. The City of Oakley has a planned station that would be served by the San Joaquin line.

#### ***San Francisco Bay Ferry***

Starting in January 2019, the San Francisco Bay Ferry operates ferry service between the Richmond Ferry Terminal and the Ferry Building in San Francisco. There are four runs in the primary commute direction during peak commute hours, as well as limited reverse commute service.



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#### ***AC Transit***

AC Transit serves the western parts of the county (Richmond, El Cerrito, San Pablo, Pinole, El Sobrante, and Kensington) and most of Alameda County, with service to San Francisco and south to Santa Clara. San Pablo Avenue is the major spine for AC Transit bus service through western Contra Costa County, with important transfer hubs at the three local BART stations (El Cerrito Plaza, El Cerrito del Norte, and Richmond), as well as at Contra Costa College in San Pablo, Hilltop Mall in Richmond, and the Richmond Parkway Transit Center. East Bay Paratransit is operated by AC Transit and BART and fulfills the ADA paratransit obligations for both agencies transporting riders within the AC Transit service area.

#### ***County Connection***

County Connection, formally known as the Central Contra Costa Transit Authority, provides service throughout the central part of the county including Clayton, Concord, Danville, Lafayette, Martinez, Moraga, Orinda, Pleasant Hill, San Ramon, Walnut Creek, and nearby unincorporated areas. Important transfer hubs for County Connection buses are at the Pleasant Hill, Walnut Creek, and Concord BART stations, the Martinez Amtrak station, and the Diablo Valley College campus in Pleasant Hill. County Connection also operates several express bus routes serving the Bishop Ranch employment center in San Ramon, offering connections to BART stations in Walnut Creek and Dublin/Pleasanton as well as to the Pleasanton ACE commuter rail station. County Connection LINK is the paratransit service that operates on the same schedule and in the same area as the County Connection's buses.

#### ***Tri Delta Transit***

Tri Delta Transit serves eastern Contra Costa County, including the cities of Antioch, Brentwood, Pittsburg, and Oakley, and the unincorporated area of Bay Point. Major transfer hubs for Tri Delta Transit are at the three local BART stations (Pittsburg/Bay Point, Pittsburg Center, and Antioch), as well as at Los Medanos College in Pittsburg and the downtown Brentwood park-n-ride. Tri Delta Transit's Dial-a-Ride service offers ADA paratransit within the same service area.

#### ***WestCAT***

WestCAT serves the far western communities of Richmond, Pinole, and Hercules, as well as nearby unincorporated communities such as Rodeo and Crockett. Important transfer hubs for WestCAT are at the Hilltop Mall in Richmond, the Richmond Parkway Transit Center, and the Hercules Transit Center. Express buses extend to the El Cerrito del Norte BART station, and WestCAT also operates one regional express bus (LYNX) from the Hercules Transit Center to San Francisco. WestCAT operates a dial-a-ride service, both for ADA paratransit customers and for the general public in some of the more rural parts of the service area.

#### ***Other Transit Operators with Service to Contra Costa County***

Additional bus operators including SolTrans, Golden Gate Transit, Livermore Amador Valley Transit (also known as Tri-Valley Wheels), and Napa VINE operate primarily in other parts of the Bay Area, but have express service connecting to BART stations in Contra Costa.

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#### *Existing Bicycle Network*

Bikeways connect areas across the county and are supported by a wide variety of agencies and jurisdictions. Countywide bikeways help connect residents in a practical and healthy alternative to driving through both on- and off-road facilities. The “countywide bikeway network” (CBN) was established in the 2003 CBPP and has been expanded upon with the most recent CBPP update in 2018. This network is comprised of bikeway corridors connecting cities, towns, and major destinations throughout the county. Key bicycle corridors included in the CBN include:

- The Bay Trail
- San Pablo Avenue corridor
- Connections between western and central parts of the county (Cummings Skyway/Franklin Canyon/SR 4; Alhambra Valley Road; San Pablo Dam Road; Carquinez Scenic Drive)
- Connections to Alameda County (SR 24; Pinhurst Road; Canyon Road; Redwood Road)
- Iron Horse Trail
- Connections within the central part of the county (Olympic Boulevard; Mt. Diablo Boulevard; Geary Road; Main Street; Treat Boulevard; Monument Boulevard; Pleasant Hill Road; Contra Costa Boulevard; Taylor Boulevard; Ygnacio Valley Road; Concord Boulevard; Concord Avenue; Cowell Road; Turtle Creek Road)
- Connections between central and eastern parts of the county (Kirker Pass Road; Marsh Creek Road)
- Regional trails (Ohlone Greenway; Richmond Greenway; Delta de Anza Trail; American Discovery Trail, etc.)

#### *Pedestrian Network*

Walking as a mode of transportation is generally confined to short local trips, generally within one city or town and not across countywide networks. On a countywide level such as in the CBPP, the focus is maintained at a high level, prioritizing investments in pedestrian-oriented districts at BART stations and along routes to transit, along routes to key activity centers such as schools, and near significant employment, shopping, or commercial centers. Recommended treatments include ADA accessible walkways, curb ramps, safer intersections, traffic calming when appropriate, direct pedestrian connections, and streetscape improvements.

### 5.16.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).

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- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.

### 5.16.3 Proposed Housing Element Policies

The following proposed Housing Element policy pertains to transportation:

- **HE-P2.2:** Encourage and provide incentives for the production of housing in close proximity to public transportation and services.

### 5.16.4 Environmental Impacts

#### 5.16.4.1 DISCUSSION OF NO TRANSPORTATION IMPACTS

All impacts would be less than significant or potentially significant.

#### 5.16.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.16-1: Implementation of the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. [Threshold T-1]

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The proposed Housing Element Update does not include site specific designs showing driveway locations and therefore there are no specific details to review and assess impacts on pedestrian, bicycle, and transit facilities. As part of the standard development review process, the County would require all future development of identified Housing Element inventory sites to go through a review of pedestrian, bicycle, and transit facilities in the area surrounding the individual development project to ensure that future developments do not conflict with existing or planned facilities supporting those travel modes. All pedestrian, bicycle, and transit facilities proposed would be designed using the appropriate County design standards. Any request to modify or develop new transit, bicycle, and pedestrian facilities would be subject to and designed in accordance with all applicable General Plan policies. In particular, the Transportation and Circulation Element provides a number of goals and policies that encourage and enforce consistency with or adherence to the County's various plans, programs, and ordinances for new development. Transportation and Circulation Element Policy 5-2 states that appropriately planned circulation system components shall be provided to accommodate development compatible with policies identified in the Land Use Element and Policy 5-4, which states that development shall be allowed only when transportation performance criteria are met and necessary facilities and/or programs are in place or committed to be developed within a specified period of time. As individual development proposals under the Housing Element would be evaluated for consistency with the County's plans including the CMP, CTP, and CBPP, as well as comply with ordinances such as the TDM program, the impact of implementing the HEU would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.16-1 would be less than significant.

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#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.16-1 would be less than significant.

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Impact 5.16-2: Implementation of the proposed project would/not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b). [Threshold T-2]

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The County's Transportation Analysis Guidelines describe County's recommended methodology for compliance with the requirements of Senate Bill 743 (SB 743) regarding analysis of vehicle miles traveled (VMT) for land use projects that are subject to the California Environmental Quality Act (CEQA).

As described in the Transportation Analysis Guidelines, there are four screening criteria that can be applied to screen projects out of conducting project level VMT analysis.

1. Projects that generate or attract fewer than 110 daily vehicle trips or, projects of 10,000 square feet or less of non-residential space or 20 residential units less, or otherwise generating less than 836 VMT per day.
2. Residential, retail, office projects, or mixed-use projects proposed within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor.
3. Residential projects (home-based VMT) at 15% or below the baseline County-wide home-based average VMT per capita, or employment projects (employee VMT) at 15% or below the baseline Bay Area average commute VMT per employee in areas with low VMT that incorporate similar VMT reducing features (i.e., density, mix of uses, transit accessibility).
4. Public facilities (e.g. emergency services, passive parks (low-intensity recreation, open space), libraries, community centers, public utilities) and government buildings.

The VMT modeling used to evaluate emission impacts from VMT in Section 5.8, *Greenhouse Gas Emissions*, used the buildout assumptions of the upcoming General Plan Update which can be seen on the first page of Appendix 5.3-1 in a table titled Land Use Statistics- Contra Costa County. While these buildout estimates assume a 38 percent growth for housing units and 39 percent growth for population between 2019 and 2040, the model shows (page 2, Appendix 5.3-1, in a table titled Comparison of the Change in Population and VMT in Contra Costa), that VMT/person in the County will decrease within this period by 11 percent. While this model reflects assumptions made for the General Plan Update, it can be assumed that because growth under the Housing Element must comply with General Plan, that the growth pattern of the sites selected for the Housing Element will match that of the assumptions made in this model.

The sites selected by the County as potential sites to meet its RHNA are primarily in infill locations within existing residential communities. The proposed project would potentially redesignate 376 sites from non-residential uses to residential uses or increase the residential densities of sites that currently allow residential development. According to the Office of Planning and Research (OPR) Guidelines on Evaluating

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Transportation Impacts in CEQA, residential and office projects that are located in areas with low VMT, and that incorporate features such as density, mix of uses, transit accessibility, will tend to exhibit lower VMT (OPR 2018). Additionally, 204 of the 529 sites in the sites inventory, or 38 percent, have been chosen as sites to accommodate lower-income housing by the County. These sites would be targeted for affordable housing development and as stated in the OPR Guidelines, “adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT... In areas where existing jobs housing match is closer to optimal, low-income housing generates less VMT than market- rate housing. Therefore, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT.” (OPR 2018).

While the VMT generated by all potential projects pursuant to the Housing Element has not been evaluated, it can be assumed that the growth pattern created by development of the Housing Element Inventory sites would not increase the VMT per capita due to its focus on infill, increasing density, and promoting affordability. Furthermore, the VMT per capita modeled for the General Plan Update shows a decrease by 2040, indicating that the development within the County over the next eight years will reflect that of the Housing Element which focuses on VMT decreasing growth. VMT impacts of individual projects will be evaluated or screened based on CCTA’s guidelines as site-specific development proposals are submitted. Therefore, implementation of the Housing Element Update would have less than significant impacts with regards to VMT.

**Level of Significance Before Mitigation:** Impact 5.16-2 would be less than significant.

*Mitigation Measures*

No mitigation measures are required.

**Level of Significance After Mitigation:** Impact 5.16-2 would be less than significant.

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Impact 5.16-3: Implementation of the proposed would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). [Threshold T-3]

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Subsequent projects under the HEU, including any new roadway, bicycle, pedestrian, and transit infrastructure improvements, would be subject to, and designed in accordance with County standards and specifications which address potential design hazards including sight distance, driveway placement, and signage and striping. Additionally, any new transportation facilities or improvements to such facilities associated with subsequent projects would be constructed based on industry design standards and best practices consistent with the County’s ordinance code, building design and inspection requirements, in addition to any applicable community-based transportation plans. The County’s evaluation of projects’ access and circulation will incorporate analysis with respect to County standards for vehicular level of service and queuing, as well as for service to pedestrians, bicyclists, and transit users. Therefore, the HEU would result in a less-than-significant impact to transportation hazards.

**Level of Significance Before Mitigation:** Impact 5.16-3 would be less than significant.

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### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.16-3 would be less than significant.

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Impact 5.16-4: Development associated with the proposed project could temporarily result in inadequate emergency access. [Threshold T-3]

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The County maintains roadway networks in the unincorporated communities, and such networks would provide access to new development sites under the Housing Element. In accordance with industry design standards including the County's Standard Plans for General Road Work and applicable development would be subject to the requirements of Division 722, *Fire Code*, of the County's Ordinance Code. Adherence to such standards would generally ensure that the physical network would be free of obstructions to emergency responders. Emergency access to new development sites proposed under the HEU would be subject to review by the County and responsible emergency service agencies, thus ensuring the projects would be designed to meet all emergency access and design standards.

Adopted emergency response plans and emergency evacuation plans are discussed in Chapter 18, *Wildfire*, and include the Contra Costa County Emergency Operations Plan (EOP). As described in Section 5.18 under Impact 5.18-1, development under the HEU would be required to adhere to the EOP and a number of other County and state regulations. However, as noted in Impact 5.18-1, even with these requirements, construction of new development or redevelopment could cause a temporary impairment of an evacuation route due to road closure during construction activities. For areas of the County subject to increased fire hazard risk and limited evacuation access, impacts would be significant. This would be limited to the duration of the construction period and direct impacts of construction would be evaluated during the project environmental review process or permit review process by applicable Fire Protection District; however, a temporary impact could still occur on single access roadways or evacuation constrained areas where there is limited ingress and egress. While this analysis pertains to evacuation access, there is the potential that the impacts described in Impact 5.18-1 could affect the access of emergency vehicles and services in addition to emergency access for evacuation. Because construction for projects could temporarily result in inadequate emergency access would make impacts potentially significant.

***Level of Significance Before Mitigation:*** Impact 5.16-4 would be potentially significant.

### *Mitigation Measures*

Implement Mitigation Measure WILD-1 (See chapter 5.18)

***Level of Significance After Mitigation:*** Impact 5.16-4 would be less than significant.

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### 5.16.5 Cumulative Impacts

As noted in Impacts 5.16-1, 5.16-2, 5.16-3 and 5.16-4, implementation of the proposed project would not have significant impacts with regards to transportation. Most impacts would require project-specific evaluation to determine whether the project's design is consistent with relevant plans, ordinances, and policies; would create or increase roadway hazards; or result in inadequate emergency access. Additionally, projects would be evaluated under the CCTA's guidelines for assessing VMT impact during it would be determined whether such projects would require VMT analysis or be screened out under CCTA's criteria. As noted in Impact 5.16-2, the location of the sites included in the County's Housing Element Sites Inventory are primarily infill sites and the actions proposed by the Housing Element would generally increase allowable residential density in these areas. OPR's guidelines suggest that such actions would likely not result in a substantial increase in VMT per capita. However, as described in Chapter 3, Project Description, any potential changes to allowable density that are proposed in this Housing Element would be implemented with the County's upcoming General Plan Update, during which it may be decided that some of the proposed designation changes would not occur. For these reasons, implementation of the proposed project would not result in significant cumulative impacts to transportation.

### 5.16.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.16-1, 5.16-2, and 5.16-3..

### 5.16.7 Mitigation Measures

Impact 5.16-4

WILD-1      Project applicants for development in a Very High Fire Hazard Severity Zone and WUI shall prepare a Traffic Control Plan to ensure that construction equipment or activities do not block roadways during the construction period. The Traffic Control Plan shall be submitted to the Fire Protection District for review and approval of building permits.

### 5.16.8 Level of Significance After Mitigation

Impact 5.16-4

With the implementation of Mitigation Measure WILD-1, which requires the preparation of a Traffic Control Plan, impacts would be less than significant.

## 5. Environmental Analysis

### TRANSPORTATION

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## 5. Environmental Analysis

### 5.17 UTILITIES AND SERVICE SYSTEMS

This section describes the public services and utilities that would serve buildout of the proposed project. Specifically, this section includes an examination of wastewater treatment and collection, water supply and distribution systems, and solid waste services. Each subsection includes a description of existing facilities and infrastructure, applicable service goals, potential environmental impacts resulting from implementation of the proposed project, and cumulative impacts.

Impacts associated with the following public service and utility issues are addressed in other sections of this Draft EIR, as listed below.

- Storm drainage system, including potential overflow and downstream flooding impacts – Section 5.10, *Hydrology and Water Quality*
- Groundwater impacts, including water quality – Section 5.10, *Hydrology and Water Quality*

#### 5.17.1 Wastewater Treatment and Collection

##### 5.17.1.1 ENVIRONMENTAL SETTING

###### Regulatory Background

###### Federal

###### *Clean Water Act*

The Clean Water Act (CWA) is the primary federal legislation governing surface water quality protection. The statute employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water.

###### *National Pollutant Discharge Elimination System*

The NPDES program, Section 402 of the Clean Water Act, controls direct discharges into navigable waters. Direct discharges, or point source discharges, are from sources such as pipes and sewers. NPDES permits, issued by either the EPA or an authorized state/tribe, contain industry-specific, technology-based, and/or water-quality-based limits and establish pollutant monitoring and reporting requirements. (The EPA has authorized 40 states to administer the NPDES program.)

A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge. The municipal separate storm sewer system (MS4) is the permit for discharges of stormwater runoff. The NPDES permits issued jointly to Contra Costa County and other public agencies

## 5. Environmental Analysis

### UTILITIES AND SERVICE SYSTEMS

by the San Francisco Bay Regional Water Quality Control Board and the Central Valley Regional Water Quality Control Board. These permits are Permit No. CAS0029912 and CAS0083313 respectively.

#### ***General Pretreatment Regulations***

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a collection system to the treatment plant. At the plant, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (nondomestic) users.

The General Pretreatment Regulations establish responsibilities of federal, state, and local government, industry, and the public to implement Pretreatment Standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than the state/tribe or the EPA (EPA 2022).

State

#### *Municipal Service Reviews*

Government Code §56430 requires the (LAFCO) conduct a service review of the municipal services (MSR) provided in the county or other appropriate area designated by the commission. The purpose is to evaluate the current services and potential impacts in those services from projected future growth.

#### *Sanitary Sewer Overflow Program*

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge, or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease and can pollute surface water and groundwater, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. To provide a consistent, statewide regulatory approach to address sanitary sewer overflows, the SWRCB adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Resources Control Board's online SSO database. All public agencies that own or operate a sanitary sewer system comprising more than 1 mile of pipes or sewer lines which convey wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order (SWRCB 2022).

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### *Recycled Water Policy*

To establish uniform requirements for the use of recycled water, the SWRCB adopted a statewide Recycled Water Policy on February 3, 2009. The purpose of the policy is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n), in a manner that implements state and federal water quality laws. The policy describes permitting criteria that are intended to streamline the permitting of most recycled water projects. The intent of this streamlined permit process is to expedite the implementation of recycled water projects in a manner that implements state and federal water quality laws while allowing the Regional Water Quality Control Boards to focus on projects that require substantial regulatory review due to unique site-specific conditions (SWRCB 2022).

### ***Department of Public Health***

The California Department of Public Health (formerly the Department of Health Services) is responsible for establishing criteria to protect public health in association with recycled water use. The Department's Water Recycling Criteria are found in the California Code of Regulations, Title 22, Division 4, Chapter 3. Title 22 criteria, contain treatment and effluent quality requirements that vary based on the proposed type of water reuse. Title 22 sets bacteriological water quality standards based on the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to encounter the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22 requires three levels of secondary treatment, basically differing by the amount of disinfectant required (SWRCB 2022).

Title 22 also specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, the department has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems (SWRCB 2022).

The Department of Public Health does not have enforcement authority for the Title 22 criteria; instead, the RWQCBs enforce the criteria through enforcement of their permits containing the applicable criteria. All recycled water in use in the Bay Area Region complies with applicable Title 22 water quality standards, which specify treatment and use requirements for various recycled water uses (SFBA 2019, 2-64).

### Local

#### *Contra Costa Municipal Code*

#### ***ORDINANCE NO. 2018-25***

Chapter 420-6 of the County Ordinance Code, which pertains to sewage collection requires all structures in which plumbing fixtures are installed to be connected to either a sanitary sewer system or a septic system. Chapter 420-6 further requires that applications for building permits or certificates of occupancy for structures requiring disposal of sewage be submitted to the health officer for review and approval of the proposed sewage disposal system.

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### UTILITIES AND SERVICE SYSTEMS

#### ***ORDINANCE NO. 2018-25***

Chapter 420-6 of Contra Costa Municipal Code provides maximum protection to water quality and public health by establishing requirements for connection to sanitary sewers and minimum standards for the design, construction, operation and abandonment of sewage collection and disposal systems.

#### ***TITLE 10 – Source Control***

This title sets forth uniform requirements for contributors to the wastewater collection and treatment system of the Central Contra Costa Sanitary District (hereafter District) and enables the district to comply with all applicable state and federal laws required by the Clean Water Act of 1977 as amended and the General Pretreatment Regulations (40 CFR Part 403), which are on file at the District Office.

#### *Contra Costa County General Plan*

The Contra Costa County General Plan Chapter 7 Public Services and Facilities Element includes goals and policies aimed at providing an adequate level of services from potable water, sanitary sewer facilities, and public services to the region. The goals and policies are referenced as in the Public Services and Facilities Element of the General Plan.

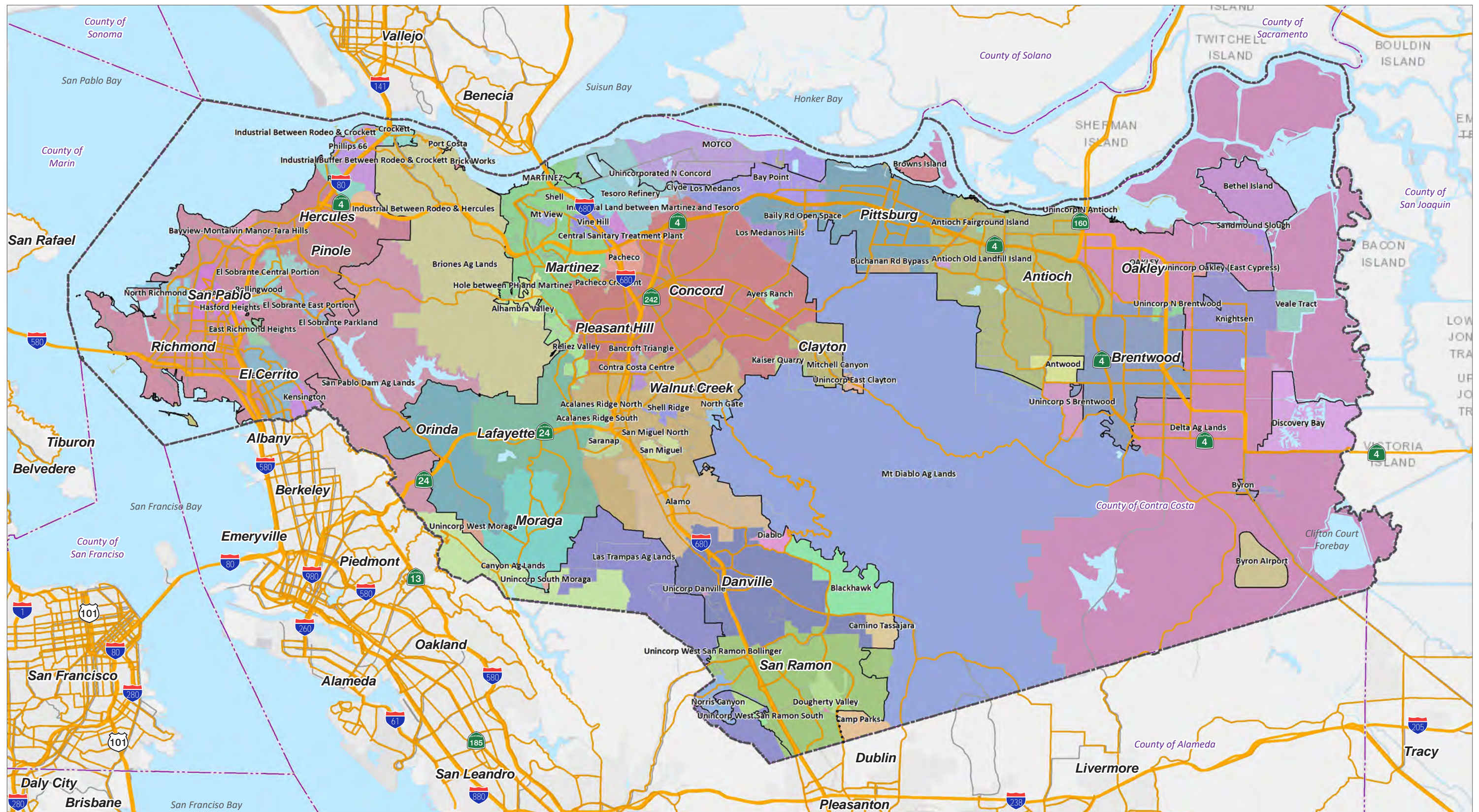
#### ***Sewer Service***

- **Policy 7-30:** Sewer service agencies shall be encouraged to establish service boundaries and develop treatment facilities to meet future service needs based on the growth policies contained in the County and cities' General Plans
- **Policy 7-33:** At the project approval stage, the County shall require new development to demonstrate that wastewater treatment capacity can be provided. The County shall determine whether (1) capacity exists within the wastewater treatment system if a development project is built within a set period, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.
- **Policy 7-37:** The need for sewer system improvements shall be reduced by requiring new development to incorporate water conservation measures which reduce flows into the sanitary sewer system.

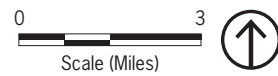
#### 5.17.1.2 EXISTING CONDITIONS

There are many wastewaters treatment and collection services throughout Contra Costa County. Water and wastewater services are provided through twenty-nine agencies: eight cities, twenty special districts, and one private water company. (CC LAFCO 2014, pg. 6). Figure 5.17-1, *Wastewater Treatment Facilities*, displays the various wastewater and water services provided in Contra Costa. Table 5.17-1 summarizes the eleven special districts that provide wastewater services to the proposed housing units.

HOUSING ELEMENT



Source: Contra Costa County Department of Conservation and Development, February 1, 2017



- Contra Costa County Boundary
- - - County Boundary
- Urban Limit Line

Figure 5.17-1  
Wastewater Treatment Facilities in Contra Costa County

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UTILITIES AND SERVICE SYSTEMS

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UTILITIES AND SERVICE SYSTEM

Table 5.17-1 Summary of Wastewater Treatment Plants within Contra Costa HEU Inventory Sites

Special Districts	Total Treatment Plant Capacity (MGD)	Primary Disposal Method
Bryon Sanitary District	96,000 GPD	Treatment at Byron Sanitary District Wastewater Treatment Plant and discharge into adjacent effluent disposal area
Central Contra Costa Sanitary District	53.8	Gravity flow through Concord sewage collection and conveyance system to Central Contra Costa Sanitary District system
Crockett Community Services District	2.11	Both the Crockett and Port Costa treatment plants discharge into the Carquinez Strait
Delta Diablo	16.5	50% recycled water; 50% discharge to New York Slough through deep water outfall
East Bay Municipal Utility District*	120	EBMUD Main Wastewater Treatment Plant (primary and secondary treatment); treated effluent discharged through an outfall into San Francisco Bay
Ironhouse Sanitary District	6.8	Effluent from Water Recycling Facility is: (1) stored in an on-site pond for later use as irrigation water; (2) applied to 334 acres of agricultural land on Jersey Island; and (3) discharged into San Joaquin River through a 550-foot outfall with 16 diffusers
Mt. View Sanitary District	3.2	Tertiary treatment and discharge into series of wetlands and marshlands
Rodeo Sanitary District	1.14	RSD, the City of Pinole, and the City of Hercules share discharge facilities into San Pablo Bay
Stege Sanitary District	320	EBMUD treatment plant - Oakland
Town of Discovery Bay Community Services District*	2.1	Secondary treatment; UV disinfection and discharge into Old River
West County Wastewater District	12.5	<b>Approximately 3 MGD of secondary effluent conveyed to EBMUD's North Richmond Water Reclamation Plant to produce tertiary treated recycled water for use in the Chevron Refinery cooling towers; approximately 3 MGD is used by EBMUD's Richmond Advance Recycled Expansion (RARE) facility at Chevron refinery for use as boiler feed water; the remaining secondary effluent conveyed to Richmond Water Pollution Control Plant, dechlorinated, and discharged into San Francisco Bay through a deep water outfall.</b>

Source: CC LAFCO 2014

\*Special district also provides water services

5.17.1.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- U-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEMS

### 5.17.1.4 PROPOSED HOUSING ELEMENT POLICIES

There are no housing element policies that address public utilities.

### 5.17.1.5 ENVIRONMENTAL IMPACTS

### 5.17.1.6 DISCUSSION OF NO WASTEWATER TREATMENT AND COLLECTION IMPACTS

All of the impacts would be less than significant or potentially significant.

### 5.17.1.7 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.17-1: Sewer and wastewater treatment systems are adequate to meet project requirements.  
[Thresholds U-1 (part) and U-3]

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The Housing Element Update (HEU) will allow for approximately 20,417 additional maximum housing units, which would result in an increase in population of approximately 63,471 people. The HEU can impact the wastewater treatment and collection's level of service. However, the proposed housing sites are allocated throughout the entire county thus the level of service would not substantially impact any singular wastewater treatment or collection system. All the housing sites identified in the inventory are within established wastewater and collection services and are likely to be able to access water and wastewater services. Depending on where the housing sites will be located, the level of service from a wastewater treatment and collection agencies will need to be evaluated for treatment capacity, ability to treat increased wastewater generation, and accordance with RWQB objectives. Furthermore, the Municipal Code details regulations and provisions relating to collecting and discharging of any sewage effluent. As noted in Chapter 420-2, before any new development can be built, the developer must first secure a permit from the board of supervisors. Article 420-6.4 of this chapter also details the requirements for a sanitary sewer to be considered available for connection to a structure requiring sewage disposal. Therefore, before any proposed housing sites in the HEU inventory can be built, the developer will need to go through the proper procedures and approval set forth in the Ordinance Code.

***Level of Significance Before Mitigation:*** Impact 5.17-1 would be less than significant.

#### *Mitigation Measures*

No mitigation measure is required.

***Level of Significance After Mitigation:*** Impact 5.17-1 would be less than significant.

### 5.17.1.8 CUMULATIVE IMPACTS

The HEU's inventory housing sites are all located within a wastewater treatment and collection sphere of influence. Before any proposed housing can be built, the developers must go through the appropriate legal channels and approvals set forth by County Ordinance Code regarding accessing wastewater treatment and collection services. As wastewater services are provided by various districts and municipalities, the cumulative setting for wastewater services includes all areas served by the districts.



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### 5.17.1.9 LEVEL OF SIGNIFICANCE BEFORE MITIGATION

All projects are required to connect to a wastewater system in one of the various districts identified in Table 5.17-1. Each of the districts maintain master service plans that are designed to accommodate growth outlined in the General Plan and to support development impact fees collected at the building permit. The districts, County and RWQCB monitor the districts individually through their operating permits and will require action to expand treatment services if needed to address growth. The County may restrict or deny permits in areas that have no wastewater service until the expansion occurs, or it is demonstrated to be available at the time of building occupancy. As the County coordinates with the service providers as part of the development review process, and there are mechanisms in place to both monitor the capacity of the systems and to expand them should need arise, this impact is considered less than cumulatively considerable.

### 5.17.2 Water Supply and Distribution Systems

#### 5.17.2.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### *State*

##### ***Urban Water Management Plans***

In accordance with California Water Code, §10610-10656 and §10608 every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 urban connections is required to submit an Urban Water Management Plan (UWMP). The plan is prepared by urban water suppliers every five years to support the suppliers' long term resource planning to ensure that adequate water supplies are available to meet existing and future water needs.

##### *Local*

##### ***Contra Costa County General Plan***

The Contra Costa County General Plan Chapter 7 Public Services and Facilities Element contains goals and policies to assure adequate water supply and quality to serve the population of Contra Costa. The goals and policies are referenced as in Public Services and Facilities Element in the General Plan.

- **Policy 7-16:** Water service systems shall be required to meet regulatory standards for water delivery, water storage and emergency water supplies.
- **Policy 7-19:** Urban development shall be encouraged within the existing water Spheres of Influence adopted by the Local Agency Formation Commission; expansion into new areas within the Urban Limit Line beyond the Spheres should be restricted to those areas where urban development can meet all growth management standards included in this General Plan.
- **Policy 7-21:** At the project approval stage, the County shall require new development to demonstrate that adequate water quantity and quality can be provided. The County shall determine whether (1) capacity exists within the water system if a development project is built within a set period of time, or (2) capacity will be provided by a funded program or other mechanism. This finding will be based on information

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### UTILITIES AND SERVICE SYSTEMS

furnished or made available to the County from consultations with the appropriate water agency, the applicant, or other sources.

- **Policy 7-22:** Water service agencies shall be encouraged to meet all regulatory standards for water quality prior to approval of any new connections to that agency.
- **Policy 7-24:** Opportunities shall be identified and developed in cooperation with water service agencies for use of non-potable water, including ground water, reclaimed water, and untreated surface water, for other than domestic use.
- **Policy 7-25:** Land uses and activities that could result in contamination of groundwater supplies shall be identified, monitored, and regulated to minimize the risk of such contamination.
- **Policy 7-26:** The need for water system improvements shall be reduced by encouraging new development to incorporate water conservation measures to decrease peak water use.

#### 5.17.2.2 EXISTING CONDITIONS

There are two major water providers in the County: The East Bay Municipal Utility District (EBMUD) and the Contra Costa Water District (CCWD). EBMUD delivers water directly to its customers after it is treated. CCWD provides treated water services to several cities in the Central County area and several city and other water agencies buy "raw," untreated water from CCWD, treat it, and then sell it to their own local customers. CCWD is not limited to providing domestic urban water supplies. Other services include wholesale treated water, reclaimed water, industrial, agricultural, and landscaping irrigation water supplies-

EBMUD provides treated water to all western Contra Costa County, the Lamorinda area, portions of Walnut Creek and Pleasant Hill, and all the San Ramon Valley. The East Bay Municipal Utility District Urban Water Management Plan 2020 (EBMUD UWP) details serving a population of 473,000 in 2020. The EBMUD water supply system collects, transmits, treats, and distributes high-quality water from its primary water source, the Mokelumne River (EBMUD 2021, pg. 8). EBMUD holds a water service contract with the United States Bureau of Reclamation (USBR) to receive 133,000 acre-feet per year (AFY) of Central Valley Project (CVP) water during dry years (EBMUD 2021, pg. H-4).

CCWD, supplies treated water to all urbanized areas in Central Contra Costa County that are not serviced by EBMUD: the northern and eastern portion of Walnut Creek, most of Pleasant Hill, all of Concord and Clayton, the Hidden Lakes area of Martinez, and the unincorporated areas of Vine Hill, Pacheco, Clyde, Port Chicago, and along Marsh Creek Road to Morgan Territory. The CVP is the CCWD's primary water source, providing a maximum delivery of 195,000 AFY (CCWD 2021, pg. 6-1). While CCWD's primary source of water supply is the CVP, the District also has water rights for the Los Vaqueros Reservoir and at Mallard Slough (CCWD 2021, pg. 6-22). CCWD does not manage groundwater, nor does it use groundwater to meet any water demands.

#### 5.17.2.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

- U-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
- U-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

### 5.17.2.4 PROPOSED HOUSING ELEMENT POLICIES

There are no housing element policies that specifically address public utilities.

### 5.17.2.5 ENVIRONMENTAL IMPACTS

### 5.17.2.6 DISCUSSION OF NO WATER SUPPLY AND DISTRIBUTION SYSTEMS IMPACTS

All of the impacts would be less than significant or potentially significant.

### 5.17.2.7 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.17-2: Water supply and delivery systems are adequate to meet project requirements. [Thresholds U-1 (part) and U-2]

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The additional 20,417 housing units proposed by the HEU would result in approximately 63,471 people under maximum allowable density scenario. According to the CCWD Urban Water Management Plan, the CCWD's service area population was projected to be 788,640 persons in 2045 (CCWD 2021, pg. 1-5). The increase in population associated with the proposed project would represent 8 percent of the CCWD's population projections by 2045. The CCWD's UWMP projected future potable water demands based on population projections and the water use target of 148 gallons per capita per day (gpcd). Based on the water use target and the increase in population, the proposed project would increase future water demand by 9,393,708 gpd by 2045.

According to the EBMUD Urban Water Management Plan, the Contra Costa population within the EBMUD service area is projected to serve 552,000 persons in 2040 (EBMUD 2021, pg. 7). This increase in population would represent 11.5 percent of the EBMUD's population projections. The EBMUD's UWMP water use target is 166 gallons per capita per day (gpd) (EBMUD 2021, pg. 84). The proposed project would increase future water demand by 10,536,186 gpd by 2040.

Although the proposed project would result in an increase in water demand, the proposed project would not require additional entitlements or a substantial expansion or alteration water supplies that would result in a physical impact to the environment. Furthermore, complying with the County Ordinance Code and Public Services and Facilities Element in the General Plan will result in less than significant impacts.

**Level of Significance Before Mitigation:** Impact 5.17-2 would be less than significant.

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### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.17-2 would be less than significant.

### 5.17.2.8 CUMULATIVE IMPACTS

The proposed project would increase future water demand in both districts. Pursuant to Section 414-4.201 Water Supply of the County Ordinance Code states that any person proposing any property needing water for domestic purposes must demonstrate an approved water supply approval from the health officer for the development. Furthermore, Policy 7-21 in the Public Services and Facilities Element of the General Plan states the County must require new development to show adequate water quantity will be met with existing water systems or with other funding programs and mechanisms before project approval. Also, Policy 7-26 encourages new development to incorporate water conservation measures to offset increase water demands during peak water uses. Cumulative impacts to water supplies are considered less than cumulatively considerable.

### 5.17.2.9 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-1            Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

### 5.17.2.10 PROPOSED HOUSING ELEMENT POLICIES

There are no housing element policies that address public utilities.

### 5.17.2.11 ENVIRONMENTAL IMPACTS

### 5.17.2.12 DISCUSSION OF NO SOLID WASTE IMPACTS

Impacts would be less than significant or potentially significant.

## 5. Environmental Analysis UTILITIES AND SERVICE SYSTEM

### 5.17.3 Solid Waste

#### 5.17.3.1 ENVIRONMENTAL SETTING

##### Regulatory Background

##### Federal

###### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act (RCRA), an amendment to the Solid Waste Disposal Act of 1965, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. The RCRA gives the United States Environmental Protection Agency (EPA) the authority to control hazardous waste from “cradle to grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA also sets forth a framework for the management of nonhazardous solid wastes.

The federal Hazardous and Solid Waste Amendments are the 1984 amendments to the RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. Amendments to the RCRA in 1986 enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances (EPA 2022).

##### State

###### *California Integrated Waste Management Act*

The California Integrated Waste Management Act of 1989 (Public Resources Code Sections 42900–42927) requires all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000 and continue to remain at 50 percent or higher for each subsequent year. The purpose of this act is to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible.

The act requires each California city and county to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the act’s mandated diversion goals. Each jurisdiction’s SRRE must include specific components, as defined in Public Resources Code Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated in the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options to reduce the amount of solid waste that must be disposed of by transformation and land disposal (CalRecycle 2022).

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### UTILITIES AND SERVICE SYSTEMS

#### Local

##### *Contra Costa County General Plan*

The Contra Costa County General Plan Chapter 7 Public Services and Facilities Element contains goals and policies to assure adequate solid waste services to serve Contra Costa County.

- **Policy 7-88:** Solid waste disposal capacity shall be considered in County and city land use planning and permitting activities, along with other utility requirements, such as water and sewer service.
- **Policy 7-92:** Waste diversion from landfills due to resource recovery activities shall be subject to goals included in the County Integrated Waste Management Plan. Public agencies and the private sector should strive to meet these aggressive goals.
- **Policy 7-94:** New waste disposal facilities shall be located to minimize potential impacts upon existing and future residents. Waste disposal and processing facilities shall be designed, developed, and operated in a manner that is compatible with surrounding land uses.

##### *Contra Costa County Solid Waste and Recycling*

The Solid Waste and Recycling Section oversees the collection of garbage, recycling, and organics in portions of the unincorporated County and implements programs to reduce solid waste disposal and promote reuse and recycling in accordance with the Integrated Waste Management Act (CCCD 2022). Contra Costa Environmental Health is certified by the California Integrated Waste Management Board as the Local Enforcement Agency (LEA) for Solid Waste in Contra Costa County (CCHS 2022).

##### *Contra Costa County Ordinance Code*

###### ***ORDINANCE NO. 85-12 and 88-88***

Chapter 418-6 of the County Code applies to all occupied residences and certain commercial businesses. The purpose of this chapter is to prevent such accumulation of solid waste by requiring that owners and other persons in control of all premises from which solid waste is generated provide for its removal and disposal on a regular and frequent basis not less than once each week. Every owner, proprietor, or manager is to provide and keep containers, shall subscribe with a collector for the collection and disposal of solid waste.

###### ***ORDINANCE NO. 2017-16***

This ordinance amends Chapter 418-2 of the County Code to establish permit requirements for the collection and transportation of solid waste by non-franchised haulers in the unincorporated area of Contra Costa County. This ordinance is adopted pursuant to Article 11, section 7 of the California Constitution, Public Resources Code section 40059 and Vehicle Code section 21100.

###### ***ORDINANCE NO. 2019-31***

The County Board of Supervisors adopted County Ordinance 2019-31 in conjunction with the 2019 California Green Building Standards (CALGreen) Code to provide a single set of construction waste management requirements that apply to projects in the unincorporated County area. The 2019 Code, as

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amended in County Ordinance Code, requires that at least 65 percent by weight of job site debris generated by most types of building project types be recycled, reused, or otherwise diverted from landfill disposal. This requirement applies to demolition projects and most new construction. CalGreen requires submission of plans and reports with verifiable post-project documentation to demonstrate that at least 65 percent of the nonhazardous construction and demolition debris generated on the job site are salvaged for reuse, recycled, or otherwise diverted. County Code Section 74-4.006 contains the complete set of CALGreen requirements pertaining to waste and recycling, including the County's amendments.

#### ***ORDINANCE NO. 2021-38***

Ordinance 2021-38 added Chapter 418-20 "Organic Waste Disposal Reduction Ordinance" to the County Code for the purpose of implementing the SB 1383 Regulations (California's Short-Lived Climate Pollutant Reduction Strategy) within the unincorporated area of Contra Costa County. The SB 1383 Regulations require counties, cities and other local jurisdictions to adopt enforceable ordinances or other enforceable mechanisms to mandate that organic waste generators, haulers, and other entities comply with requirements in the SB 1383 Regulations. SB 1383 Regulations generally address requirements applicable to organic waste collection services, inspection of waste containers for prohibited contaminants, regulation of commercial edible food generators, provision of education and outreach information to generators, reporting to CalRecycle on compliance with the SB 1383 Regulations, and maintenance of records of compliance with SB 1383 Regulations, with the goal of achievement of statewide organic waste disposal reduction targets.

#### 5.17.3.2 EXISTING CONDITIONS

In Contra Costa County the private sector has traditionally been responsible for solid waste collection and disposal. The role of government in solid waste management is one of planning, administration, facility approval, and regulatory oversight. In addition to the County, 14 of the 19 cities, four special districts and one joint powers authority franchise solid waste collection. These local public agencies enter into franchise agreements with private haulers to provide for collection services. Cities and counties also have land use approval over solid waste facilities located within their jurisdiction. It is noted that all the disposal facilities, as well as the collection services, are privately owned. As a result, the range of actions, including new facility applications, and landfill expansions, requires private sector-initiated applications or agreements as well as government policy direction and approvals. There are two separate active landfill sites operating in Costa County, one site is located in Central County, and the other is located in East County (Contra Costa 2005).

Landfills are sites for the disposal of waste materials by burial. Waste transfer stations are facilities where municipal solid waste is stored and sorted during its journey to a landfill. As shown in Table 5.17-2, *Active Solid Waste Facilities in Contra Costa County*, there are six landfills (Keller Canyon as the largest active landfill), seven transfer stations, and ten composting facilities throughout Contra Costa County (2022a).

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Table 5.17-2 Active Solid Waste Facilities in Contra Costa County

SWIS Number	Site Name	Category
07-AA-0062	Woodmill Recycling Company	Composting
07-AC-0044	CCW Wood Chipping / Grinding	Composting
07-AA-0072	Pacific Wood Recycling	Composting
07-AA-0064	Woodmill Recycling	Transfer/Processing
07-AA-0068	Brentwood Transfer Station	Transfer/Processing
07-AA-0044	WCCSLF Organic Materials Processing	Composting
07-AA-0061	Green Waste Recycle Yard	Composting
07-AA-0067	EcoMulch	Composting
07-AA-0059	Fahy Tree Service	Composting
07-AA-0027	Contra Costa TS And Recovery	Transfer/Processing
07-AA-0037	Byron Hot Springs Landspreading	Disposal
07-AC-0042	USS-Posco Industries Waste Mgmt Unit II	Disposal
07-AA-0038	Souza Ranch Landspreading Facility	Disposal
07-AA-0054	Airport Ranch Sludge Spreading	Disposal
07-AA-0069	Expert Tree Services	Composting
07-AA-0002	Acme Landfill	Disposal
07-AA-0032	Keller Canyon Landfill	Disposal
07-AC-0043	Recycling Center & Transfer Station	Transfer/Processing
07-AA-0034	Central Processing Facility	Transfer/Processing
07-AA-0056	Golden Bear Waste Recycling Center	Transfer/Processing
07-AA-0066	Oliveira Enterprises, Inc.	Composting
07-AA-0063	El Cerrito Recycling Center	Transfer/Processing
07-AA-0070	Atlas Tree Service, Inc.	Composting

Source: CalRecycle 2022b

#### 5.17.3.3 THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

- U-4 Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
- U-5 Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

#### 5.17.3.4 PROPOSED HOUSING ELEMENT POLICIES

There are no housing element policies that address public utilities.



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### 5.17.3.5 ENVIRONMENTAL IMPACTS

### 5.17.3.6 DISCUSSION OF NO SOLID WASTE IMPACTS

All of the impacts would be less than significant or potentially significant.

### 5.17.3.7 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.17-4: Existing and/or proposed facilities would be able to accommodate project-generated solid waste. [Threshold U-4]

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Because the HEU is a policy document and does not propose any development, evaluation of proposed housing sites impact on solid wastes services will depend on the location of the sites and thus the applicable entity providing the solid waste services. Implementation of the proposed project could result in new homes and residents which will generate solid waste and require disposal and recycling. Solid waste services for the project area are currently provided by the various public agencies mentioned above. The proposed project is expected to contribute to solid waste generation which could impact the level of service provided by the applicable entities.

During construction, future development projects would comply with CAL Green requirements, specifically recycling and/or salvaging for reuse a minimum of 65 percent of nonhazardous construction and demolition waste generated during most “new construction” projects. Section 74-4.006, Amendments to CGBSC, amends Section 5.408.1, Construction waste management, to include 2019 CAL Green requirements.

During operations, future projects would comply with Section 418-20.2-6, Mandates on organic waste generators, of the County Ordinance Code, which require commercial and multifamily residential land uses to have recycling and organic waste recycling. Pursuant to SB 1383, future residents would be required to separate organic and recyclable materials from trash and subscribe to collection service from a waste hauler or self-haul material to an appropriate facility for diversion (SWR 2022). Contra Costa County will impose penalties for non-compliance with SB 1383 starting January 1, 2024 (SWR 2022). All new development proposed under the proposed project such as the addition of new solid waste facilities would be subject to subsequent project-level CEQA review. Construction activities would be required to comply with all federal, state, and local management and reduction statutes and regulations related to solid waste, and impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.17-4 would be less than significant.

#### *Mitigation Measures*

No mitigation measures required.

***Level of Significance After Mitigation:*** Impact 5.17-4 would be less than significant.

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Impact 5.17-5: The proposed project would comply with federal, state, and local statutes and regulations related to solid waste. [Threshold U-5]

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Approval of the HEU, as a policy document, would not change or interfere with federal, state, or local regulations, and would not provide any goals, policies, or programs that would result in an inadequate capacity of solid waste collection providers or facilities. Furthermore, all residential development on any of the identified development sites will be required to comply with all federal, state, and local laws regarding the proper disposal of waste. This impact would therefore be considered less than significant.

***Level of Significance Before Mitigation:*** Impact 5.17-5 would be less than significant.

#### *Mitigation Measures*

No mitigation measures required.

***Level of Significance After Mitigation:*** Impact 5.17-5 would be less than significant.

#### 5.17.3.8 CUMULATIVE IMPACTS

The cumulative setting for solid waste includes all existing, planned, proposed, approved, and reasonably foreseeable development in Contra Costa County. Future development associated with the proposed project would result in an incremental cumulative demand for solid waste collection and disposal in regional landfills. The landfills are monitored for capacity on a regular basis. This impact is considered less than cumulatively considerable.

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### 5.17.4 References

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### 5.18 WILDFIRE

This chapter describes the regulatory framework for wildfire management and protection, existing conditions for wildfire, evacuation planning, and post-fire flooding or landslides within unincorporated Contra Costa County. The existing conditions include a description of previous wildfire events throughout the county. This chapter also includes a discussion of potential impacts of the Contra Costa Housing Element Update on wildfire.

#### 5.18.1 Environmental Setting

##### 5.18.1.1 REGULATORY BACKGROUND

###### Federal Regulations

###### *National Cohesive Wildfire Management Strategy*

The National Park Service, Bureau of Land Management, Bureau of Reclamation, and Department of Defense own and manage land within the unincorporated areas of Contra Costa County. In the Federal Land Assistance, Management, and Enhancement Act of 2009 (FLAME Act), Congress mandated the development of a National Cohesive Wildland Fire Management Strategy for all lands within the United States. Wildfire management on these lands is guided by the National Cohesive Wildland Fire Management Strategy, which has three primary goals (US Department of Interior and US Department of Agriculture 2014):

1. Resilient landscapes
2. Fire adapted communities
3. Safe and effective wildfire response

The three goals enable the land managers to manage vegetation and fuels; protect homes, communities, and other values at risk; manage human-caused ignitions; and effectively and efficiently response to wildfires. California is part of the Western Regional Strategy Committee, chartered to support and facilitate the implementation of the National Cohesive Wildland Fire Strategy.

###### *National Fire Protection Association Standards*

National Fire Protection Association (NFPA) codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. NFPA standards are recommended (advisory) guidelines for fire protection that are referenced in the California Fire Code, which is adopted by Contra Costa County every three years. Specific standards applicable wildland fire hazards include, but are not limited to:

- **NFPA 1141**, Fire Protection Infrastructure for Land Development in Wildlands
- **NFPA 1142**, Water Supplies for Suburban and Rural Fire Fighting
- **NFPA 1143**, Wildland Fire Management
- **NFPA 1144**, Reducing Structure Ignition Hazards from Wildland Fire

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- **NFPA 1710**, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

#### State Regulations

##### *California Department of Forestry and Fire Protection*

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of California's wildlands. CAL FIRE provides fire assessment and firefighting services for lands within State Responsibility Areas, conducts educational and training programs, provides fire planning guidance and mapping, and reviews General Plan Safety Elements to ensure compliance with state fire safety requirements.

The Board of Forestry and Fire Protection is a government-appointed approval body within CAL FIRE. It is responsible for developing the general forest policy of the state, for determining the guidance policies of CAL FIRE and for representing the state's interest in federal forestland in California. The Board of Forestry and Fire Protection also promulgates regulations and approves general plan safety elements that are adopted by local governments for compliance with State statutes.

The California Office of the State Fire Marshal supports the mission of CAL FIRE by focusing on fire prevention. These responsibilities include regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death and destruction by fire; providing statewide direction for fire prevention within wildland areas; regulating hazardous liquid pipelines; developing and renewing regulations and building standards; and providing training and education in fire protection methods and responsibilities. These are accomplished through major programs including engineering, education, enforcement, and support from the Board of Forestry and Fire Protection. For jurisdictions within State Responsibility Areas or Very High Fire Hazard Severity Zones, the Land Use Planning Program division of the Office of State Fire Marshal reviews Safety Elements during the update process to ensure consistency with California Government Code, Section 65302(g)(3).

Together, the Board of Forestry and Fire Protection, Office of State Fire Marshal, and CAL FIRE protect and enhance the forest resources of all wildland areas of California that are not under federal jurisdiction.

##### *Fire Hazard Severity Zones and Responsibility Areas*

CAL FIRE designates fire hazard severity zones as authorized under California Government Code Sections 51175 et seq. CAL FIRE considers many factors when designating fire severity zones, including fire history, existing and potential vegetation fuel, flame length, blowing embers, terrain, and weather patterns for the area. CAL FIRE designates Fire Hazard Severity Zones within three types of areas depending on what level of government is financially responsible for fire protection:

- **LRA – Local Responsibility Area:** incorporated communities are financially responsible for wildfire protection. There is one severity zone in the LRA, which is the Very High Fire Hazard Severity Zone.

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- SRA – State Responsibility Area: CAL FIRE and contracted counties are financially responsible for wildfire protection. There are three hazard zones in SRAs: moderate, high, and very high.
- FRA – Federal Responsibility Area: federal agencies such as the United States Forest Service, National Park Service, Bureau of Land Management, United States Department of Defense, United States Fish and Wildlife Service, and Department of the Interior are responsible for wildfire protection.

#### *2018 Strategic Fire Plan for California*

CAL FIRE produced the 2018 *Strategic Fire Plan for California*, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California’s natural and built environments (California State Board of Forestry and Fire Protection 2018). The 2018 *Strategic Fire Plan for California* focuses on fire prevention and suppression activities to protect lives, property, and ecosystems in addition to providing natural resource management to maintain state forests as a resilient carbon sink to meet California’s climate change goals. A key component of the 2018 *Strategic Fire Plan for California* is the collaboration between communities to ensure fire suppression and natural resource management is successful California State Board of Forestry and Fire Protection 2018.

#### *2021 California’s Wildfire and Forest Resilience Action Plan*

The Governor’s Forest Management Task Force developed the *California’s Wildfire and Forest Resilience Action Plan*, which is a framework for establishing healthy and resilience forests that can withstand and adapt to wildfire, drought, and climate change. This plan accelerates efforts to restore the health and resilience of California’s forests, grasslands, and natural places; improves the fire safety of communities; and sustains the economic vitality of rural forested areas. CAL FIRE, in partnership with the U.S. Forest Service, intends to scale-up forest thinning and prescribed fire; integrate climate adaptation into the statewide network of regional forest and community fire resilience plans; improve the electricity grid resilience, and promote sustainable land use.

#### *State Responsibility Area and Very High Fire Hazard Severity Zone Fire Safe Regulations*

California Code of Regulations Title 14, Division 1.5, Chapter 7, Subchapter 2, *SRA/VHFHSZ Fire Safe Regulations* establishes minimum wildfire protection standards for construction and development within the SRA and Very High Fire Hazard Severity Zone and requires CAL FIRE to review development proposals and enact recommendations that serve as conditions of approval in these zones. These standards include basic emergency access and perimeter wildfire protection measures; signing and building numbering; private water supply resources for emergency fire use; and vegetation modification. These regulations apply to all residential, commercial, and industrial buildings within the SRA, the siting of new mobile homes, all tentative and parcel maps, and applications for building permits approved before 1991 where these standards were not proposed. Fire Safe Regulations also include a minimum setback of 30 feet for all buildings from property lines and/or the center of a road. Section 1273.08, *Dead-End Roads*, of these standards provide regulations for the maximum lengths of single access roadways requiring the following:

- Parcels zoned for less than one acre: 800 feet
- Parcels zoned for 1 acre to 4.99 acres: 1,320 feet

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- Parcels zoned for 5 acres to 19.99 acres: 2,640 feet
- Parcels zoned for 20 acres or larger: 5,280 feet

Fire Safe Regulations, Section 1299.03, *Fire Hazard Reduction Around Buildings and Structure Requirements*, provides defensible space requirements for areas within 30 feet of a structure (Zone 1) and between 30 and 100 feet from a structure (Zone 2). In Zone 1, all dead and dying plants are required to be removed and any flammable vegetation that could catch fire must be removed. In Zone 2, horizontal and vertical spacing among shrubs and trees must be created and maintained.

#### *Public Resources Code Section 4291*

Public Resources Code Section 4291, *Mountainous, Forest-, Brush- and Grass-Covered Lands*, is intended for any person who owns, lease, controls, operates, or maintains a building or structure in a mountainous area, forest-covered lands, shrub-covered lands, grass-covered lands, or land that is covered with flammable material, regardless of whether the property is within an SRA or Very High Fire Hazard Severity Zone. This section requires defensible space to be maintained within 100 feet from each side of a structure. An ember resistant zone is also required within 5 feet of a structure and more intense fuel reduction between 5 and 30 feet of a structure.

#### *California Building Standards Code*

The California Buildings Standards Code (California Code of Regulations Title 24) provides twelve different codes for construction and buildings in California. This code is updated every three years, with the most recent version effective January 1, 2020, and the next version going into effect January 1, 2023. Contra Costa County regularly adopts the most recent version of the California Building Standards Code, with modifications, into the Contra Costa County Ordinance Code, Title 7, *Building Regulations*.

#### ***Building Standards***

The California Building Code (CBC), Part 2 of 24 California Code of Regulations, identifies building design standards, including those for fire safety. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. Residential buildings are plan checked by local city and county building officials for compliance with the CBC and any applicable local edits. Typical fire safety requirements of the CBC include the installation of sprinklers in buildings and other facilities; the establishment of fire-resistance standards for fire doors, building materials, and particular types of construction in high fire hazard severity zones; requirements for smoke-detection systems; exiting requirements; and the clearance of debris.

#### ***Materials and Methods for Exterior Wildfire Exposure***

Chapter 7A of the CBC, Materials and Methods for Exterior Wildfire Exposure, prescribes building materials and construction methods for new buildings in a Fire Hazard Severity Zone or Wildland Interface Fire Area. Chapter 7A contains requirements for roofing; attic ventilation; exterior walls; exterior windows and glazing; exterior doors; decking; protection of underfloor, appendages, and floor projections; and ancillary structures.



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Other requirements include vegetation management compliance, as prescribed in California Fire Code Section 4906 and Public Resources Code 4291.

#### *California Fire Code*

The California Fire Code incorporates, by adoption, the International Fire Code of the International Code Council, with California amendments. This is the official fire code for the State and all political subdivisions. It is found in California Code of Regulations Title 24, Part 9 and, like the CBC the California Fire Code is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions. The California Fire Code is a model code that regulates minimum fire safety regulations for new and existing buildings; facilities; storage; processes, including emergency planning and preparedness; fire service features; fire protection systems; hazardous materials; fire flow requirements; and fire hydrant locations and distribution. Typical fire safety requirements include installation of sprinklers in all buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

#### ***Wildland-Urban Interface Areas***

Chapter 49 of the California Fire Code, Requirements for Wildland Urban Interface Fire Areas, applies to any geographical area identified as a Fire Hazard Severity Zone by CAL FIRE. This section defines Fire Hazard Severity Zones and connects to the SRA Fire Safe Regulation requirements for defensible space, as well as parallels requirements for wildfire protection buildings construction and hazardous vegetation fuel management in other sections of the California Code of Regulations and the Public Resources Code.

#### *Fire Risk Reduction Community*

A Fire Risk Reduction Community is a Board of Forestry and Fire Protection designation for local agencies in the SRA or Very High Fire Hazard Severity Zone that meet the Board defined best practices for local fire planning. The requirements for this designation are found in California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 1, Article 3, *Fire Risk Reduction Community List*. Two non-City or County agencies in Contra Costa County, East Bay Municipal Utilities District and East Bay Regional Park District, are on the Fire Risk Reduction Community List. Non-city or county agencies must meet at least two of the following criteria to obtain this designation:

- Identify wildfire as a high priority hazard in a Local, Tribal or Multi-Jurisdictional Hazard Mitigation Plan updated within the last five years, or as a low or medium priority hazard with the inclusion of one or more mitigation actions.
- Adopt a Community Wildfire Protection Plan; critical infrastructure protection plan; evacuation plan; Integrated Resource Management Plan including a Fire Management Plan; or similar plan addressing fire protection within the Local Agency's jurisdiction within the last five years.
- Sponsor, coordinate, or actively engage with a community disaster preparedness council or group, including but not limited to a Firewise USA community or a Fire Safe Council, with events or meetings at least quarterly.

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- Adopt a plan within the last five years or implements an ongoing program to conduct a hazardous fuels reduction project or projects, including but not limited to California Vegetation Treatment Program (CalVTP) projects, Forest Management and Fuels Reduction Plans (FMRFP), Program Timberland Environmental Impact Reports (PTEIR), prescribed or cultural burns, and community fuels reduction workdays.
- Adopt a plan within the last five years or implements an ongoing program to conduct public outreach and education about water conservation, wildfire prevention, vegetation management and fuels reduction, home hardening, evacuation preparedness, defensible space, Traditional Ecological Knowledge (TEK) pertaining to fire, fire risk reduction, or similar topics.
- Adopt a special benefit assessment or tax measure or fee that addresses wildfire risk reduction.

Both East Bay Municipal Utilities District and East Bay Regional Park District have adopted Local Hazard Mitigation Plans with wildfire as a high priority and a Community Wildfire Protection Plan has been developed and adopted for Contra Costa County, which both districts serve.

#### *California Public Utilities Commission*

In 2007, wildfires in southern California were ignited by overhead utility power lines and aerial communication facilities near power lines. In response, the California Public Utilities Commission (CPUC) began considering and adopting regulations to protect the public from fire hazards posed by overhead power lines and nearby aerial communication facilities. The CPUC published a fire threat map—under Rulemaking 15-05-006, following procedures in Decision 17-01-009, revised by Decision 17-06-024—that adopted a work plan for the development of a utility high fire-threat district where enhanced fire safety regulations in Decision 17-12-024 apply (CPUC 2022a). The fire regulations require electrical utilities to (CPUC 2022b):

- Prioritize the correction of safety hazards.
- Correct nonimmediate fire risks in “Tier 2” (elevated fire threat) areas in the CPUC high fire-threat district within 12 months, and in “Tier 3” (extreme fire threat) areas within 6 months.
- Maintain increased clearances between vegetation and power lines in the high fire-threat district.
- Maintain stricter wire-to-wire clearances for new and reconstructed facilities in Tier 3 areas.
- Conduct annual inspections of overhead distribution facilities in rural areas of Tier 2 and Tier 3 areas.
- Prepare a fire prevention plan annually if overhead facilities exist in the high fire-threat district.

#### Local Regulations

##### *Contra Costa County General Plan*

The following policies and implementation measures, which pertain to wildfires and evacuation, are included in the Safety Element adopted in 2005:

- **Policy 10-83:** The County will adopt and implement a comprehensive hazard mitigation plan to minimize the impacts of natural and man-made disasters pursuant to the requirements of the Federal Disaster Mitigation Act of 2000.

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- **Policy 10-84:** The Office of Emergency Services, in cooperation with cities within the County, shall delineate evacuation routes and, where possible, alternate routes around points of congestion.
- **Policy 10-85:** The Office of Emergency Services, in cooperation with public protection agencies, shall delineate emergency vehicle routes for disaster response, and where possible, alternate routes where congestion or road failure could occur.
- **Policy 10-86:** In order to ensure prompt public protection services, dwelling unit numbers shall be required to be easily seen from the street or road.
- **Policy 10-88:** The County shall require adequate access for medical emergency equipment in high-occupancy buildings of over two stories.
- **Policy 10-89:** Every high-rise building shall be designed and constructed to provide for the evacuation of occupants and/or for the creation of a safe environment in case of a substantial disaster, such as a severe earthquake or fire.
- **Policy 10-90:** Policies related to wild land fire risk are contained in the Fire Services section of the Public Facilities Element.
- **Policy 10-91:** Restrict homes built in rural areas or adjacent to major open space areas from having roofs which are covered with combustible materials.
- **Implementation Measure 10-aq:** Undertake a program in cooperation with cities within the County to unify street name and numbering systems.
- **Implementation Measure 10-ar:** In cooperation with cities within the County and public protection agencies, delineate evacuation routes, emergency vehicle routes for disaster response and, where possible, alternative routes where congestion or road failure could occur.
- **Implementation Measure 10-as:** Development of areas identified by the criteria of the State Division of Forestry as having an Extreme Fire Hazard will be avoided where possible. Homes located in extreme or high fire hazard areas will be constructed with fire-resistant materials and the surroundings should be irrigated or landscaped with fire resistant plants.
- **Implementation Measure 10-at:** Require projects which encroach into areas which are determined to have a high or extreme fire hazard, or which incorporate wildfire hazard areas, to be reviewed by the appropriate Fire Bureau to determine if special fire prevention measures are advisable.
- **Implementation Measure 10-au:** Major developments will not be approved if fire fighting services are not available or are not adequate for the area.

The following policies and implementation measures, which pertain to wildfires and evacuation, are included in the Public Facilities and Services Element adopted in 2005:

- **Policy 7-64:** New development shall pay its fair share of costs for new fire protection facilities and services.
- **Policy 7-66:** Sprinkler systems may be required in new residential structures, where necessary to protect health, safety and welfare.
- **Policy 7-71:** A set of special fire protection and prevention requirements shall be developed for inclusion in development standards applied to hillside, open space, and rural area development.

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- **Policy 7-74:** All new traffic signals shall be equipped with preemptive devices for emergency response services. Existing traffic signals significantly impacted by new development shall be retrofitted with preemptive devices.
- **Policy 7-80:** Wildland fire prevention activities and programs such as controlled burning, fuel removal, establishment of fire roads, fuel breaks and water supply, shall be encouraged to reduce wildland fire hazards.
- **Policy 7-81:** All structures located in Hazardous Fire Areas, as defined in the Uniform Fire Code, shall be constructed with fire-resistant exterior materials, such as fire safe roofing, and their surroundings are to be irrigated and landscaped with fire-resistant plants, consistent with drought resistance and water conservation policies.
- **Implementation Measure 7-at:** The Conservation and Development Department shall include fire agency code requirements requested by the districts as advisory notes to the applicant within proposed conditions of project approval when the Planning Agency is considering subdivisions, development plans, use permits and other entitlement requests.
- **Implementation Measure 7-au:** Fire protection agencies shall be afforded the opportunity to review projects and submit conditions of approval for consideration to determine whether:
  - there is an adequate water supply for fire fighting;
  - road widths, road grades and turnaround radii are adequate for emergency equipment; and
  - structures are built to the standards of the Uniform Building Code, the Uniform Fire Code, other State regulations, and local ordinances regarding the use of fire retardant materials and detection, warning and extinguishment devices
- **Implementation Measure 7-av:** The County Conservation and Development Department shall submit building and development plans for all new construction, including remodeling, to the local fire protection agency to assure that fire safety and control features are included that meet the adopted codes and ordinances of that agency.

#### *Contra Costa County Ordinance Code*

The Contra Costa County Ordinance Code includes various directives to minimize adverse impacts associated with wildfires in Butte County. The Ordinance Code is organized by Title, Division, and Chapter. Most provisions related to wildfire and evacuation are included in Title 7, *Building Regulations*. Title 7 includes the adoption of the California Building Code and California Fire Code, which have specific provisions for reducing wildfire hazards in existing and new developments. The 2019 versions of these codes were adopted, with modifications, into Title 7 of the Contra Costa County Ordinance Code.

#### *Contra Costa County Hazard Mitigation Plan*

The purpose of hazard mitigation planning is to reduce the loss of life and property by minimizing the impact of disasters. The Contra Costa County Hazard Mitigation Plan (HMP), most recently updated in 2018 in accordance with the Federal Disaster Mitigation Action of 2000 (DMA 2000), provides an assessment of natural hazards in the county and a set of short-term mitigation actions to reduce or eliminate the long-term

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risk to people and property from these hazards. In the context of an HMP, mitigation is an action that reduces or eliminates long-term risk to people and property from hazards, including wildfire.

Mitigation actions for the unincorporated county related to wildfire in Volume II, Chapter 1 of the HMP include supporting the retrofit or relocation of structures in high hazard areas; maintaining and developing the existing County-wide Community Warning System (CWS) by identifying and implementing new technology as it becomes available; enhance/improve County Ordinance Code language and enforcement including: County Building Codes to Increase Compliance with SB 1369 Defensible Space and Other Fire Safe Requirements in the Unincorporated County; and better informing residents of comprehensive mitigation strategies for all hazards of concern.

The LHMP must be reviewed and approved by FEMA every 5 years to maintain eligibility for disaster relief funding. As part of this process, the California Governor's Office of Emergency reviews all LHMPs in accordance with DMA 2000 regulations and coordinates with local jurisdictions to ensure compliance with FEMA's Local Mitigation Plan Review Guide.

### *Contra Costa County Community Wildfire Protection Plan*

The Contra Costa County Community Wildfire Protection Plan, developed by the Diablo Fire Safe Council in conjunction with the Contra Costa County Fire Chiefs Association, Hills Emergency Forum, and Stakeholder Committee Members, identifies and prioritizes fuel reduction opportunities throughout the county, addresses structural ignitability, and collaboration with stakeholders. The Contra Costa County Community Wildfire Plan has been developed upon the priority goals and objectives identified by the Healthy Forest Restoration Act and by local collaborators. The priority actions of this plan include collaborative partnerships for public communications, evacuation planning and communication, hazardous fuel load management balanced with biological resource protection, defensible space programs, and home hardening. The strategies in this Plan will be implemented in cooperation with the fire districts and the Diablo Fire Safe Council in Contra Costa County.

### *Contra Costa County Emergency Operations Plan*

The Contra Costa County Emergency Operations Plan (EOP), adopted in June 2015, provides planned response actions for emergency events throughout the county. The EOP establishes the emergency management organization required to respond to significant emergencies and disasters, identifies the roles and responsibilities required to protect Contra Costa County community members, and establishes the operational concepts for different emergencies, the Emergency Operations Center, and recovery processes. The EOP includes Supplemental Elements that provide direction for specific emergency processes such as warning, integrating people with disabilities and others with access and functional needs, public information, population protection, and training and exercises.

#### 5.18.1.2 EXISTING CONDITIONS

Contra Costa County contains a variety of land use patterns but approximately 65 percent is preserved for agriculture, open space, wetlands, parks, and other non-urban according to the 2019 Contra Costa County Briefing Book. The sites proposed for redesignating and rezoning in the Housing Element Update are in a

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variety of communities with a variety of settings including unincorporated pockets in dense urban areas like North Richmond as well as rural agricultural towns like Byron. As a result, the wildfire setting and evacuation will differ by community.

#### Wildfire Background

The term “wildfire” refers to fires that usually result from the ignition of dry grass, brush, or timber. Historically, wildfires commonly occurred in areas that are characterized by steep or heavily vegetated areas, which make suppression of the fire difficult. More recently, wildfires have been encroaching into more urban areas within the wildland-urban interface, threatening homes, businesses, and essential infrastructure. While wildfires play an important role in the ecology of many natural habitats, as urban development moves into areas susceptible to wildfire hazards, risks to human safety and property increase.

#### *Types of Wildfires*

There are three basic types of wildfires (Natural Resources Canada 2018):

- **Crown fires** burn trees to their tops and are the most intense and dangerous wildland fires.
- **Surface fires** burn surface litter and duff and are known for being the easiest fires to extinguish and to cause the least damage. Brush and small trees enable surface fires to reach treetops, and so are referred to as *ladder fuels*.
- **Underground fires** occur underground in deep accumulations of dead vegetation. These fires move very slowly and can be difficult to extinguish due to limited access.

Wildfires burn in many types of vegetation—forest, woodland, scrub, chaparral, and grassland. Many species of native California plants are adapted to fire and habitats such as chaparral shrubs and conifer forests can recover from fire. For example, some species of chaparral plants, such as ceanothus, require intense heat for germination and therefore have flammable resins on leaves and roots that can quickly sprouts up in burned areas (National Park Service 2018). Between 2010 and 2017, wildfires in California burned a total of about 265,000 acres of forest land, 207,000 acres of scrub vegetation, 99,000 acres of grassland, 18,000 acres of desert vegetation, and 14,000 acres of other vegetation types (State Board of Forestry and Fire Protection 2018). Wildfires have been observed to be more frequent and growing in intensity the past several years, with 4,304,379 acres and 2,568,948 acres burning in 2020 and 2021, respectively (CAL FIRE 2022).

#### *Wildfire Causes*

Although the term *wildfire* suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned (Bach 2017). The three most common types of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.); arson; and equipment use (Pacific Biodiversity Institute). Power lines can also ignite wildfires through downed lines, vegetation contact, conductors that collide, and equipment failures (Texas Wildfire Mitigation Project). CAL FIRE determined that between 2017 and 2021, 1,344 fires and 639,437 acres have been burned due to electrical power and distribution lines (CAL FIRE 2018 and 2021). Lightning is the most common cause of nature-induced wildfire (Bach 2017).

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An analysis of US Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires and 90 percent of all wildfires was within 0.5 mile of a road, and that about 61 percent of all wildfires and 55 percent of human-caused wildfires occurred within approximately 650 feet (200 meters) of a road. The study concluded that the increase in human-caused ignition greatly outweighs the benefits of increased access for firefighters (Pacific Biodiversity Institute 2007).

There are three primary methods of wildfire spread:

- **Embers.** Embers are the most prolific cause of home ignition, at a rate of two out of every three homes destroyed. Embers are glowing or burning pieces of vegetation or construction debris that are lofted during a wildfire and can move up to a mile ahead of a wildfire, especially during high winds. These small embers or sparks may fall on the vegetation near a home (on dry leaves, needles, or twigs on the roof) and subsequently ignite the home. Embers can travel several miles during high wind events, such as the Diablo Winds, placing a potential risk to all structures without fire-resistant landscaping and construction within a mile of the fire (CAL FIRE 2019).
- **Direct Flame Contact.** Direct flame contact refers to the transfer of heat by direct flame exposure. Direct contact will heat the building materials of the home, and if the time and intensity of exposure is severe enough, windows will break, and materials will ignite.
- **Radiant Heat.** A house can catch fire from the heat that is transferred to it from nearby burning objects, even in the absence of direct flames or embers. By creating defensible space around homes, the risk from radiant heat is significantly reduced.

#### *Secondary Effects of Wildfires*

After a high intensity wildfire is suppressed, the burn scar is typically bare of its vegetative cover, which had supported the hillsides and steeper slopes. As a result, rainstorms increase the possibility of severe landslides and debris flows in these areas. The intense heat from the fire can also cause a chemical reaction in the soil that makes it less porous, causing water to runoff during precipitation events, which can lead to flooding downstream.

In addition to damaging natural environments, wildfires can injure and cause fatalities of residents and firefighters, as well as damage or destroy structures and personal property. Wildfires also deplete water reserves, down power lines, disrupt communication services, and block evacuation routes, which can isolate communities. Wildfires can also indirectly cause flooding if flood control facilities become inadequate to handle increases in storm runoff, sediment, and debris that are likely to be generated from burn scars. Regionally, smoke from wildfires can create poor air quality that can last for days or weeks depending on the scale of the wildfire and wind patterns.

#### Wildfire in Contra Costa County

The geography, weather patterns, and vegetation in the East Bay area provide ideal conditions for recurring wildfires. As recent wildfire activity revealed, several areas of Contra Costa County face some level of threat from wildland fire. As shown in Figure 5.18-1, *Fire Hazard Severity Zones*, fire hazard severity zones are located in western Contra Costa County along the mountain range from Norris Canyon to Crockett, and central and

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eastern Contra Costa County from Mount Diablo to Byron and the Alameda County border to Bay Point. CAL FIRE and local jurisdictions have designated these fire hazard severity zones as moderate, high, and very high. Western Contra Costa County has zones designated primarily as high and very high fire hazard severity zones. Central and Eastern Contra Costa County has zones designated very high and high near Mount Diablo, and then transitioning to moderate going east towards Byron and south towards Alameda County.

Figure 5.18-2, *Wildland-Urban Interface Areas*, shows the wildland-urban interface (WUI) areas in Contra Costa County. WUI areas occur when urban development is intermixed with wildland vegetation, or when pockets of wildland vegetation occur inside developed areas. The WUI is subdivided into the intermix zone (where houses and wildland vegetation directly mingle), the interface zone (housing adjacent to wildland vegetation, but not mingled with it), and the influence zone (areas of wildfire-susceptible vegetation surrounding the others). The interface and intermix zones are the areas of highest risk for wildfires affecting developed areas. Unlike wildfire in wildland areas, fires that occur within WUI areas are more likely to damage or destroy buildings and infrastructure that support populations, the economy, and key services within the county. Some of the WUI areas in Contra Costa County have few access roads, which pose challenges for evacuation and for emergency responders to fight fires and help residents in these areas.

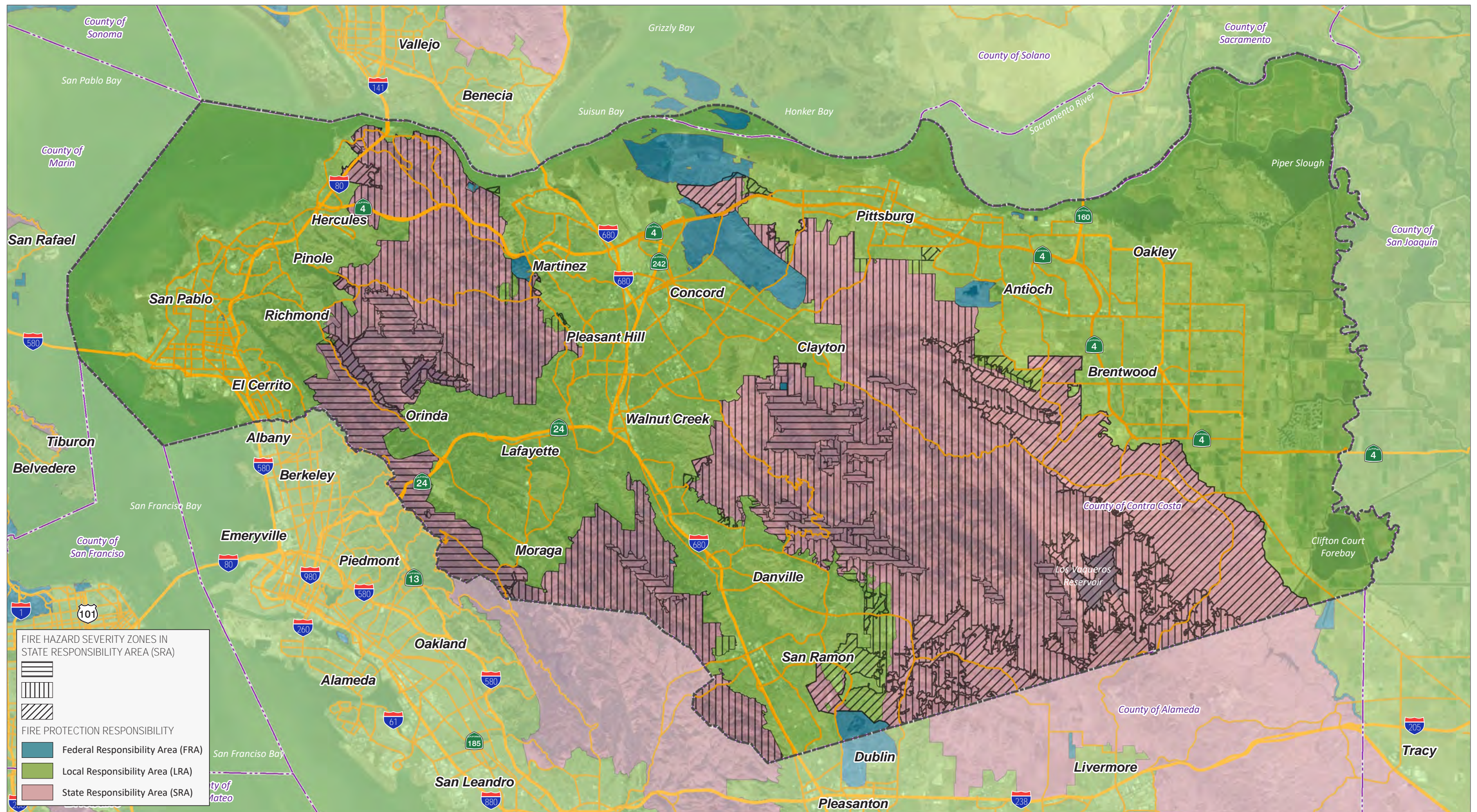
#### *Wildfire History*

CAL FIRE maintains a list of historic fires throughout the state. According to CAL FIRE, Contra Costa County has experienced several medium to large wildfires in throughout the county and in the wildland urban interface. Table 5.18-1, *Historic Wildfire Perimeters in Contra Costa County 2010-2020*, lists historic wildfire incidents greater than 100 acres that have occurred within the county from 2010 to 2021. Figure 5.18-3, *Historic Wildfire Perimeters*, shows the historic wildfire perimeters for all fires that have burned in Contra Costa County between 1880 and 2021. The largest fire in recent years was the Santa Clara Unit Complex Fire in 2020.

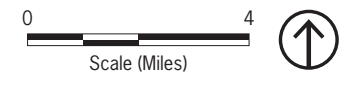
The Santa Clara Unit (SCU) Complex Fire, which started on August 18, 2020, is by far the largest fire to burn in Contra Costa County in recent years. The fire burned approximately 396,824 acres across Santa Clara, Alameda, Contra Costa, San Joaquin, Stanislaus, and Merced counties and lasted 44 days. It consisted of three zones: the Deer Zone in Contra Costa County; the Canyon Zone in Alameda, Santa Clara, and parts of Stanislaus counties; and the Calaveras zone in parts of Stanislaus, San Joaquin, and Merced counties. The SCU Complex Fire was one of several fire complexes burning during August and September in California of 2020. The fire destroyed 222 structures, damaged 26 structures, and injured 6 people, although no fatalities were recorded. As of the summer of 2022, this fire was California's 4<sup>th</sup> largest wildfire in California's modern history.



HOUSING ELEMENT



Source: ESRI, 2022



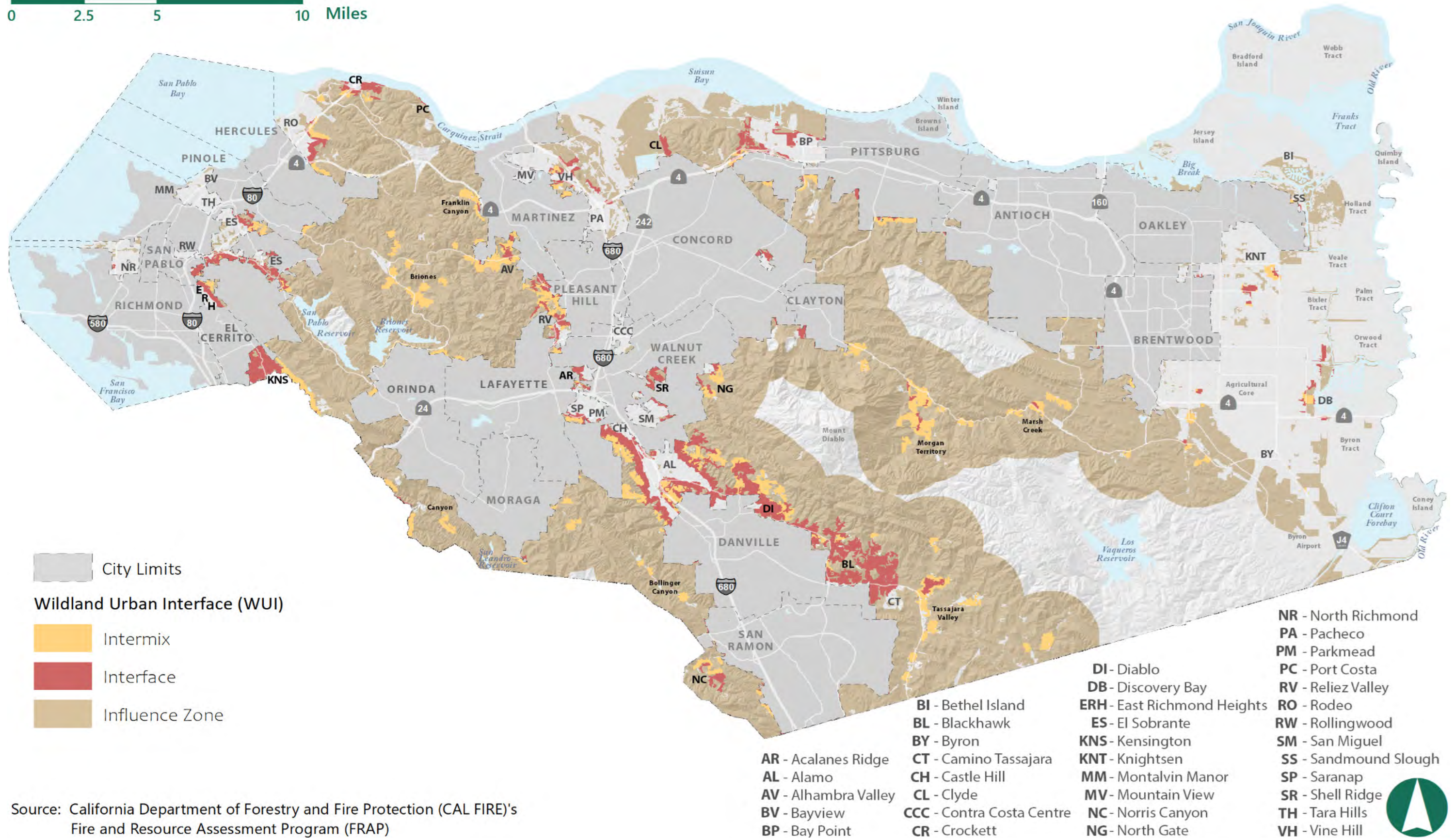
--- Contra Costa County Boundary  
- - - County Boundary

Figure 5.18-1

Fire Hazard Severity Zones in Contra Costa County

HOUSING ELEMENT

0 2.5 5 10 Miles



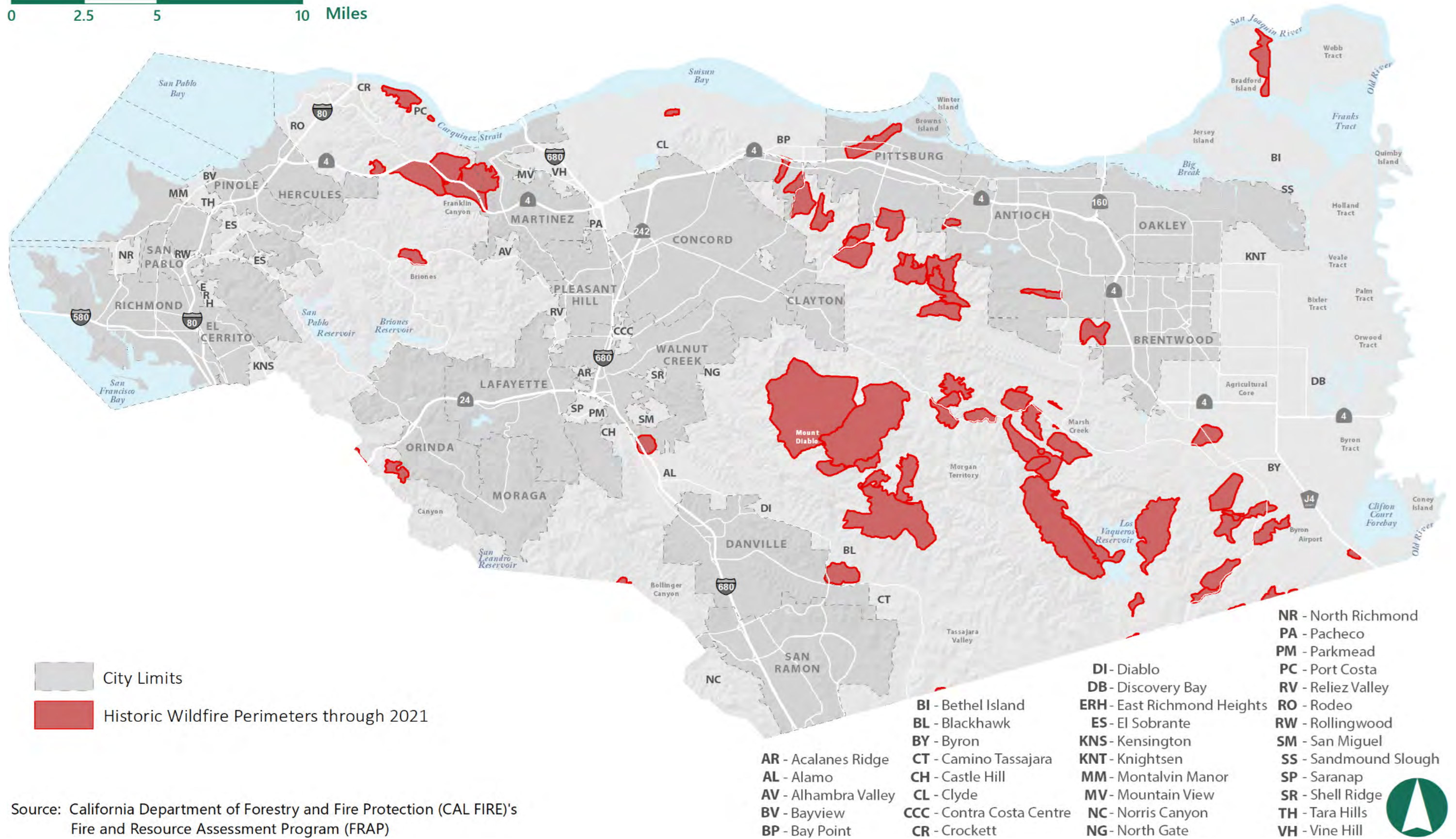
Source: California Department of Forestry and Fire Protection (CAL FIRE)'s Fire and Resource Assessment Program (FRAP)



Figure 5.18-2  
Wildland-Urban Interface Areas

HOUSING ELEMENT

0 2.5 5 10 Miles



Source: California Department of Forestry and Fire Protection (CAL FIRE)'s Fire and Resource Assessment Program (FRAP)



Figure 5.18-3  
Historic Wildfire Perimeters

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Table 5.18-1 Historic Wildfire Perimeters in Contra Costa County 2010-2020

Date	Fire Name	Size (Acres)
June 11, 2010	Vista Fire	186
July 2, 2010	Bradford Fire	510
August 24-26, 2010	Curry Fire	375
December 1-2, 2011	Collier Fire	198
July 1, 2013	Kirker Fire	492
July 1, 2013	Concord Fire	274
September 8-14, 2013	Morgan Fire	3,111
June 24-25, 2015	Loma Fire	533
July 30, 2015	Vasco Fire	195
July 25-August 3, 2018	Marsh Fire	247
August 1-8, 2019	Marsh 3 Fire	340
August 1-8, 2019	Marsh 5 Fire	227
August 1-8, 2019	Marsh 6 Fire	174
August 15-September 10, 2020	Santa Clara Unit Complex Fire	396,824
July 11, 2021	Diablo Fire	128

Source: Contra Costa 2018; California Fire, Incident Database

Wildfire frequency can be assessed through review of the percent of a given area that has been historically burned in wildfire events. Table 5.18-2, *Record of Fire Affecting Contra Costa County*, includes a summary of CAL FIRE records of fires over the 130 years from 1878 to 2015. Approximately 13 percent of the mapped fire hazard severity zones in the County have burned between that time period.

Table 5.18-2 Record of Fire Affecting Contra Costa County

Fire Hazard Severity Zone (FHSZ)	Total Area in Zone (Acres)	Area Burned, 1878 – 2015	
		Acres	Percent of Total
Moderate FHSZ	44,309	3,016	6.8
High FHSZ	130,589	17,847	13.7
Very High FHSZ	42,225	6,459	15.3
Total	217,123	27,322	12.6

Source: Contra Costa 2018

### *Factors Influencing Wildfire*

Several factors influence wildfire conditions and facilitate the spread of wildfires, including topography, fuels, weather conditions, and climate change. Human actions are also the leading cause of wildfires in California, increasing the risk of wildfire devastating natural lands and communities. This section describes these five factors in the context of Contra Costa County.

#### **Weather**

The climate in Contra Costa County is generally referred to as “Mediterranean” with hot, dry summers and cool, wet winters. Warm summers and cold winters with rainfall are common throughout the County, with snowfall rarely occurring at the higher elevations around Mount Diablo. Rainfall throughout the county occurs during the winter months due to storm fronts that move in from the Pacific Ocean. Precipitation ranges from

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an annual average of 23 inches near Richmond, 13 inches near Antioch, and 24 inches near the slopes of Mount Diablo (Contra Costa 2018). Because the summer months are generally hot and dry, the risk of wildfires has historically been greatest in summer and fall. Relative humidity is also an important fire-related weather factor. As humidity levels drop, the dry air causes vegetation moisture levels to decrease, thereby increasing the likelihood that plant material will readily ignite and burn; the risk of wildfire increases when lightning strikes occur during dry periods.

Wind is a primary weather factor of wildfire behavior. Diablo winds, which are warm easterly winds that flow over the Diablo Mountain range, have had reported speeds of up to 100 miles per hour in the East Bay Hills. As wind speeds increase, the rate of fire spread, intensity, and ember spread potential also increases. Gusty and erratic wind conditions can cause a wildfire to spread irregularly, making it difficult to predict its path and effectively deploy fire suppression forces. Winds from the northeast in the summer and fall compound the severity of fire conditions, as well as lower relative humidity, creating red flag conditions. Northeast winds are especially dangerous because they are accompanied by low humidity, which can dry out trees and other fuel that may also be weakened by the winds. This can increase wildfire conditions in the area. Wind shifts can also occur suddenly due to temperature changes and interactions with steep slopes or hillsides, causing fires to spread unpredictably. Fall has historically been one of the most dangerous times for wildfire risk, as periods of very high temperatures, low humidity, and strong wind increases cause red flag warnings and extreme fire danger.

#### ***Fuel***

Many portions of Contra Costa County are covered by natural vegetation, which provides fuels such as grass, brush, and woodlands for wildfires. Each type of vegetation contributes to fire hazard severity to varying degrees. The qualities of vegetation which directly influence fire risk include fuel type and size, loading, arrangement, chemical composition, and dead and live fuel moisture, which contributes to the flammability characteristics of the vegetation (Contra Costa 2018).

The lower elevations of Contra Costa County are covered in grass and brush fuel types, which react quickly to changes in weather such as low humidity or high wind speeds. Fires in these areas can spread quickly in gusty wind conditions. Higher elevations on hillside and mountainsides are dominated by brush and woodland vegetation, which is likely to burn in later summer fires due to low fuel moisture. These fires can be difficult to control, especially on steep slopes and during high wind events.

#### ***Topography***

Steep terrain or slope plays a key role in the rate and direction in which wildfires spread since fires will normally burn much faster uphill. When the gradient of a slope doubles, the rate of spread of a fire will also likely double. Contra Costa County varies in topography from steep, rugged topography along the Diablo Mountain Range to low-lying inland valleys in central Contra Costa County and shorelines along the San Francisco Bay and Sacramento-San Joaquin Delta.

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#### ***Human Actions***

Most wildfires are ignited by human action, the result of direct acts of arson, carelessness, or accidents. Many fires originate in populated areas along roads and around homes and are often the result of the careless disposal of cigarettes, mowing of dead grass, electricity equipment malfunction, use of equipment, or burning of debris. Recreation areas with increased human activity that are located in high or very high fire hazard areas also increase the potential for wildfires to occur.

#### ***Climate Change***

Climate change is likely to increase annual average temperatures countywide from a historical 71.1 degrees Fahrenheit (°F), to 75.8 °F by 2050 and 79 °F by 2100 (Cal-Adapt 2022a). This will likely create warmer temperatures earlier and later in the year. Precipitation levels are projected to increase slightly over the course of the century, changing from a historical annual average of 19 inches per year, to an annual average of 21 inches by 2050 and an annual average of 23.2 inches by 2099 (Cal-Adapt 2022a). Variations in precipitation patterns will also lead to an increase in frequency and intensity of heavy precipitation events, as well as prolonged periods of drought. The combination of extreme heat and droughts can cause soils and vegetation to dry out, creating more fuel for wildfires. These factors are expected to increase wildfire conditions, creating a risk of more frequent and intense wildfires. Because wildfires burn the trees and other vegetation that help stabilize a hillside and absorb water, more areas burned by fire may also lead to an increase in landslides and floods. Historically, an average of 2,890 acres burned annually in the county (Cal-Adapt 2022b). Figure 5.18-3 shows historic wildfire perimeters in the county. Wildfires are projected to increase to an annual average in the county of 2,920 acres burned annually by 2050 and decrease to an annual average of 2,696 acres burned annually by 2100 (Cal-Adapt 2022b).

#### ***Fire Protection Resources***

Fire protection services within unincorporated Contra Costa County are provided by six fire protection districts, as shown on Figure 5.15-1, *Proposed Fire Protection Districts in Contra Costa County*, of this Draft EIR, including the following:

- Contra Costa Fire Protection District
- San Ramon Valley Fire Protection District
- Moraga-Orinda Fire Protection District
- Kensington Fire Protection District
- Crockett-Carquinez Fire Protection District
- Rodeo Fire Protection District

Each fire protection district has also signed the Contra Costa County Fire Chief's Mutual Aid Plan, to receive aid and provide fire protection services when an emergency strained the capabilities of just one agency. Chapter 5.15, Public Services and Recreation, of this Draft EIR provides additional details about fire protection resources and services in Contra Costa County.

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#### *Evacuation and Access*

Evacuation routes are designated roadways that allow for many people to quickly leave an area due to a potential or imminent disaster. These routes should have a sufficient capacity to accommodate the needs of the community, be safely and easily accessible, and allow people to travel far enough away to be safe from any emergency conditions.

Primary evacuation routes throughout Contra Costa County include Interstates (I) and State Routes (SR) that traverse the county. These include, but are not limited to, I-80, I-580, I-680, SR-24, SR-4, SR-242, and SR-160. During emergency Contra Costa Sheriff's Office and the fire protection districts coordinate the use of Zone Haven, an internet-based evacuation mapping application that uses zones to provide evacuation warnings and orders. This system is used in both the cities and unincorporated areas of the county. This application allows for quick and transparent evacuation decision making that speeds up the evacuation notification process.

#### 5.18.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if located in or near state responsibility areas or lands classified as very high fire hazard severity zones the project would:

- W-1 Substantially impair an adopted emergency response plan or emergency evacuation plan.
- W-2 Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- W-3 Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- W-4 Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

#### 5.18.3 Proposed Housing Element Policies

The following proposed Housing Element policies are applicable to wildfires:

- **Policy HE-P8.3:** Locate below market-rate housing developments outside of mapped hazard zones as identified in the Health and Safety Element.

#### 5.18.4 Environmental Impacts

##### 5.18.4.1 DISCUSSION OF NO WILDFIRE IMPACTS

All impacts would be less than significant.



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### 5.18.4.2 DISCUSSION OF IMPACTS AND MITIGATION MEASURES

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Impact 5.18-1: Buildout of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan. (Threshold W1)

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Adopted emergency response plans and emergency evacuation plans include those discussed under Section 5.18.1.1, include the Contra Costa County Emergency Operations Plan. The proposed project would result in a significant impact if it would substantially impair the implementation of this plan.

Any potential development under the proposed project would be required to integrate the Emergency Operations Plan as necessary into development to continue its facilitation in evacuation for the people in wildfire prone areas. Buildout under the proposed project would not result in substantial changes to the circulation patterns or emergency access routes in the County that would conflict with or require changes to the Emergency Operations Plan. Additionally, future development within the SRA, WUI, or Very High Fire Hazard Severity Zones would be required to comply with the SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations, the California Building Code, the California Fire Code, and the Contra Costa County Code or Ordinances, which have maximum requirements for lengths of single access roads, minimum widths of roadways, and vegetation fuel management around roadways. Furthermore, to ensure emergency services in the County are not impaired by future development, all future development projects would be reviewed and approved by the applicable Fire Protection District prior to project approval. In accordance with the California Fire Code and Public Facilities and Services Element Implementation Measure 7-au, future projects' site design would be required to comply with fire access requirements.

However, even with these requirements, construction of new development or redevelopment could cause a temporary impairment of an evacuation route due to road closure during construction activities, and therefore, impacts would be significant. This would be limited to the duration of the construction period and direct impacts of construction would be evaluated during the project environmental review process or permit review process by applicable Fire Protection District; however, a temporary impact could still occur on single access roadways or evacuation constrained areas where there is limited ingress and egress.

***Level of Significance Before Mitigation:*** Impact 5.18-1 would be potentially significant.

#### *Mitigation Measures*

WILD-1 Project applicants for development in a Very High Fire Hazard Severity Zone or WUI area shall prepare a Traffic Control Plan to ensure that construction equipment or activities do not block roadways during the construction period. The Traffic Control Plan shall be submitted to the applicable Fire Protection District for review and approval prior to issuance of building permits.

***Level of Significance After Mitigation:*** Impact 5.18-1 would be less than significant.

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Impact 5.18-2: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, future projects, due to slope, prevailing winds, and other factors, could exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. (Threshold W-2)

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As discussed in Section 5.18.1.2, Existing Conditions, Contra Costa County is prone to Diablo Winds that are erratic in movement and have high speeds. These winds are often accompanied by low humidity and can shift suddenly due to temperature changes and interactions with steep slopes. This creates dangerous conditions by drying out vegetation and enabling a wildfire to spread more quickly. However, implementation of the Housing Element Update would not change or affect wind patterns in the county, but wildfires and wildfire smoke hazards could be spread by prevailing or Diablo winds.

Section 5.18.1.1, Regulatory Framework, describes plans, policies, regulations, and procedures that help to reduce wildfire risks. The 2018 Strategic Fire Plan for California, 2021 California Wildfire and Forest Resilience Action Plan, Fire Risk Reduction Community designation for East Bay Regional Parks and East Bay Municipal Utilities District, Contra Costa County Hazard Mitigation Plan, Contra Costa County Community Wildfire Protection Plan, and Contra Costa County General Plan are intended to reduce wildfire hazards and response to these hazards on a statewide and regional scale. In addition, the Bay Area Air Quality Management District provides air quality alerts, advisories, and provides resources for an interactive online map to view current air quality conditions in the region. However, future potential development under the Housing Element update in wildfire prone areas could exacerbate wildfire risks by adding more residents to wildfire prone areas; therefore, exposing people in the county and surrounding jurisdictions to pollutant concentrations from a wildfire. A wildfire combined with Diablo winds could expose residents in the county to the uncontrolled spread of wildfire.

As discussed in Section 5.18.1.2, Existing Conditions, the topography in Contra Costa County and Housing Element sites varies between steeply sloped mountains to flat valleys and shorelines. Construction of potential future housing may require grading and site preparation activities that could change the slope of a single parcel or site. Potential future development under the Housing Element Update could increase density in both flat and steeper areas of the county.

All potential future residential development within Contra Costa County would be required to comply with the California Building Standards Code, SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations, Contra Costa County Code of Ordinance Grading requirements, which include standards to minimize the ignition and spread of wildfire due to slopes. Furthermore, Policy HE-P8.3 of the proposed Housing Element Update requires the location of below market-rate housing developments to be outside of mapped hazard zones as identified in the Health and Safety Element. However, due to vegetation and slope, wildfires and associated smoke could potentially travel up a slope. Therefore, even with existing regulatory requirements potential future development under the proposed Housing Element Update could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to slope.

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Other factors, such as vegetation, have the potential to exacerbate wildfire risks. The grassland, brush, and woodland areas throughout the county are easily ignited, especially during summer and fall when temperatures are high, relative humidity is low, and wind speeds can be high. During these conditions, woodlands and brush vegetation can dry out, particularly in areas with unirrigated vegetation, becoming extremely flammable and increasing wildfire risks. As described in Section 5.18.1.1, Regulatory Framework, the Contra Costa County Hazard Mitigation Plan and Community Wildfire Protection Plan contain several vegetation management and fuel reduction projects to reduce the uncontrolled spread of wildfire due to vegetation. Additionally, all potential future development within wildfire prone areas in Contra Costa County would be required to comply with SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations, Public Resources Code Section 4291, and the California Fire Code. These regulations have specific requirements for new development to create defensible space and extensive fuel reduction within 100 feet of a structure, an ember resistant zone within 5 feet of a structure, and the overall maintenance of properties to reduce the risk of uncontrolled fires or the spread of fires to other properties. However, even with existing regulatory requirement potential future development under the proposed project could expose people to the uncontrolled spread of wildfire or pollutant concentrations due to other factors such as vegetation.

With adherence to the above building practices and wildfire management requirements, development associated with the proposed project would reduce the potential for exacerbating wildfire risks. However, due to the programmatic nature of this analysis, the unknown details and potential impacts of specific future potential development projects under the proposed project, and the possibility of potential future development being located in wildfire prone areas, impacts would be potentially significant.

***Level of Significance Before Mitigation:*** Impact 5.18-2 would be potentially significant.

#### *Mitigation Measures*

As discussed previously, implementation of the proposed Housing Element Update could increase population, buildings, and infrastructure in wildfire prone areas. Impacts related to exacerbating the risk of pollutant concentrations from wildfire and the uncontrolled spread of wildfire would be reduced by mandatory state and local wildfire hazard reduction measures, as listed in Section 5.18.1.1, Regulatory Framework, but not to a less-than-significant level. The primary method to avoid the wildfire impact from implementation of the proposed Housing Element Update is to prohibit development in areas within the SRA, Very High Fire Hazard Severity Zones, and the Wildland-Urban Interface, thereby eliminating the wildfire impact. However, doing so is not feasible or practical as the County has a responsibility to meet multiple State obligations, including increases in the number and type of housing available in Contra Costa County. The County needs to promote residential development, as required by State housing law, within its adopted growth boundaries. While possible forms of mitigation for wildfire risks in the unincorporated County would be implemented by the County, doing so to reduce impacts to a less-than-significant level would be infeasible and inconsistent with County planning goals and objectives. This conclusion does not prevent a finding of less-than-significant impacts at the project level; however, due to potential unknown impacts from future development under the Housing Element Update, impacts at the programmatic level would remain significant and unavoidable.

***Level of Significance After Mitigation:*** Impact 5.18-2 would be significant and unavoidable.

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Impact 5.18-3: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, future projects could require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (Threshold W-3)

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Buildout under the proposed project would result in additional infrastructure, such as roadways, transmission lines, and other utilities, in order to serve new residential development. Fuel breaks and emergency water sources would also be required to comply with State and local development regulations. These types of improvements would involve temporary construction and result in changes to the existing built environment. The installation and operation of new above-ground power transmission lines would create a higher risk of exacerbating wildfire risks compared to other infrastructure. However, the CPUC requires maintenance of vegetation around power lines, strict wire-to-wire clearances, annual inspections of above-ground power lines, and the preparation of fire prevent plans for above-ground power lines in high fire-threat districts. These measures would reduce the wildfire risks associated with the installation and maintenance of power lines.

Any residential development in the wildfire prone areas of Contra Costa County would also be required to comply with building and design standards in the California Building Code and California Fire Code, which include provisions for fire resistant building materials, the clearance of debris, and fire safety requirements during demolition and construction activities. Public Resources Code Section 4291 also requires vegetation around buildings or structures must maintain defensible space within 100 feet of a structure and an ember resistant zone within 5 feet of a structure. Additionally, SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations would prevent structures from being placed within 30 feet of a roadway, reducing the potential for new roadways to exacerbate wildfire risks. These measures, along with policies and actions in the General Plan Health and Safety Element and Public Facilities and Services Element for constructing homes with fire-resistant materials, landscaping with irrigated or fire-resistant materials, and requiring review by fire protection agencies for adequate water supplies, road design, and building design would minimize wildfire risks associated with the installation and maintenance of infrastructure.

Such infrastructure and maintenance activities would also be required to comply with the adopted State regulations, Contra Costa County Ordinance Code standards, and General Plan policies and actions to mitigate the impact of infrastructure on the environment. Therefore, impacts would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.18-3 would be less than significant.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.18-3 would be less than significant.

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Impact 5.18-4: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (Threshold W-4)

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Wildfires on hillsides can create secondary hazards in the form of flooding and landslides. Wildfires on steep slopes can burn the vegetation that stabilizes the slope and create hydrophobic conditions that prevent the ground from absorbing water. This can lead to landslides, debris flows, and flooding.

As discussed in Chapter 5.10, *Hydrology and Water Quality*, Contra Costa County contains lands within the 100-year, 200-year, and 500-year floodplain. As shown in Figure 5.10-3, floodplains are primarily located along creeks, canals, shorelines, and low-lying lands in the Sacramento-San Joaquin Delta. Many flood-prone areas are not, however, located within High or Very High Fire Hazard Severity Zones or WUI areas.

As discussed in Chapter 5.7, *Geology and Soils*, landslide prone areas are located throughout the County, with many of the moderate to high landslide potential areas coinciding with high or Very High Fire Hazard Severity Zones. Many of the high landslide potential areas are located on the steep slopes of the Diablo Mountain Range, creating overlapping landslide prone areas in the steep mountain ranges. This overlap may cause areas outside of a landslide susceptible zone to be affected by runoff, post-fire slope instability, or drainage changes following a wildfire.

Potential future development under the Housing Element Update could contribute to post-fire slope instability or drainage changes upstream. However, proposed Housing Element Policy HE-P8.3 requires locating below market-rate housing development outside of mapped hazard zones as identified in the Health and Safety Element. This does not prevent other residential development from being located in mapped hazard zones. Additionally, all new development in the county is required to comply with State and local regulations, such as the California Building Code, California Fire Code, and Contra Costa County Ordinance Code, which have provisions to reduce downslope or downstream landslides and flooding. For example, Section 1803 of the 2019 California Building Code requires a geotechnical investigation that must assess existing landslide susceptibility on a project site. Contra Costa County Ordinance Code, Title 7, Article 716, Grading, also requires a grading permit issued by a building inspector to control excavating, grading, earthwork construction, including fills or embankments and related work, ultimately minimizing slope instability. Furthermore, as discussed in Impact Discussion WILD-2, all potential future development within wildfire prone areas in Contra Costa County would be required to comply with SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations, Public Resources Code Section 4291, and the California Fire Code. These regulations would ensure fire resilient structures and properties, and therefore would reduce the potential for post-wildfire flooding or landslides downstream or downslope.

New development complying with state and local regulations would not expose people or structures to downslope landslides or downstream flooding due to post-fire hazards. Furthermore, as identified in Impact Discussions WILD-1 and WILD-2, development under the proposed project must also comply with Contra Costa County Emergency Operations Plan, Hazard Mitigation Plan, and Community Wildfire Protection Plan. All future development, regardless of the location, is required to comply with adopted local, regional, and State plans and regulations addressing wildfire prevention which would minimize risks of post-fire hazards. As such,

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compliance with these policies and regulatory requirements would ensure impacts from postfire instability would be less than significant.

***Level of Significance Before Mitigation:*** Impact 5.18-4 would result in less than significant impacts.

#### *Mitigation Measures*

No mitigation measures are required.

***Level of Significance After Mitigation:*** Impact 5.18-4 would result in less than significant impacts.

### 5.18.5 Cumulative Impacts

Development associated with the proposed project would result in new development within the SRA, Very High Fire Hazard Severity Zones, and WUI. To protect this development, the County requires that future development adhere to state and local regulations. With adherence to these building practices and wildfire management requirements, development associated with the proposed project would reduce wildfire risk.

### 5.18.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: Impact 5.18-3 and Impact 5.18-4.

### 5.18.7 Mitigation Measures

#### Impact 5.18-1

**WILD-1** Project applicants for development in a Very High Fire Hazard Severity Zone and WUI shall prepare a Traffic Control Plan to ensure that construction equipment or activities do not block roadways during the construction period. The Traffic Control Plan shall be submitted to the Fire Protection District for review and approval of building permits.

#### Impact 5.18-2

There are no feasible mitigation measures.

### 5.18.8 Level of Significance After Mitigation

#### Impact 5.18-1

With the implementation of Mitigation Measure WILD-1, which requires the preparation of a Traffic Control Plan, impacts would be less than significant.

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### Impact 5.18-2

While the California Building Code, California Fire Code, SRA and Very High Fire Hazard Severity Zone Fire Safe Regulations, Public Resources Code, and the County's Hazard Mitigation Plan, General Plan, Ordinance Code, and the proposed Housing Element would reduce impacts, the only way to fully avoid the wildfire impact from implementation of the proposed project, is to not allow development in areas within Very High Fire Hazard Severity Zones and WUI areas, thereby eliminating potential wildfire impacts. However, doing so is not feasible or practical as the County has a responsibility to meet its RHNA allocation. Due to the potential unknown impacts from future development under the proposed project, impacts at the programmatic level would remain **significant and unavoidable**.

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## 6. Unavoidable Impacts, Irreversible Changes, and Growth-Inducing Impacts

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### Significant Unavoidable and Adverse Impacts

At the end of Chapter 1, *Executive Summary*, is a table that summarizes the impacts, mitigation measures, and levels of significance before and after mitigation. Mitigation measures would reduce the level of impact, but the following impacts would remain significant, unavoidable, and adverse after mitigation measures are applied:

- **Impact 5.3-2** Short-term construction activities associated with the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.
- **Impact 5.3-3** Buildout of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.
- **Impact 5.4-1:** Development of the proposed project could impact special-status species.
- **Impact 5.5-1:** Development of the proposed project could impact historic resources.
- **Impact 5.8-1:** Implementation of the proposed project is projected to result in emissions that exceed the unincorporated County's GHG reduction target established under SB 32.
- **Impact 5.9-5:** Implementation of the proposed project could expose structures and/or residences to fire danger.
- **Impact 5.13-1:** Construction activities would result in temporary noise increases in the vicinity of the proposed project.
- **Impact 5.13-2:** Project implementation would generate a substantial traffic noise increase on local roadways and could locate sensitive receptors near rail in areas that exceed established noise standards.
- **Impact 5.18-2:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, future projects, due to slope, prevailing winds, and other factors, could exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.

### Significant Irreversible Changes Due to the Proposed Project

Section 15126.2(c) of the CEQA Guidelines requires that an Environmental Impact Report (EIR) describe any significant irreversible environmental changes that would be caused by the proposed project should it be implemented. Specifically, the CEQA Guidelines state:

## 6. Unavoidable Impacts, Irreversible Changes, and Growth-Inducing Impacts

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highways improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The following are the significant irreversible changes that would be caused by the proposed project, should it be implemented:

- Implementation of the proposed project would include construction activities that would entail the commitment of nonrenewable and/or slowly renewable energy resources; human resources; and natural resources such as lumber and other forest products, sand and gravel, asphalt, steel, copper, lead, other metals, water, and fossil fuels. Operation of the proposed project would require the use of natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The commitment of resources required for the construction and operation of the proposed project would limit the availability of such resources for future generations or for other uses during the life of the project.
- As increased commitment of social services and public maintenance services (e.g., police, fire, schools, libraries, and sewer and water services) would also be required. The energy and social services commitments would be long-term obligations in view of the low likelihood of returning the land to its original condition once it has been developed.
- The visual character of the Housing Element sites would be altered by the construction of the new structures. Landscaping, grading, and construction of project sites would also contribute to an altered visual character of the existing sites. This would result in a permanent change in the character of the sites and on- and off-site views in their vicinity.

Given the low likelihood that the land at the sites would revert to its original forms, the proposed project would generally commit future generations to these environmental changes.

### Growth-Inducing Impacts of the Proposed Project

Pursuant to Sections 15126(d) and 15126.2(d) of the CEQA Guidelines, this section is provided to examine ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also required is an assessment of other projects that would foster other activities which could affect the environment, individually or cumulatively. To address this issue, potential growth-inducing effects will be examined through analysis of the following questions:

- Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?

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- Would this project result in the need to expand one or more public services to maintain desired levels of service?
- Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?
- Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?

Please note that growth-inducing effects are not to be construed as necessarily beneficial, detrimental, or of little significance to the environment. This issue is presented to provide additional information on ways in which this project could contribute to significant changes in the environment, beyond the direct consequences of developing the land use concept examined in the preceding sections of this EIR.

### **Would this project remove obstacles to growth, e.g., through the construction or extension of major infrastructure facilities that do not presently exist in the project area, or through changes in existing regulations pertaining to land development?**

According to the Association of Bay Area Governments (ABAG), the population of the unincorporated County is projected to increase to 199,105 by 2040 (as reported in the Plan Bay 2040 growth forecast), which represents an increase of 17.55 percent from the 2020 population of 169,375. The potential increase in population by adding a maximum of 20,417 new housing units (an estimated 63,471 persons) would result in a population increase that would be greater than the ABAG 2040 population projection. As stated in Section 5.14, *Population and Housing*, this increase would exceed the County's population project but would help meet the County's RHNA and the housing needs of the state and region.

The County's 65/35 Land Preservation Plan requires that at least sixty-five percent of all land in the County must be preserved for agriculture, open space, wetlands, parks, and other non-urban uses. The County's Urban Limit Line (ULL) was adopted by voters in 2006 and enforces the standards of the 65/35 plan. Development under the Housing Element Update would comply with the 65/35 standard and the ULL, limiting growth to primarily infill areas within existing unincorporated communities. Although some sites may require the construction of on-site infrastructure improvements to facilitate development in such areas, development of those areas for residential sites would only require a connection to existing services. One of the purposes of the Housing Element is to promote and facilitate housing growth to meet the County's housing needs and this growth be constrained areas with existing services. Consequently, implementation of the Housing Element Update would not induce unplanned growth in the County due to extension of urban services or infrastructure.

### **Would this project result in the need to expand one or more public services to maintain desired levels of service?**

The proposed project is expected to increase the demand for public services, which would contribute to the needs to expand facilities. However, as substantiated in Section 5.15 of this DEIR, existing ordinances and policies would ensure that the increase in uses, and impacts to public services, would be less than significant.

## 6. Unavoidable Impacts, Irreversible Changes, and Growth-Inducing Impacts

### **Would this project encourage or facilitate economic effects that could result in other activities that could significantly affect the environment?**

The Housing Element Update would not encourage or facilitate economic effects that could impact the environment beyond the provision of construction-related jobs associated with the production of housing units allowed under the proposed project. The County expects that this labor force would be available within the existing labor pool such that the proposed project would not otherwise induce growth due to construction jobs. As the role of a Housing Element as a planning document is to facilitate affordable housing production within a jurisdiction, it does not specifically address job generating uses.

### **Would approval of this project involve some precedent-setting action that could encourage and facilitate other activities that could significantly affect the environment?**

Cities and counties in California are required to update their Housing Elements in eight cycles pursuant to California Government Code Sections 65300 et seq. Thus, approval of the proposed Contra Costa Housing Element Update would not set a precedent that could encourage and facilitate other activities that could significantly affect the environment.

# 7. Alternatives to the Proposed Project

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## 7.1 INTRODUCTION

### 7.1.1 Purpose and Scope

The California Environmental Quality Act (CEQA) requires that an environmental impact report (EIR) include a discussion of reasonable project alternatives that would “feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives” (CEQA Guidelines § 15126.6[a]). As required by CEQA, this chapter identifies and evaluates potential alternatives to the proposed project.

Section 15126.6 of the CEQA Guidelines explains the foundation and legal requirements for the alternatives analysis in an EIR. Key provisions are:

- “[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (15126.6[b])
- “The specific alternative of ‘no project’ shall also be evaluated along with its impact.” (15126.6[e][1])
- “The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” (15126.6[e][2])
- “The range of alternatives required in an EIR is governed by a ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.” (15126.6[f])
- “Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent)” (15126.6[f][1]).
- “Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.” (15126.6[f][2][A])
- “An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.” (15126.6[f][3])

## 7. Alternatives to the Proposed Project

For each development alternative, this analysis:

- Describes the alternative.
- Analyzes the impact of the alternative as compared to the proposed project.
- Identifies the impacts of the project that would be avoided or lessened by the alternative.
- Assesses whether the alternative would meet most of the basic project objectives.
- Evaluates the comparative merits of the alternative and the project.

According to Section 15126.6(d) of the CEQA Guidelines, “[i]f an alternative would cause...significant effects in addition those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.”

### 7.1.2 Project Objectives

As described in Section 3.2, the following objectives have been established for the proposed project and will aid decision makers in their review of the project, the project alternatives, and associated environmental impacts.

1. Adopt the 6<sup>th</sup> Cycle Housing Element by February 2023.
2. Provide a list of potential housing sites to meet the regional housing needs allocation (RHNA).
3. Determine if there are significant environmental issues that would preclude future decisions to consider land use designation and/or zone changes for sites identified for housing in the 6<sup>th</sup> Cycle Housing Element.

### 7.1.3 Summary of Significant Impacts Reduced to Less than Significant with Mitigation Incorporated

#### Air Quality

- **Impact 5.3-4:** Construction activities associated with the proposed project could expose sensitive receptors to substantial pollutant concentrations.

#### Biological Resources

- **Impact 5.4-2:** Development of the proposed project could impact sensitive natural communities, including wetland and riparian habitats.
- **Impact 5.4-3:** Development pursuant to the proposed project could adversely impact wildlife movement in and surrounding the County.

#### Cultural Resources

- **Impact 5.5-2:** Development of the project could impact archaeological resources.
- **Impact 5.5-3:** Grading activities could potentially disturb human remains.



## 7. Alternatives to the Proposed Project

### Geology and Soils

- **Impact 5.7-5:** Development under the proposed project could directly or indirectly destroy a unique paleontological resource or unique geologic feature.

### Hazards and Hazardous Materials

- **Impact 5.9-4:** Development under the proposed project could affect the implementation of an emergency responder or evacuation plan.

### Mineral Resources

- **Impact 5.12-1:** Implementation of the proposed project could result in the loss of availability of a known mineral resource.

### Noise

- **Impact 5.13-3:** Individual construction developments for future housing may expose sensitive uses to excessive levels of groundborne vibration.

### Transportation

- **Impact 5.16-4:** Development associated with the proposed project could temporarily result in inadequate emergency access.

### Wildfire

- **Impact 5.18-1:** Buildout of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan.

## 7.1.4 Summary of Significant and Unavoidable Impacts

### Air Quality

- **Impact 5.3-2:** Short-term construction activities associated with the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.
- **Impact 5.3-3:** Buildout of the proposed project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in non-attainment under applicable federal or State ambient air quality standards.

### Biological Resources

- **Impact 5.4-1:** Development of the proposed project could impact sensitive species in the County.

## 7. Alternatives to the Proposed Project

### Cultural and Tribal Cultural Resources

- **Impact 5.5-1:** Development of the project could impact an identified historic resource.

### Greenhouse Gases

- **Impact 5.8-1:** Implementation of the proposed project is projected to result in emissions that would exceed the unincorporated County's GHG reduction target established under Executive Order S-03-05 or progress toward the State's carbon neutrality goal.

### Hazards and Hazardous Materials

- **Impact 5.9-5:** Development on sites located in designated Very High Fire Hazard Severity Zones could expose structures and/or residences to fire danger.

### Noise

- **Impact 5.13-1:** Construction activities would result in temporary noise increases in the vicinity of the proposed project.
- **Impact 5.13-2:** Project implementation would generate a substantial traffic noise increase on local roadways and could locate sensitive receptors near rail in areas that exceed established noise standards.

### Wildfire

- **Impact 5.18-2:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, future projects, due to slope, prevailing winds, and other factors, could exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.

## 7.2 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this EIR.

### 7.2.1 Alternative Off-Site Development Areas

The proposed Housing Element Update covers the entire County. Alternative locations are typically included in an environmental document to avoid, lessen, or eliminate the significant impacts of a project by considering the proposed development in an entirely different location. To be feasible, development of off-site locations must be able to fulfill the project purpose and meet most of the project's basic objectives. Given the nature of the proposed project (adoption of a Housing Element for the entire unincorporated County), it is not possible to consider an offsite alternative. For this reason, an offsite alternative was considered infeasible pursuant to State CEQA Guidelines Section 15126.6(c) and was rejected as a feasible project alternative.

## 7. Alternatives to the Proposed Project

### 7.2.2 Reduced Density Alternative

A reduced density alternative that would result in fewer residences, which would theoretically reduce traffic and thereby reduce community impacts such as air quality, greenhouse gas (GHG) emissions, traffic, noise, and demand for utilities and public services. However, such an alternative would not achieve or would only partially achieve the project objectives of providing for growth in the County. Additionally, this alternative would not meet the County's RHNA allocation. As a reduced development density conflicts with regional plans to increase housing, and would not meet the project objectives, this option was not evaluated in the EIR.

### 7.2.3 Transit-Oriented Sites Alternative

The "transit-oriented sites" alternative would consist of removing all new sites in the proposed Housing Element sites inventory except those within a half mile of Bay Area Rapid Transit (BART) stations and other high quality transit corridors. To replace these lost sites, this alternative would add to the inventory all developable parcels in the unincorporated County within in a half mile of the BART stations in Contra Costa Centre and Bay Point. The proposed density range for these new sites would be a minimum of 75 units per acre and a maximum 125 units per acre, per the BART residential density standard. This alternative would reduce greenhouse gas emissions and air quality impacts by reducing Vehicle-Miles Traveled (VMT). Increasing density in proximity to the County's high-quality transit centers would encourage use of BART and other alternative modes of transportation available to these areas which should reduce the total and per-capita VMT in the County.

This alternative would focus future residential development in the County near high-quality transit corridors and BART stations leading to potential VMT reductions. However, the number of housing units considered in the proposed project is 7,610 units with another 2,485 units of buffer. To place these units within ½ mile of the existing BART stations or high quality transit corridors would likely displace existing residents and non-residential development. This has the potential to offset the expected reduction in VMT realized by this alternative because residents and employees might need to drive further than they do currently. It's also physically improbable that sufficient land could be developed near the BART stations at the densities needed to match the housing potential shown in the proposed project. It is also unlikely that the water distribution and wastewater collection systems could function acceptably without significant upgrade if density was increased to meet the housing potential of the proposed project.

While not a CEQA consideration necessarily, this round of Housing Element Update is required to demonstrate that new housing sites affirmatively further fair housing. The intent of this requirement is to avoid concentrating housing in one or two areas of the County. Consistent with the state requirement, the County has worked to provide housing sites that are distributed throughout the geographic area of the County rather than in one or two locations. This provides housing opportunities for people to live close to where they work even if where they work is not on a BART or high quality transit corridor. Placing all the potential housing units in one or two locations would not be consistent with this state mandate. Review of aerial photographs surrounding the two BART sites shows that there is limited developable land proximate to these stations. Due to its infeasibility, this alternative is rejected from further analysis.

## 7. Alternatives to the Proposed Project

### 7.3 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

Based on the criteria listed above, the following alternatives have been determined to represent a reasonable range of alternatives which have the potentially to feasibly attain most of the basic objectives of the project but may avoid or substantially lessen any of the significant effects of the project. These alternatives are analyzed in detail in this section:

- No Project/Existing Housing Element
- Removal of Sites in a Fire Hazard Severity Zone

An EIR must identify an “environmentally superior” alternative and if the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative’s environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior.

### 7.4 NO PROJECT/EXISTING HOUSING ELEMENT ALTERNATIVE

The No Project Alternative is required to discuss the existing conditions at the time the notice of preparation is published and evaluate what would reasonably be expected to occur in the foreseeable future if the proposed project is not approved (CEQA Guidelines, Section 15126.6[e]). Pursuant to CEQA, this Alternative is also based on current plans and consistent with available infrastructure and community services. Therefore, the No Project/Existing Housing Element Alternative assumes that the proposed project would not be adopted, and the development intensity assumed in the existing Housing Element would be followed.

Although the Planning Area would be the same under the proposed project and existing Housing Element, the footprint-related impacts (e.g., biological resources, cultural resources) of the No Project Alternative would be the less than the proposed project as development intensity would be less. The proposed project would result in an increase in population and housing units, and therefore, this Alternative would result in a reduction in intensity-related impacts. For example, this Alternative would generate fewer auto trips, traffic noise would be less, and impacts on services and utilities would be less.

It should be noted that the growth not accommodated in the unincorporated County under this Alternative would likely occur in other communities in the region. This could result in encroachment into open space or other areas with sensitive resources or that are susceptible to wildfires if adequate developable land is not available in those communities. This Alternative would not be consistent with the County’s RHNA allocation for the unincorporated areas and would result in greater impacts to land use and planning and population and housing. While this Alternative would reduce overall impacts compared to the proposed project, it would not likely reduce any of the identified significant impacts to a less than significant level. This Alternative would not meet any of the proposed project’s objectives.

## 7. Alternatives to the Proposed Project

7.5 REMOVAL OF SITES IN A FIRE HAZARD SEVERITY ZONE  
ALTERNATIVE

The “removal of sites in a fire hazard severity zone” alternative would remove four sites in the Housing Element Sites Inventory that border a Very High Fire Hazard Severity Zone (VHFHSZ), as designated by the Department of Forestry and Fire Protection (CAL FIRE), near the El Sobrante Ridge and Pinole Valley Park. These sites include APN’s 430012022, 433460007, 435080005, and 430161020 in the El Sobrante community. The Fire Hazard Severity Zone (FHSZ) maps consider several factors that determine fire likelihood and behavior and assign a hazard score based on these factors. Some factors considered are fire history, existing and potential fuel (natural vegetation), predicted flame length, blowing embers, terrain, and typical fire weather for the area. These four sites in El Sobrante border a VHFHSZ, which are areas of increased fire hazard within the jurisdiction of a local government or Local Responsibility Area (LRA). Development in these areas must adhere to California Building Code Chapter 7A requirements which include the use ignition resistant construction methods and materials and are subject to defensible space standards. It should be noted that at the time of publishing this Draft EIR, CAL FIRE is in process of updating the statewide Fire Hazard Severity Maps and has released the draft maps of the State Responsibility Areas for public review. However, as CAL FIRE has yet to release the updated boundaries of the LRA’s, it cannot be determined at this time how these updated maps will affect this alternative and the proposed project.

As discussed in Impact 5.18-2 of Section 5.18, *Wildfire*, the proposed project could exacerbate wildfire risk and expose future project residents to the danger of uncontrolled spread of wildfire. This impact is also discussed in Impact 5.9-5 of Section 5.9, *Hazards and Hazardous Materials*. Removal of these sites from the inventory would ensure that no sites included in the Housing Element’s sites inventory are within or in proximity to a fire hazard severity zone at the time of publishing this Draft EIR. This alternative would therefore reduce impacts from Wildfire (Impact 5.18-2) and Hazards and Hazardous Materials (Impact 5.9-5) to less than significant. However, as noted previously, the 2022 Fire Hazard Severity Zones for LRA’s have not been released for public review at the time of publishing this Draft EIR. Revisions to the LRA VHFHSZ boundaries across the County may result in other sites within the Housing Element’s sites inventory not otherwise noted in this alternative, intersecting with CAL FIRE’s new fire hazard zones.

This alternative would result in the loss of approximately 58 maximum developable units from the Housing Element’s sites inventory. The combined “realistic” capacity of these sites is 44 units, which when subtracted from the total number of units that have been identified to meet the County’s RHNA, would result in 9,472 units remaining in the inventory (see Chapter 3 for additional details on the “realistic capacity”). As such, the elimination of these sites from the inventory would still allow the County to fully meet its RHNA and continue to have a surplus of 1,862 units. It should be noted that APN’s 430012022 and 435080005 are listed in Table B of the Housing Element sites inventory; and while these sites are proposed to be redesignated and rezoned to accommodate higher residential densities, both sites are currently zoned and designated for residential development. APN’s 430161020 and 433460007 are listed in Table A of the Housing Element and would not be rezoned or redesignated to accommodate higher residential density. This alternative would at most prevent the redesignation and rezone of two sites for higher density that already allow residential development. As a result, this alternative neither significantly increases nor decreases impacts to any

## 7. Alternatives to the Proposed Project

additional resource topic discussed in this Draft EIR. As a project that contains 529 individual sites, the topics discussed in this document are evaluated programmatically; the magnitude of change that would occur to other resource topics by removing these sites from the inventory is minimal.

The removal of four sites from the inventory would not reduce the number of units available in the sites inventory to meet the County's RHNA to below the 7,610 allocated units. Therefore, this alternative meets all project objectives by allowing the County to adopt its 6<sup>th</sup> Cycle Housing Element Update, provide a list of potential housing sites that meet the County's RHNA, and determine significant environmental issues that would preclude future decisions to consider land use changes to the housing sites. Furthermore, this alternative would reduce impacts from exposure to wildfire and hazards and hazardous materials to less than significant. As a result, this alternative is considered to be the environmentally superior alternative as it meets all project objectives and reduces an environmental impact to less than significant.

### 7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires a lead agency to identify the "environmentally superior alternative" and, in cases where the "No Project" Alternative is environmentally superior to the proposed project, the environmentally superior development alternative must be identified. One alternative has been identified as "environmentally superior" to the proposed project:

- Removal of Sites in a Fire Hazard Severity Zone Alternative

The Removal of Sites in a FHSZ Alternative has been identified as the environmentally superior alternative. This Alternative would lessen impacts associated with wildfire and wildfire hazards to less than significant. The remaining impacts are generally the same as the proposed project.

"Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts" (CEQA Guidelines § 15126.6[c]).

Table 7-1, *Comparison of Project Alternatives to the Proposed Project*, compares the environmental determination of the proposed project with the project alternatives.

## 7. Alternatives to the Proposed Project

Table 7-1 Comparison of Project Alternatives to the Proposed Project

Topic	Project Environmental Determination	No Project Alternative	Removal of Sites in a FHSZ Alternative
Aesthetics	LS	=	=
Agriculture and Forestry Resources	LS	-	=
Air Quality	SU	-	-
Biological Resources	SU	-	-
Cultural Resources and Tribal Cultural Resources	SU	-	-
Energy	LS	-	-
Geology and Soils	LSM	-	-
Greenhouse Gas Emissions	SU	-	-
Hazards and Hazardous Materials	SU	+	-
Hydrology and Water Quality	LS	-	-
Land Use and Planning	LS	+	+
Mineral Resources	LSM	-	-
Noise	SU	-	-
Population and Housing	LS	+	-
Public Services and Recreation	LS	-	-
Transportation	LSM	-	-
Utilities and Service Systems	LS	-	-
Wildfire	SU	+	-

Note: The symbols in the table indicate the following: No Impact (NI), Less Than Significant (LS), Less Than Significant with Mitigation (LSM), Significant and Unavoidable (SU); Similar Impacts (=), Less Severe Impacts (-), More Severe Impacts (+)

In addition to lessening significant impacts, an alternative must also attempt to meet most of the project objectives. Table 7-2, *Comparison of Alternatives to Project Objectives*, compares each of the alternatives to the project objectives.

Table 7-2 Comparison of Alternatives to Project Objectives

Objective	No Project Alternative	Removal of Sites in a FHSZ Alternative
Adopt the 6th Cycle Housing Element by February 2023	Does Not Meet	Does Meet
Provide a list of potential housing sites to meet the regional housing needs allocation (RHNA)	Does Not Meet	Does Meet
Determine if there are significant environmental issues that would preclude future decisions to consider land use designation and/or zone changes for sites identified for housing in the 6th Cycle Housing Element.	Does Not Meet	Does Meet
	Does Not Meet	Does Meet

## 7. Alternatives to the Proposed Project

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## 8. Organizations Consulted and Qualifications of Preparers

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### ORGANIZATIONS

Contra Costa County

Department of Conservation and Community Development

Native American Tribes

Confederated Villages of Lisjan

### QUALIFICATIONS OF PREPARERS

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## 8. Organizations Consulted and Qualifications of Preparers

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# **APPENDICES**

- 1. Appendix 2-1            NOP and NOP Comments**
- 2. Appendix 3-1            Draft Housing Element**
- 3. Appendix 5.3-1        Air Quality and Greenhouse Gas Emissions  
Data**
- 4. Appendix 5.13-1        Noise Appendix**

**Appendix 2-1**

**NOP and NOP Comments**

**Previous NOP Comment Letters**  
**(July 27, 2022 – August 26, 2022)**

**Department of  
Conservation and  
Development**

30 Muir Road  
Martinez, CA 94553

Phone: 1-855-323-2626

**Contra  
Costa  
County**



**John Kopchik**  
Director

**Aruna Bhat**  
Deputy Director

**Jason Crapo**  
Deputy Director

**Maureen Toms**  
Deputy Director

**Amalia Cunningham**  
Assistant Deputy Director

**NOTICE OF PREPARATION AND  
NOTICE OF PUBLIC SCOPING MEETING**

- Date:** July 27, 2022
- To:** California State Clearinghouse  
Contra Costa County Clerk  
Responsible and Trustee Agencies  
Interested Parties and Organizations
- Subject:** Notice of Preparation (NOP) for the Contra Costa County Housing Element Update Environmental Impact Report (EIR) and Notice of Public Scoping Meeting
- Lead Agency:** Contra Costa County
- Applicant:** Contra Costa County,  
30 Muir Road, Martinez, CA 94553  
(925) 655-2901
- Contact:** Daniel Barrios, Senior Planner (925) 655-2901
- Project Title:** Contra Costa County 6<sup>th</sup> Cycle Housing Element Update
- Project Location:** Contra Costa County is located on the eastern side of San Francisco Bay in Northern California. Contra Costa County is surrounded by Solano County and Sacramento County to the north, San Joaquin County to the east, Alameda County to the south, and Marin County to the west. Interstates 80 and 680, and State Routes 4 and 24, traverse the county and offer access to neighboring counties (See Figure 1, *Regional Location*).
- Scoping Meeting:** August 15, 2022, 3:30 PM

**PURPOSE**

In accordance with Section 15021 of the California Environmental Quality Act (CEQA) Guidelines, Contra Costa County, as lead agency, will prepare an Environmental Impact Report (EIR) for the Contra Costa County 6<sup>th</sup> Cycle Housing Element Update (Housing Element Update). Pursuant to Section 15082(a) of the CEQA Guidelines, Contra Costa County (County) has issued this Notice of Preparation (NOP) to provide responsible agencies, trustee agencies, and other interested

parties with information describing the Housing Element Update and its potential effects. The County is soliciting your comments on the scope of the environmental analysis.

Section 15082(b) of the CEQA Guidelines requires comments to be provided within 30 days of receipt of a NOP. In compliance with the time limits mandated by CEQA, the comment period for this NOP begins **Wednesday, July 27, 2022**, and ends **Friday, August 26, 2022, at 4:00 PM**. Please email your written comments to Daniel Barrios at [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us) or physically mail them to:

Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94553  
Attn: Daniel Barrios

When providing comments, please include the name, email and/or telephone number for a contact person at your agency or organization who can answer questions about the comment.

### **PROJECT DESCRIPTION & SUMMARY**

The Housing Element is one of the required elements of the General Plan. As a policy document, the Housing Element does not normally result in physical changes to the environment but encourages the provision of affordable housing within the land use designations shown in the Land Use Element of the General Plan. The Housing Element identifies policy direction to meet the housing needs of the County by preserving existing homes and clarifying priorities for housing creation. The proposed Housing Element will include an overview of housing policies and programs and will identify locations that can accommodate future housing. One of the programs in the proposed Housing Element will require that the County redesignate up to approximately 1,304 acres of land to meet the Regional Housing Needs Allocation (RHNA) of 7,610 total housing units. The parcels that may be redesignated to meet the RHNA are identified in Table 1, *Housing Element Sites Inventory*, and on Figures 2 through 5, *Housing Element Sites*.

Development under the Housing Element Update would be located within the Urban Limit Line and comply with the County's 65/35 Standard, which limits urban development to no more than 35 percent of the land area of the County, preserving the remaining 65 percent for agriculture, open space, wetlands, parks, and other non-urban uses.

The update to the Contra Costa County General Plan and Zoning Ordinance is underway (<https://envisioncontracosta2040.org/>) but will not be complete before the Housing Element adoption deadline of January 2023. Therefore, because it is not known for certain which of the sites shown in Table 1 will be redesignated to meet the RHNA, the County is preparing this EIR to evaluate the cumulative impacts of developing all of the sites in Table 1 at a programmatic level. Additional information regarding the Housing Element Update can be found on the County's website: <https://www.contracosta.ca.gov/8525/Housing-Element-Update>.

## **Project Objectives**

The Housing Element is an integral part of the County's General Plan and is the only element that must be certified by the State. Adoption of a certified Housing Element is essential to meeting grant funding requirements for the County. The proposed Housing Element has the following goals that form the project objectives for the purpose of this EIR:

- Maintain and improve the quality of the existing housing stock and residential neighborhoods in Contra Costa County;
- Preserve the existing affordable housing stock in Contra Costa County;
- Increase the supply of housing with a priority on developing affordable housing, including housing affordable to extremely low-income households;
- Increase the supply of appropriate and supportive housing for special-needs populations;
- Improve housing affordability for renters and homeowners;
- Provide adequate sites through appropriate land use and zoning designations to accommodate the County's share of regional housing needs;
- Mitigate potential governmental constraints to housing development and affordability;
- Promote equal opportunity for all residents to reside in the housing of their choice; and,
- Promote energy-efficient retrofits of existing dwellings and exceedance of building code requirements in new construction.

## **ENVIRONMENTAL IMPACT REPORT**

As all the CEQA topics will be included in the EIR, the County has not prepared an Initial Study as permitted in Section 15060(d) of the CEQA Guidelines.

### **Probable Environmental Effects**

The County has determined that implementation of the Housing Element Update may have a significant effect on the environment. The EIR will evaluate the potential for the Housing Element Update to cause direct and indirect growth-inducing impacts, as well as cumulative impacts. Mitigation will be proposed for those impacts that are determined to be significant. Mitigation will be identified, and a mitigation monitoring and reporting program will be developed as required by the CEQA Guidelines (Section 15150). The EIR will evaluate the following topics:

- **Aesthetics:** The potential for new development to affect aesthetics in the county will be evaluated in the EIR.
- **Agriculture and Forestry Resources:** There is a possibility that one or more sites in Table 1 is on prime agricultural land; therefore, the EIR will evaluate the potential for agricultural land conversion.
- **Air Quality:** Construction and operation of housing could result in air pollutant emissions. Ground disturbance during site development activities will generate dust and construction



equipment will create short-term pollutant emissions. Development accommodated under the Housing Element update could result in additional vehicular traffic that would generate air pollution, exacerbated by the county's location in a climate with high winds present, and proximity to high-traffic corridors. Air quality impacts will be evaluated in the EIR.

- **Biological Resources:** Development under the Housing Element Update may have an adverse effect on rare, threatened, or endangered species and/or the habitat that supports them, which could impact potential development outcomes. Such development could potentially affect existing wildlife corridors. The Housing Element Update could also affect riparian habitat and/or wetlands. The EIR will evaluate the potential for the sites to affect mapped habitat but will not provide information on a parcel level basis.
- **Cultural and Tribal Cultural Resources:** Development accommodated under the Housing Element Update may have an adverse effect on historic archaeological, and/or tribal cultural resources. There is the potential for construction-related effects on historical and archaeological resources. As part of the EIR process, both SB 18 and AB 52 tribal consultation will be completed. Cumulative impacts will be discussed at a programmatic level in the EIR, but individual site analysis will not be part of this effort.
- **Geological Resources:** Development accommodated under the Housing Element Update may result in soil erosion or the loss of topsoil and/or allow development in areas with geologic or soils constraints. There could be impacts associated with grading, such as increased wind and water erosion potential. Impacts may involve disruptions of the soil, changes in topography, erosion from wind or water, and other impacts, as well as a potential for development on paleontological resources. The EIR will summarize the construction process and identify sites possibly within areas of known geologic concern.
- **Greenhouse Gas:** It is likely that future development will contribute to cumulative increases in greenhouse gases. The EIR will analyze impacts of the Housing Element Update on greenhouse gas emissions and provide reduction methods, as needed.
- **Hazards:** The EIR will identify hazards that could be created or made worse because of the Housing Element Update.
- **Hydrology and Water Quality:** Development accommodated under the Housing Element Update may affect groundwater supplies, could change drainage patterns, and/or could have the potential to contribute polluted stormwater runoff. There could be impacts related to urban runoff and flooding potential, as well as to water quality. The EIR will evaluate these issues at a programmatic level.
- **Land Use:** The Housing Element Update will affect some of the land use designations currently under review as part of the larger General Plan Update. As the Housing Element Update must be approved before the updated General Plan will be adopted, the EIR will evaluate the potential for impact associated with the new land use designations.
- **Noise:** Increases in traffic because of future development accommodated under the Housing Element Update may result in an increase in ambient and transportation noise. Noise impacts will be evaluated in the EIR.

- **Public Services and Utilities:** Additional growth generated by the development accommodated under the Housing Element Update will increase demand on services and utilities. The EIR will evaluate the availability and capacity of the systems to provide for the increase in growth.
- **Recreation:** Additional growth would increase use of recreational facilities. The EIR will evaluate impacts to existing facilities resulting from the Housing Element Update.
- **Transportation:** Future development may result in impacts on the circulation system, including facilities outside the County's jurisdiction. The EIR will include an analysis of vehicle miles traveled.
- **Wildfire:** Portions of the county are subject to an increase in fire hazards due to ongoing drought conditions. The Housing Element Update EIR will include a discussion of potential impacts related to fire hazard at a programmatic level.

### **TYPE OF EIR**

The County will prepare a program EIR pursuant to Section 15168 of the CEQA Guidelines. Use of a program EIR allows analysis consistent with the high-level nature of the Housing Element. The Housing Element Update EIR will serve as a cumulative impact analysis for implementation of the Housing Element Update.

### **USE OF THE HOUSING ELEMENT UPDATE EIR**

Later projects implemented after the Housing Element Update will be examined considering the Housing Element Update EIR to determine whether an additional environmental document must be prepared. In addition, the CEQA Guidelines currently provide for streamlining through Section 15183 (Projects Consistent with a Community Plan or Zoning), Section 15183.3 (Streamlining for Infill Projects), and Section 15183.5 (Tiering and Streamlining the Analysis of Greenhouse Gas Emissions). The County intends to promote streamlining for future development through certification of the Housing Element Update EIR. Later development may have to conduct site-specific environmental analysis; however, the cumulative analysis will be addressed in the Housing Element Update EIR and proposed policies.

### **PUBLIC SCOPING MEETING**

The Contra Costa County Zoning Administrator will conduct a public scoping meeting for the Housing Element Update EIR on **Monday, August 15, 2022, at 3:30 PM**. Interested agencies, organizations, and members of the public are encouraged to attend and provide comments on environmental issues related to the Housing Element Update. The comments provided during the meeting will assist the County in scoping the potential environmental effects of the Housing Element Update to be addressed by the EIR.

The scoping meeting will be held on Zoom and will be accessible online and by phone using the following information:

Online:

<https://cccounty-us.zoom.us/j/84028702795>

Meeting ID: 84028702795

Phone:

(214) 765-0478 US Toll

(888) 278-0254 US Toll-free

Conference code: 198675

If you have questions or require additional information, please contact Daniel Barrios, Senior Planner, at (925) 655-2901, or by email at [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us).

Attachments:

Table 1 – Housing Element Sites Inventory

Figure 1 – Regional Location

Figure 2 – Housing Sites Inventory (Northwest Quadrant)

Figure 3 – Housing Sites Inventory (Northeast Quadrant)

Figure 4 – Housing Sites Inventory (Southwest Quadrant)

Figure 5 – Housing Sites Inventory (Southeast Quadrant)

**Table 1 Housing Element Sites Inventory**

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
197010013	0.23	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197010014	0.24	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197010016	0.24	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197010029	0.23	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197030026	5.68	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium High Density	17 to 30
197030027	0.61	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium High Density	17 to 30
196370032	3.79	Alamo	Single-Family Residential - Very Low Density	0.2 to 0.9	Residential – Low Medium Density	3 to 7
191062022	1.64	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
191080001	1.18	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
188330038	5.55	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
192142031	6.90	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
093036010	0.21	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093036014	0.37	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093036015	1.23	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093081028	0.52	Bay Point	Willow Pass Road Commercial Mixed Use	21 to 29	Mixed Use	30 to 75
093081029	0.77	Bay Point	Willow Pass Road Commercial Mixed Use	21 to 29	Mixed Use	30 to 75
093090029	0.51	Bay Point	Willow Pass Road Commercial Mixed Use	21 to 29	Mixed Use	30 to 75
093100059	0.98	Bay Point	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
093100060	2.87	Bay Point	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
093121001	10.99	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
093170056	0.56	Bay Point	Multiple-Family Residential - High Density	12.0 to 20.9	Residential – High Density	30 to 70
093170069	1.41	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093170071	0.53	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093170074	0.05	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093170080	0.27	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093191025	0.16	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093192026	0.29	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
093193002	0.14	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
093193035	0.18	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
094012021	0.13	Bay Point	Bay Point Residential Mixed Use	21 to 40 <sup>2</sup>	Mixed Use	75 to 125
094012022	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012023	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012024	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012025	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012026	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012027	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012030	0.10	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012031	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
094012032	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012033	0.13	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012038	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012039	0.15	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012040	0.13	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013001	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013002	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013003	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013004	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013005	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013006	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013012	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013013	0.18	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013014	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013015	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013016	0.10	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014001	0.20	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014010	0.19	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014011	0.20	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014012	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014013	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014014	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015006	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015010	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015011	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015012	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015013	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015014	0.15	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015027	0.30	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015028	0.21	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094016002	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026001	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026002	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026007	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026008	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
095021002	0.57	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
095021009	0.62	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095022025	0.30	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095022026	0.10	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095022027	0.07	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095034002	0.12	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095071010	0.50	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
095075025	0.21	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
095081020	0.77	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
095081023	0.71	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095083023	0.16	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095084025	0.22	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
095101001	0.42	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095101002	0.42	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095102003	0.66	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095102020	0.44	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095107015	0.40	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095120041	0.13	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
096012008	0.13	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096012009	0.06	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096015011	0.22	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096015015	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096015016	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016002	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016003	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016005	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016013	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016018	0.20	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096017008	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096018007	0.18	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096018015	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096019017	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096019025	0.25	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096020022	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020039	0.08	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020042	0.09	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020050	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020062	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020081	0.62	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
096020082	0.17	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096020093	0.09	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020173	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096031018	0.62	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096031019	1.02	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096032011	0.12	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	30 to 75
096032016	0.12	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	30 to 75
096032028	0.31	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096032032	0.92	Bay Point	Multiple-Family Residential - Low Density, Willow Pass Road Mixed Use	7.3 to 11.9, 21 to 29 <sup>3</sup>	Mixed Use	30 to 75

APN	Acres	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
096033028	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096033035	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096033037	0.15	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096033039	0.35	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096041001	0.33	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096041013	0.35	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096041026	0.37	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096042007	0.63	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096042020	0.41	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096042025	0.63	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096043002	0.64	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044001	0.42	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044002	0.20	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044003	0.41	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044007	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044009	0.33	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050011	0.80	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050012	0.15	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050013	0.15	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050014	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
098052006	0.13	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
098052053	0.12	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
098180005	1.46	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
098180041	0.76	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
098180043	0.82	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
098210001	2.35	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium High Density	17 to 30
098230023	0.61	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
098250013	256.18	Bay Point	Multiple-Family Residential – Medium Density, Commercial Recreation, Parks and Recreation, Open Space, Water	12.0 to 21.9 <sup>4</sup>	Residential – Medium High Density	17 to 30
093160005	0.24	Bay Point	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium Density	7 to 17
093160006	0.27	Bay Point	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium Density	7 to 17
093170018	0.12	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170021	0.13	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170022	0.13	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170076	0.06	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170078	0.19	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
403030005	12.79	Bayview	Montalvin Manor Mixed Use	12.0 to 21.9	Mixed Use	30 to 75
403461003	0.16	Bayview	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
403020009	2.77	Bayview	Public and Semi-Public	0	Residential – Medium High Density	17 to 30
403020013	0.59	Bayview	Public and Semi-Public	0	Residential – Medium High Density	17 to 30
403482043	4.55	Bayview	Public and Semi-Public	0	Residential – Medium High Density	17 to 30





APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
031240031	0.15	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240032	0.18	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240046	0.17	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240056	0.13	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240061	0.17	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240062	0.16	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240063	0.23	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240070	0.15	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240071	0.15	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031250007	0.14	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
003120008	4.94	Byron	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium High Density	17 to 30
003120009	5.08	Byron	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium High Density	17 to 30
100303008	0.14	Clyde	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
148170051	2.36	Contra Costa Centre	Multiple-Family Residential - Very High Special	45.0 to 99.9	Residential – Very High Density	70 to 125
172040025	0.30	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
172040026	0.29	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
172040034	0.35	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
172040035	0.13	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
354042029	0.11	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354064025	0.24	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
354072003	0.16	Crockett	Commercial, Multiple-Family Residential - Low Density	7.3 to 11.9 <sup>5</sup>	Mixed Use	0 to 30
354072020	0.08	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	0 to 30
354072027	0.12	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
354094009	0.09	Crockett	Commercial, Multiple-Family Residential - Low Density	7.3 to 11.9 <sup>5</sup>	Mixed Use	0 to 30
354094014	0.04	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
354095024	0.15	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
354155004	0.11	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
354155007	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – High Density	30 to 70
354173009	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354173010	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354177007	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354030013	2.39	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Very Low Density	< 1
354041016	0.16	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
354054006	0.22	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
354231028	0.18	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
011220010	22.96	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
011220017	40.45	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
011220018	6.73	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
011230006	44.70	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
011230007	42.22	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
004500005	545.22	Discovery Bay	Delta Recreation and Resources	1 unit per 20 acres	Agricultural	N/A
004182006	6.00	Discovery Bay	Commercial	1.0 FAR	Mixed Use	30 to 75
008010039	4.60	Discovery Bay	Commercial	1.0 FAR	Mixed Use	30 to 75
011220039	6.42	Discovery Bay	Office	1.5 FAR	Mixed Use	30 to 75
520032002	1.09	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520042013	0.96	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520050001	3.42	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520062001	1.59	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520070004	2.10	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
420090029	3.07	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
420140003	2.12	El Sobrante	Commercial, Single-Family Residential - High Density	5.0 to 7.2 <sup>6</sup>	Mixed Use	0 to 30
420150030	0.45	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420150033	0.93	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420184015	2.78	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420192037	0.76	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420192042	0.19	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420192043	0.47	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
425023011	2.94	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425040016	3.64	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425040024	2.33	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061012	4.57	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061032	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061033	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061034	0.17	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425072024	0.49	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425100054	0.30	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425100056	0.56	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425110025	0.18	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425110027	1.17	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
425142015	0.41	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425160015	0.40	El Sobrante	Multiple-Family Residential-Low Density, Open Space	7.3 to 11.9 <sup>5</sup>	Mixed Use	0 to 30
425200006	3.12	El Sobrante	Multiple-Family Residential - Low Density, Single-Family Residential - High Density	7.3 to 11.9, 5.0 to 7.2 <sup>7</sup>	Residential – Medium Density	7 to 17
425210037	0.90	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
425210039	0.91	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425210042	0.91	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425210044	0.33	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
425210045	1.30	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
425230017	0.89	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425230036	0.47	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425230037	0.45	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425230038	0.91	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425240041	1.68	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425252045	0.30	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
425252048	0.12	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
425252064	1.33	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
426261050	0.20	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
426261060	0.87	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430012022	3.21	El Sobrante	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Low Medium Density	3 to 7
430152062	0.16	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152092	0.14	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152093	0.23	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152094	0.27	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152095	0.48	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430184021	0.24	El Sobrante	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Low Medium Density	3 to 7
431010010	0.79	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
431010011	0.26	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
431020017	0.45	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
431070027	0.19	El Sobrante	Single-Family Residential - High Density, Open Space	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
433060014	1.55	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
435070008	0.16	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
435080005	0.99	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
435171006	0.45	El Sobrante	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Low Medium Density	3 to 7
420071012	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420071014	0.28	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420071020	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420071021	0.30	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172017	0.24	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172019	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172020	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172021	0.25	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172039	0.13	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420192018	0.39	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425130002	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425130010	6.06	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
425141005	0.44	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425150046	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180010	0.57	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180018	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180021	0.87	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180041	0.92	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425190019	0.16	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425190028	0.22	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425210003	0.60	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425220014	0.42	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425220029	0.99	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426030070	0.97	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426030071	5.46	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426163052	0.35	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426182001	3.90	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426182017	1.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426192005	1.55	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426192007	0.26	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426192008	1.81	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426200008	1.11	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426200010	2.43	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426210007	1.31	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426210022	1.83	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426221049	0.29	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243005	1.83	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243019	0.57	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243039	0.49	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243045	0.55	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426270013	3.06	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
430132002	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
430161004	0.44	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
430161020	0.37	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
431070026	0.27	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
431070028	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
431070035	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433190041	0.22	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433190043	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433190060	0.93	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433241057	0.45	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433241065	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433460007	0.35	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
435120070	0.16	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
435130015	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420010001	0.39	El Sobrante	Commercial, Open Space	1.0 FAR	Mixed Use	0 to 30
420010002	1.19	El Sobrante	Commercial, Open Space	1.0 FAR	Mixed Use	0 to 30
425170030	0.77	El Sobrante	Commercial, Open Space	1.0 FAR	Mixed Use	0 to 30
425251006	0.09	El Sobrante	Commercial	1.0 FAR	Mixed Use	0 to 30
403202011	2.76	Montalvin Manor	Montalvin Manor Mixed Use	12.0 to 21.9	Residential – Medium Density	7 to 17
403211024	1.69	Montalvin Manor	Commercial	1.0 FAR	Mixed Use	30 to 75
403211026	1.14	Montalvin Manor	Commercial	1.0 FAR	Mixed Use	30 to 75
403211027	3.63	Montalvin Manor	Commercial	1.0 FAR	Mixed Use	30 to 75
375311001	0.96	Mountain View	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
375311003	0.49	Mountain View	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
408160016	0.16	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409011012	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021007	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021008	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021010	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021027	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021028	0.09	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021032	0.15	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021034	0.08	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021037	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021040	0.05	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021041	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409031004	0.05	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409032013	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409032015	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409032019	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033001	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033012	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033023	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033025	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409041006	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409042014	0.45	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409042021	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409042022	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409051002	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409051008	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409052001	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409052003	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409052009	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060009	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060013	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30

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409060018	0.35	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060029	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060043	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060044	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409080005	0.05	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409100004	0.58	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409100009	0.04	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	30 to 75
409110007	0.19	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409120005	0.18	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409120011	0.41	North Richmond	Multiple-Family Residential - Low Density, Single-Family Residential - High Density	7.3 to 11.9, 5.0 to 7.2 <sup>7</sup>	Mixed Use	30 to 75
409120012	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131003	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131010	0.09	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131014	0.04	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131015	0.04	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409132002	0.12	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409132007	0.51	North Richmond	Multiple-Family Residential - Low Density, Industrial - Light Industrial	7.3 to 11.9 <sup>5</sup>	Mixed Use	30 to 75
409132016	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409141006	0.18	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409141012	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142005	0.49	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142012	0.10	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142014	0.40	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142015	0.10	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142016	0.10	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409151005	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409151011	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409152002	0.10	North Richmond	Multiple-Family Residential - Medium Density	12.0 to 20.9	Mixed Use	30 to 75
409152007	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409161001	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409161003	0.17	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Mixed Use	30 to 75
409161008	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162008	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162018	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162025	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171012	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171015	0.24	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171023	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30

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409172017	0.13	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409172019	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409172027	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409172028	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409181008	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409182002	0.26	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409182020	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409182023	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409182024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409191001	0.35	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409191009	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409191013	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409192001	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409200009	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200015	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200016	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200025	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409210011	0.53	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210020	0.67	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210021	1.37	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210022	2.16	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210023	3.03	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210024	1.28	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210025	0.70	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210026	1.60	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409220006	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409220007	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409220008	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409230015	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409240017	0.15	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409240019	0.08	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409240029	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409240030	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251019	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251020	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251021	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251022	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409252008	0.19	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409261009	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409261012	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409261013	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
409261015	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409261016	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409262012	0.06	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
409262013	0.06	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
409262015	0.06	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
409271005	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409271007	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409271011	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409271021	0.09	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409271025	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409272007	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409272009	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409272010	0.04	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409281001	0.40	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409281011	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409281014	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409282005	0.34	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409282006	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409282019	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409291008	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409291009	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409292001	0.61	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
125071011	0.23	Pacheco	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
125071012	0.27	Pacheco	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
125140005	0.47	Pacheco	Office, Single-Family Residential - High Density	5.0 to 7.2 <sup>6</sup>	Mixed Use	30 to 75
154210027	0.58	Pacheco	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Low Density	1 to 3
125077024	0.08	Pacheco	Commercial	1.0 FAR	Mixed Use	30 to 75
125130018	0.79	Pacheco	Commercial, Public and Semi-Public	1.0 FAR	Mixed Use	30 to 75
125130020	0.19	Pacheco	Commercial	1.0 FAR	Mixed Use	30 to 75
125155021	0.21	Pacheco	Office	1.5 FAR	Mixed Use	30 to 75
169231011	0.29	Reliez Valley	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Low Medium Density	3 to 7
357042008	0.07	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357042016	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357052002	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357052015	0.05	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357061010	0.14	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357081003	0.26	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357140010	0.12	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140016	0.12	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140039	0.65	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140041	0.65	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75



APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
357140045	0.07	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140056	0.14	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140057	0.07	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140058	0.11	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140059	0.08	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140060	0.14	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140062	0.11	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140063	0.12	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140064	0.19	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357151002	0.56	Rodeo	Downtown/Waterfront Rodeo Mixed Use	30	Mixed Use	30 to 75
357151035	0.12	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357151036	1.07	Rodeo	Downtown/Waterfront Rodeo Mixed Use	30	Mixed Use	30 to 75
357161001	0.22	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357161002	0.17	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357161006	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357161013	0.90	Rodeo	Downtown/Waterfront Rodeo Mixed Use	30	Mixed Use	30 to 75
357171002	0.10	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357171008	0.23	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357171010	0.42	Rodeo	Downtown/Waterfront Rodeo Mixed Use	25	Mixed Use	30 to 75
357171019	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357171020	0.04	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357194001	0.74	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357196012	0.15	Rodeo	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium Density	7 to 17
357224013	0.13	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357371013	0.17	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357260071	0.24	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
357281005	0.31	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
357101002	0.13	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357111010	0.16	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357120002	0.65	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357120003	0.79	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357120074	0.99	Rodeo	Commercial	1.0 FAR	Residential – Very High Density	70 to 125
184010035	0.60	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
184010046	0.69	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
184450025	0.62	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370010	0.76	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370012	0.19	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370018	0.27	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370033	0.31	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
184342008	0.21	Saranap	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426070020	2.98	Tara Hills	Single-Family Residential - High Density, Public and Semi-Public	5.0 to 7.2	Residential – Low Medium Density	3 to 7

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
403152020	0.51	Tara Hills	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
161262010	0.59	Vine Hill	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium Density	7 to 17
161262013	0.69	Vine Hill	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium Density	7 to 17
380070035	0.18	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070036	0.15	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070037	0.14	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070038	0.15	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070039	0.14	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070040	0.14	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070041	0.22	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070042	0.16	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070043	0.23	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070044	0.34	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380080030	0.18	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380080031	0.20	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380080058	0.42	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120060	0.30	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120061	0.30	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120066	0.63	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120087	0.17	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120088	0.28	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380193024	1.79	Vine Hill	Single-Family Residential - High Density, Multiple-Family Residential - High Density	5.0 to 7.2, 21.0 to 29.9 <sup>8</sup>	Mixed Use	30 to 75
380194004	0.10	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380194009	0.76	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380194010	0.39	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380220066	0.75	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380231020	0.31	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
159180028	0.23	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
159190043	2.39	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
159230007	9.75	Vine Hill	Single-Family Residential - High Density, Light Industrial	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
161280005	1.98	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
159210004	0.26	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159210039	1.05	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159210042	4.33	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159210043	0.87	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159240005	10.00	Vine Hill	Light Industry	0.67 FAR	Residential – Very Low Density	< 1

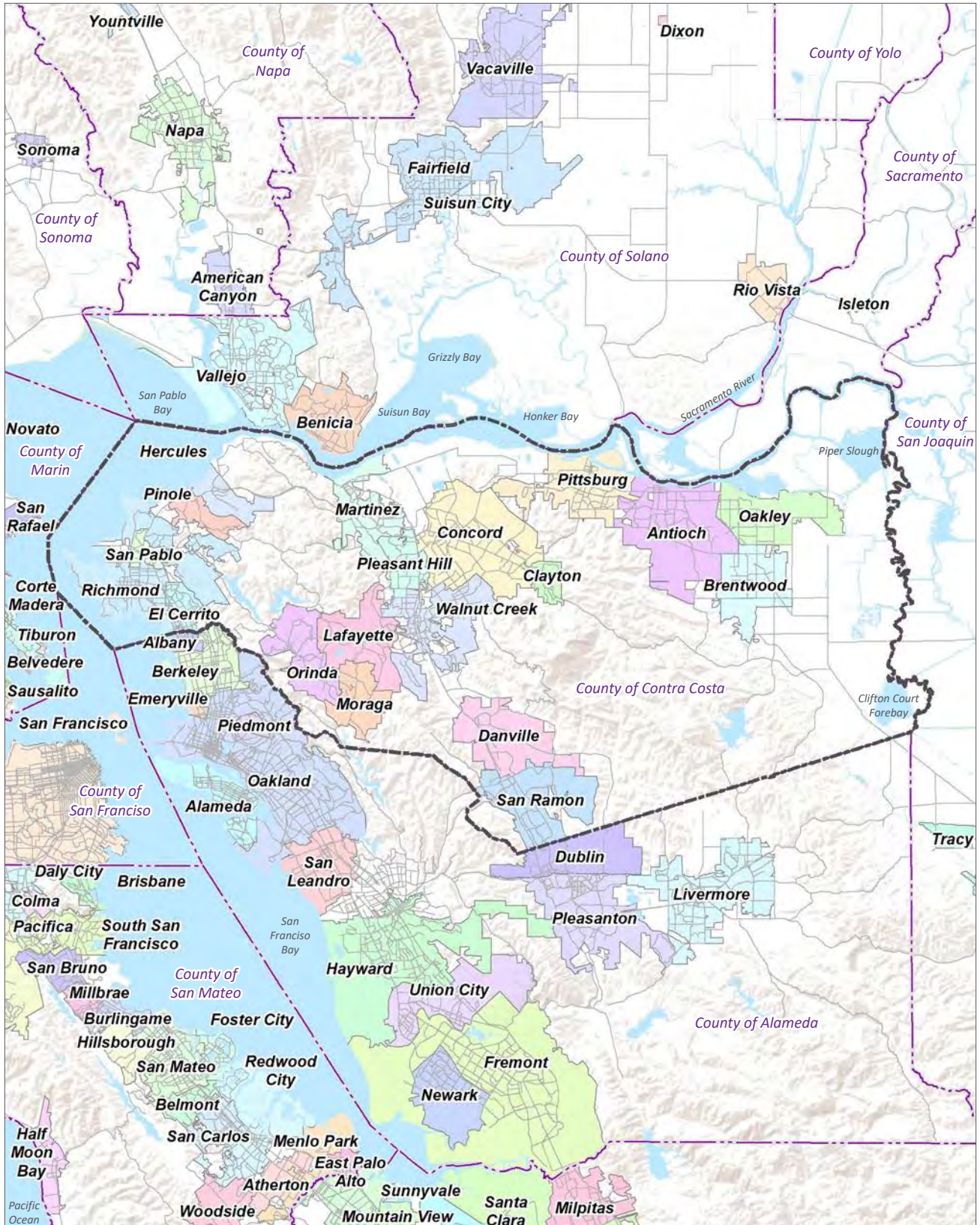
Source: Contra Costa County Department of Conservation and Development

<sup>1</sup> Units per net acre, unless otherwise indicated

<sup>2</sup> The allowable density range shown in this table for all parcels with the Bay Point Residential Mixed Use (M-6) designation is the combined range of both Dev. Zone 2 and Dev. Zone 3. Dev. Zone 2 has a required density of 40 minimum units per net acre and Dev. Zone 3 allows a range of 21 to 29.9 units.

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
<p><sup>3</sup> 7.3 to 11.9 is the allowable density range for the Multiple-Family Residential – Low Density designation and 21 to 29 is the allowable density range for the Willow Pass Road Mixed Use designation.</p> <p><sup>4</sup> This is the allowable density range of the Multiple-Family Residential – Medium Density designation.</p> <p><sup>5</sup> This is the allowable density range of the Multiple-Family Residential - Low Density designation.</p> <p><sup>6</sup> This is the allowable density range of the Single-Family Residential - High Density designation.</p> <p><sup>7</sup> 7.3 to 11.9 is the allowable density range of the Multiple-Family Residential - Low Density designation and 5.0 to 7.2 is the allowable density for the Single-Family Residential - High Density designation.</p> <p><sup>8</sup> 5.0 to 7.2 is the allowable density range of the Single-Family Residential - High Density designation and 21.0 to 29.9 is the allowable density range of the Multiple-Family Residential - High Density designation.</p>						

# NOTICE OF PREPARATION



Source: ESRI, 2022



--- Contra Costa County Boundary

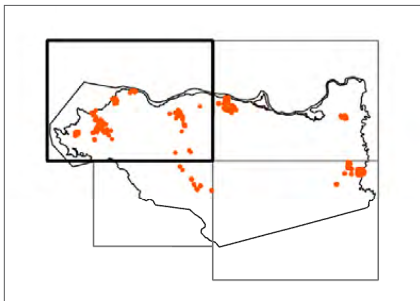
--- County Boundary

Figure 1  
Regional Location

# NOTICE OF PREPARATION



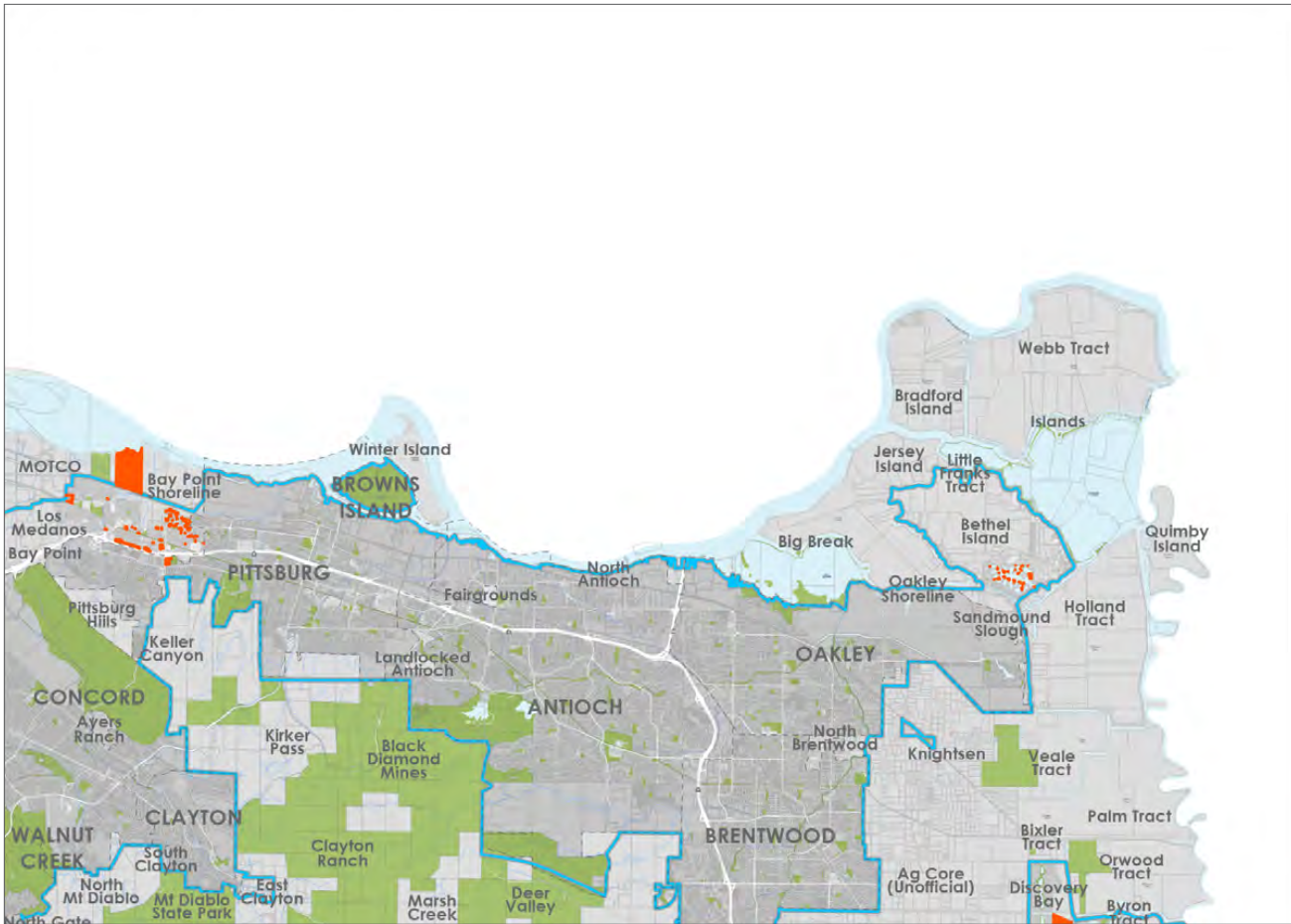
Source: Contra Costa County, 2022.



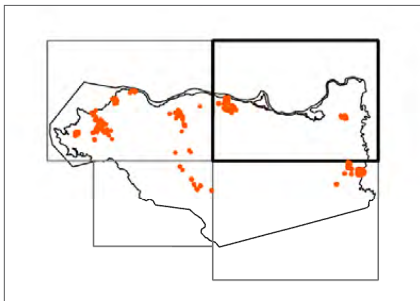
- City Limits
- Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 2  
Housing Element Sites (Northwest Quadrant)

# NOTICE OF PREPARATION



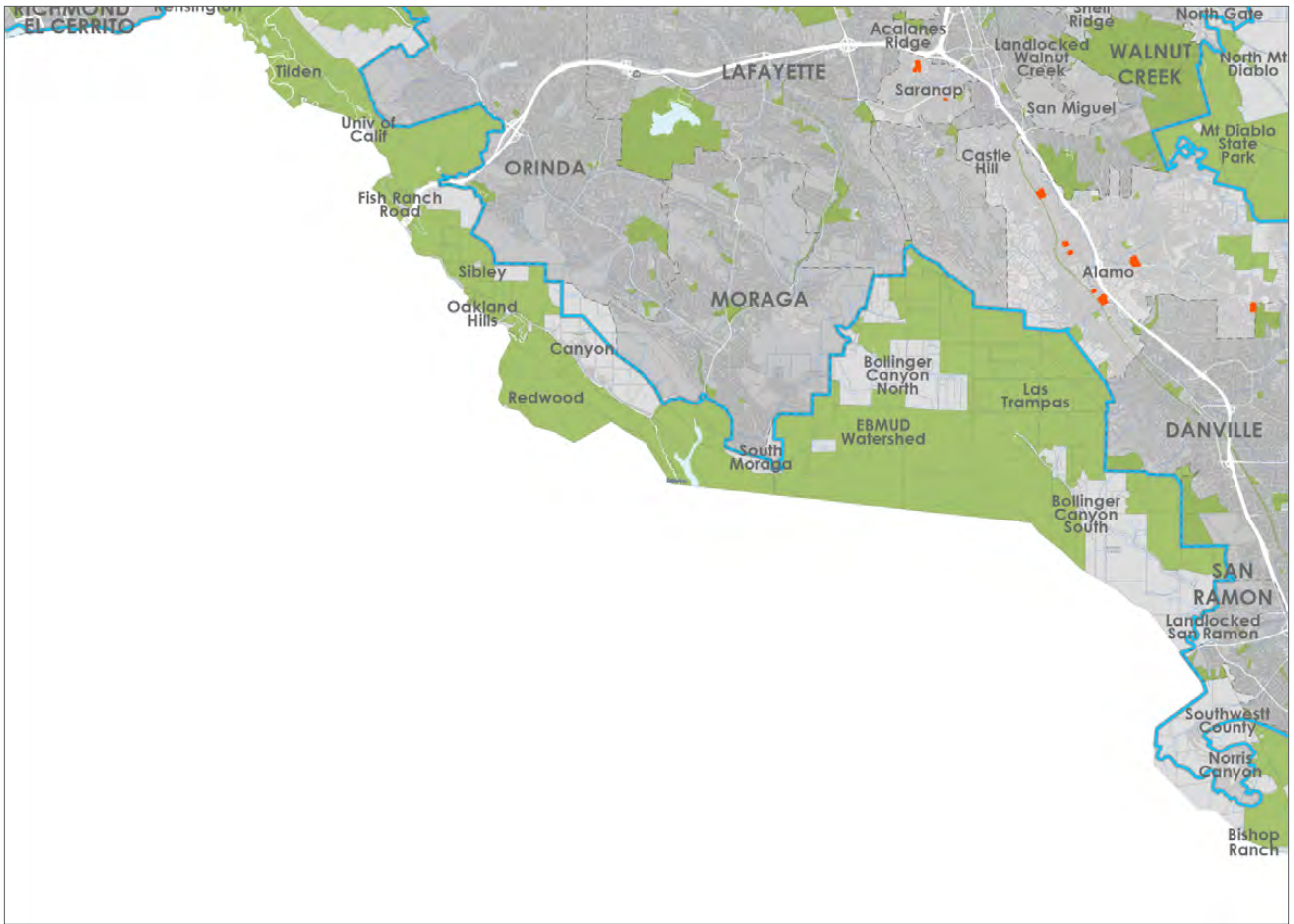
Source: Contra Costa County, 2022.



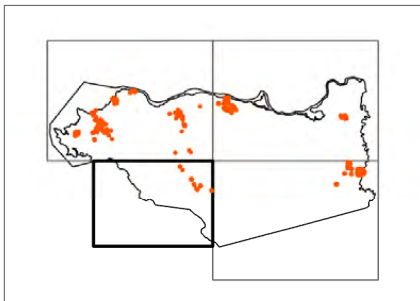
- City Limits
- ▭ Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 3  
Housing Element Sites (Northeast Quadrant)

# NOTICE OF PREPARATION



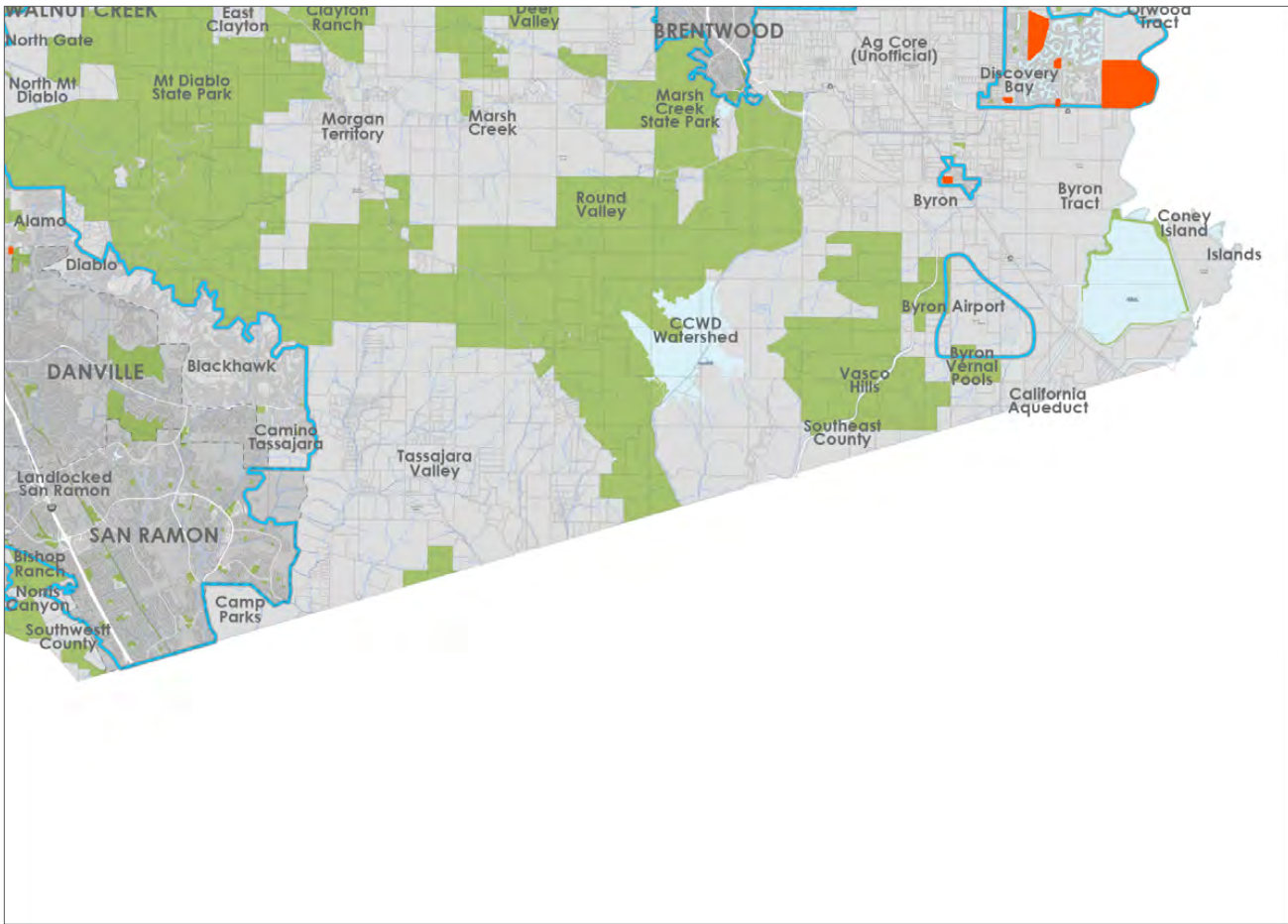
Source: Contra Costa County, 2022.



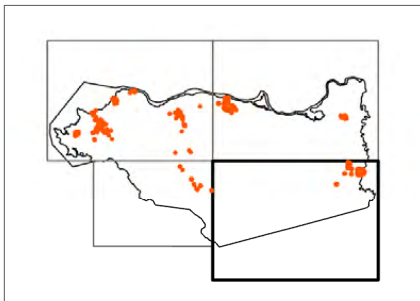
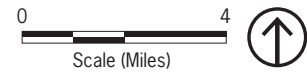
- City Limits
- ▭ Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 4  
Housing Element Sites (Southwest Quadrant)

# NOTICE OF PREPARATION



Source: Contra Costa County, 2022.



- City Limits
- Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 5  
Housing Element Sites (Southeast Quadrant)





## NATIVE AMERICAN HERITAGE COMMISSION

July 28, 2022

Daniel Barrios, Senior Planner  
Contra Costa County  
30 Muir Road  
Martinez, CA 94553

DEPARTMENT OF CONSERVATION  
AND DEVELOPMENT  
2022 AUG - 1 P 2:46  
CONTRA COSTA COUNTY

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**NAHC HEADQUARTERS**  
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California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
[NAHC.ca.gov](http://NAHC.ca.gov)

**Re: 2022070481, Contra Costa County 6<sup>th</sup> Cycle Housing Element Update Project, Contra Costa County**

Dear Mr. Barrios:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

## AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

  - a.** A brief description of the project.
  - b.** The lead agency contact information.
  - c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
  - d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

  - a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

  - a.** Alternatives to the project.
  - b.** Recommended mitigation measures.
  - c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

  - a.** Type of environmental review necessary.
  - b.** Significance of the tribal cultural resources.
  - c.** Significance of the project's impacts on tribal cultural resources.
  - d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

  - a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
    - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
    - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - i.** Protecting the cultural character and integrity of the resource.
    - ii.** Protecting the traditional use of the resource.
    - iii.** Protecting the confidentiality of the resource.
  - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
  - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
  - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
  - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)

## SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf).

Some of SB 18's provisions include:

1. **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation.** There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation:** Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

### NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([https://ohp.parks.ca.gov/?page\\_id=30331](https://ohp.parks.ca.gov/?page_id=30331)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place; or, failing both, mitigation measures.
  
4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, § 15064.5(f) (CEQA Guidelines § 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code § 7050.5, Public Resources Code § 5097.98, and Cal. Code Regs., tit. 14, § 15064.5, subdivisions (d) and (e) (CEQA Guidelines § 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:

[Cody.Campagne@nahc.ca.gov](mailto:Cody.Campagne@nahc.ca.gov).

Sincerely,

*Cody Campagne*

Cody Campagne  
Cultural Resources Analyst

cc: State Clearinghouse

The Contra Costa County Flood Control and Water Conservation District (FC District) has reviewed the Notice of Preparation (NOP) for the Contra Costa County (County) 6<sup>th</sup> Cycle Housing Element Update Environmental Impact Report (EIR) dated July 27, 2022 and attached for reference. We received the NOP on July 28, 2022 and submit the following comments:

1. We request that the EIR provide a map or maps of the watersheds within the housing element areas. The purpose is to understand which watersheds the land use designation changes and density increases will be located. The map should include the watershed boundaries, show all existing watercourses, tributaries, and man-made drainage facilities within the housing element sites that could be impacted by this project and also identify the FC District's right of way. The FC District can assist in this by providing a GIS layer of our right of way. The EIR should discuss what the map(s) present(s) and tie the map(s) into other impact discussions and analyses regarding the natural and manmade drainage features in the watersheds.
2. The creeks which have FC District facilities that would be impacted by this development include Wildcat Creek, San Pablo Creek, Rodeo Creek, Pacheco Creek, Grayson Creek, Walnut Creek, Las Trampas Creek, and San Ramon Creek. Many of these creeks have known inadequate reaches and a lack of maintenance funding. With increased housing density resulting in a potential risk of flooding, the FC District recommends the EIR include a plan for funding the flood control channels and detention basins serving these areas. The FC District can work with the County to identify maintenance cost allocations needed for these facilities.
3. Per "Table 1 Housing Elements Sites Inventory", which was included with the NOP, the Housing Element is proposing to significantly increase the allowed density range of most of the listed parcels. These future developments could alter the existing drainage pattern, and the increased runoff would exceed the capacity of the existing and planned drainage systems and could result in erosion or capacity issues in creeks.

The EIR should discuss any proposed changes in density from the County's current General Plan, and its corresponding increases in impervious surface, and discuss its effect on the existing storm drain systems and any mitigations that are necessary, such as upgrading the existing storm drain systems or constructing detention basins.

In addition, for formed Drainage Areas (DAs) planned by the FC District, the analysis should:

- a. Evaluate the differences between the Land Use plans of formed DAs and the Housing Element sites. The drainage impacts of the changes to the DA Land Use Plans should be determined and the proposed mitigations listed in the Hydrology and Water Quality Section.
- b. Discuss the differences between the FC District's Hydrology Plans and the Housing Element sites. For instance, the drainage pattern or hydrology assumptions for some areas in the Housing Element may be different from the drainage assumptions used for DA facilities. The effects of these changes to the existing and proposed DA facilities should be analyzed in the Hydrology and Water Quality Section.

c. List proposed changes to the existing and proposed DA improvements that may be necessary due to higher volume of runoff. Some of the DA facilities may need to be upsized or eliminated based on the Land Use Plan layout of the Housing Element.

For areas not within formed DAs, we recommend that Drainage Master Plans be drafted and implemented. The Drainage Master Plan(s) should closely analyze any increase stormwater runoff due to the proposed density increases proposed by this Housing Element. The Master Drainage Plan(s) should result in a plan with descriptions of proposed upsizing of existing drainage facilities or new drainage facilities planned to serve the areas.

4. The EIR should discuss the payment of drainage area fees for development within formed drainage areas as a mitigation measure. The FC District, by ordinance, collects drainage area fees for any new impervious surfaces created within formed drainage areas. By ordinance, all building permits or subdivision maps filed in this area are subject to the provisions of the drainage fee ordinance. Effective January 1, 2022, the current fees in these drainage areas are listed in the attached Drainage Fee Schedule per square foot of newly created impervious surface.

Please note that the FC District is not the approving local agency for projects within the County's jurisdiction as defined by the Subdivision Map Act. As a special district, the FC District has an independent authority to collect drainage fees that is not restricted by the Subdivision Map Act. The FC District reviews the drainage fee rate every year that the ordinance is in effect and adjusts the rate annually on January 1 to account for inflation. The drainage fee rate does not vest at the time of tentative map approval. The drainage fees due and payable will be based on the fee in effect at the time of fee collection.

5. We recommend that the EIR stipulate that future developments should design and construct storm drain facilities to adequately collect and convey stormwater runoff, without diversion of the watershed, entering or originating within the development to the nearest natural watercourse or adequate man-made drainage facility. Future developments should be required to provide an assessment of their project's potential impacts on the local drainage system and downstream regional drainage system.

We recommend that the adequacy, stability, capacity, and erosion potential of the drainage facilities and existing watercourses within the Housing Element areas be studied to determine if local drainage design criteria and FEMA National Floodplain Insurance requirements are met. If those criteria are not met, or if there are potential capacity or erosion concerns attributable to the land use changes, then the EIR and future CEQA documents should discuss the potential impacts and propose mitigation measures to address those impacts.

6. The EIR should discuss how the Housing Element will comply with the current, newly updated, NPDES (National Pollutant Discharge Elimination System) requirements under the County's Stormwater Management and Discharge Control Ordinances and the C.3 Guidebook.

7. The FC District should be included in the review of all drainage facilities that have a region-wide benefit, that impact region-wide facilities, or that impact FC District-owned facilities. The FC District is available to provide technical assistance to the County in their update efforts.



Contra Costa County Flood Control and Water Conservation District

Agricultural lots must be used for agricultural purposes, generally greater than 20 acre lots						<b>Drainage Fee Schedule Updated January 1, 2022</b>						* DA with Annual Construction Cost Index Adjustment Based on 2021 ENR index of 3.16%	
Drainage Area	NT CODE	Fund #	Org#	Fee Ordinance	Effective Date of Ordinance	Effective Date Last Increase	FEE Base	Base Unit Measure	Maximum Exemption	Standard Pool Fee	Maximum Deferral Excess Of	Drainage Plan	Involved Jurisdictions
DA8/CSAD2	AE	2602	7602	79-40	05/03/79	05/03/79	\$2,667	Per Acre	500 Sq Ft	None	1 Acre	FD-11263	CCC / Walnut Creek
DA9/SNCRN	AH	1110	120	79-45	05/10/79	05/10/79	\$900	Per Acre	\$4000 Value	Base Fee	5 Acres	FD-11435	CCC / Walnut Creek
DA 10	AK	2554	7554	92-52	10/03/92	10/03/92	\$ 0.34	Per Sq Ft	100 Sq Ft	\$290	2 Acres	FD-12264	CCC / Danville
DA 13	AN	2552	7552	86-36	07/12/86	07/12/86	\$ 0.17	Per Sq Ft	100 Sq Ft	\$145	2 Acres	FD-12475 & 6	CCC / Walnut Creek
DA 15A	AQ	2559	7559	85-19	04/22/85	04/22/85	\$ 0.35	Per Sq Ft	100 Sq Ft	\$290	2 Acres	FD-11936	CCC/Walnut Creek/Laf.
DA 16 *	AS	2583	7583	2002-41	02/03/03	01/01/22	\$ 1.45	Per Sq Ft	100 Sq Ft	\$1,276	2 Acres	FD-12473	CCC / Pleasant Hill
DA 19A	AV	2540	7540	89-24	06/10/89	06/10/89	\$ 0.35	Per Sq Ft	100 Sq Ft	\$300	2 Acres	FD-12421	CCC / Richmond
DA 22	BF	2588	7588	87-44	08/22/87	08/22/87	\$ 0.05	Per Sq Ft	100 Sq Ft	\$33	2 Acres	FD-12548 & 9	Concord / Walnut Creek
DA 29C*	BI	2555	7555	2006-46	02/19/07	01/01/22	\$ 1.02	Per Sq Ft	100 Sq Ft	\$898	2 Acres	FD-13010	Oakley
DA 29D*	BJ	2556	7556	2006-47	02/19/07	01/01/22	\$ 2.59	Per Sq Ft	100 Sq Ft	\$2,279	2 Acres	FD-13011	Oakley
DA 29E*	BK	2548	7548	2006-48	02/19/07	01/01/22	\$ 2.43	Per Sq Ft	100 Sq Ft	\$2,138	2 Acres	FD-12604	Oakley
DA 29G*	BM	2568	7568	2006-49	02/19/07	01/01/22	\$ 1.88	Per Sq Ft	100 Sq Ft	\$1,654	2 Acres	FD-12031-1	CCC/Antioch/Oakley
DA 29H*	BN	2569	7569	2006-50	02/19/07	01/01/22	\$ 1.37	Per Sq Ft	100 Sq Ft	\$1,201	2 Acres	FD-12575	Oakley
DA 29J*	BP	2570	7570	2002-29	12/22/02	01/01/22	\$ 0.73	Per Sq Ft	100 Sq Ft	\$642	2 Acres	FD-12249	CCC/Antioch
DA 30A*	CC	2557	7557	2007-07	11/10/07	01/01/22	\$ 0.74	Per Sq Ft	100 Sq Ft	\$651	2 Acres	FD-12367.1 & 8.1	Oakley
DA 30B*	CD	2546	7546	2006-51	02/19/07	01/01/22	\$ 2.02	Per Sq Ft	100 Sq Ft	\$1,778	2 Acres	FD-11927	CCC/Brentwood/Oakley
DA 30C*	CE	2558	7558	2007-08	11/10/07	01/01/22	\$ 0.49	Per Sq Ft	100 Sq Ft	\$431	2 Acres	FD-11928.1	CCC/Brentwood/Oakley
DA 33A	CL	2535	7535	85-51	09/26/85	09/26/85	\$ 0.21	Per Sq Ft	100 Sq Ft	\$185	2 Acres	FD-12429 & 30	CCC/Concord
DA 33B	CM	2541	7541	89-57	11/11/89	11/11/89	\$ 0.70	Per Sq Ft	100 Sq Ft	\$600	2 Acres	FD-12631	CCC/Concord
DA 33C	CN	2561	7561	90-07	03/30/90	03/30/90	\$ 0.44	Per Sq Ft	100 Sq Ft	\$380	2 Acres	FD-12649	CCC/Concord
DA 37A	CQ	2534	7534	85-41	07/04/85	07/04/85	\$925	Per Acre	500 Sq Ft	None	2 Acres	FD-12406	CCC/Danville
DA 40A	DC	2565	7565	82-09	02/04/82	02/04/82	\$ 0.21	Per Sq Ft	100 Sq Ft	\$180	2 Acres	FD-12090 & 1	CCC/Martinez
DA 44B*	DM	2547	7547	2002-42	02/03/03	01/01/22	\$ 1.22	Per Sq Ft	100 sq ft	\$1,074	1 Acre	FD-12009.1 & 10.	CCC/Pleasant Hill/W.C.
DA 46*	DP	2578	7578	2002-43	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD-12555	CCC/Laf/Pl.Hill/W.Crk
DA 47*	DQ	2597	7597	2001-04	03/26/01	01/01/22	\$ 1.40	Per Sq Ft	100 Sq Ft	\$1,232	2 Acres	FD-13075	Martinez/Pleasant Hill
DA 48B*	DS	2574	7574	2002-28	12/22/02	01/01/22	\$ 0.63	Per Sq Ft	100 Sq Ft	\$554	2 Acres	FD-12661	CCC/Pitts/Concord

Contra Costa County Flood Control and Water Conservation District

Agricultural lots must be used for agricultural purposes, generally greater than 20 acre lots					<b>Drainage Fee Schedule Updated January 1, 2022</b>							* DA with Annual Construction Cost Index Adjustment Based on 2021 ENR index of 3.16%		
Drainage Area	NT CODE	Fund #	Org#	Fee Ordinance	Effective Date of Ordinance	Effective Date Last Increase	FEE Base	Base Unit Measure	Maximum Exemption	Standard Pool Fee	Maximum Deferral Excess Of	Drainage Plan	Involved Jurisdictions	
DA 48C	DT	2572	7572	93-73	11/20/93	11/20/93	\$ 0.43	Per Sq Ft	100 Sq Ft	\$379	2 Acres	FD-12296	CCC (Bay Point)	
DA 48D	DU	2573	7573	93-53	10/02/93	10/02/93	\$ 0.54	Per Sq Ft	100 Sq Ft	\$465	2 Acres	FD-12438	CCC (Bay Point)	
DA 52A*	ED	2553	7553	2007-09	11/10/07	01/01/22	\$ 0.36	Per Sq Ft	100 Sq Ft	\$317	2 Acres	FD-12007	CCC / Brentwood	
DA 52B*	EF	2549	7549	2007-10	11/10/07	01/01/22	\$ 0.33	Per Sq Ft	100 Sq Ft	\$290	2 Acres	FD-11926	CCC / Brentwood	
DA 52C*	EG	2571	7571	2007-11	11/10/07	01/01/22	\$ 1.32	Per Sq Ft	100 Sq Ft	\$1,162	2 Acres	FD-13077	CCC / Brentwood	
DA 52D*	EH	2584	7584	2006-52	02/19/07	01/01/22	\$ 1.59	Per Sq Ft	100 Sq Ft	\$1,399	2 Acres	FD-12630	CCC/Brentwood/Oakley	
DA 55*	EP	2579	7579	2002-23	11/11/02	01/01/22	\$ 1.05	Per Sq Ft	100 Sq Ft	\$924	2 Acres	FD-12606	CCC / Antioch	
DA 56*	ER	2566	7566	2002-24	11/11/02	01/01/22	\$ 1.05	Per Sq Ft	100 Sq Ft	\$924	2 Acres	FD-12085.1 & 6.1	CCC/Antioch/Oakley/Brent	
DA 57	ET	2538	7538	88-86	01/07/89	01/07/89	\$ 0.35	Per Sq Ft	100 Sq Ft	\$300	2 Acres	FD-12576 & 7	CCC / Martinez	
DA 62*	FB	2543	7543	2002-35	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD-13080	CC/Martinez/Pleas. Hill	
DA 67	FM	2539	7539	89-12	04/16/89	04/16/89	\$ 0.38	Per Sq Ft	100 Sq Ft	\$325	2 Acres	FD-12023 & 1262	CCC / Walnut Creek	
DA 72*	GE	2544	7544	2002-36	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD13081	CCC/Martinez/Pleas. Hill	
DA 73	GF	2567	7567	88-68	10/22/88	10/22/88	\$ 0.10	Per Sq Ft	100 Sq Ft	\$86	2 Acres	FD-12177	CCC/Richmond/San Pablo	
DA 76	GY	2542	7542	94-20	04/29/94	04/29/94	\$ 0.70	Per Sq Ft	100 Sq Ft	\$620	2 Acres	FD-13007	CCC / Walnut Creek	
DA 78*	GZ	2545	7545	2002-37	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD-13082	CCC/Pleasant Hill	
DA 87*	HA	2585	7585	2002-38	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD-13083	CCC/Martinez/Pacheco	
DA 88*	HB	2586	7586	2002-39	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD-13084	CCC/Pacheco/Martinez	
DA 89*	HC	2587	7587	2002-40	02/03/03	01/01/22	\$ 0.92	Per Sq Ft	100 Sq Ft	\$810	2 Acres	FD-13085	CCC/Martinez/Pleas. Hill	
DA 101A	JC	2581	7581	88-36	07/09/88	07/09/88	\$ 0.20	Per Sq Ft	100 Sq Ft	\$172	2 Acres	FD-12618	CCC/Danville/San Ramon	
DA 104	JH	2589	7589	Repealed	11/10/07	11/10/07	\$0.00	Per Sq Ft	100 Sq Ft	\$0	2 Acres	FD-12625	CCC/Antioch/Brentwood	
DA 105	JJ	2590	7590	Repealed	11/10/07	11/10/07	\$0.00	Per Sq Ft	100 Sq Ft	\$0	2 Acres	FD-12626	CCC / Brentwood	
DA 106	JL	2591	7591	Repealed	11/10/07	11/10/07	\$0.00	Per Sq Ft	100 Sq Ft	\$0	2 Acres	FD-12627.1	CCC / Brentwood	
DA 107	JN	2592	7592	Repealed	11/10/07	11/10/07	\$0.00	Per Sq Ft	100 Sq Ft	\$0	2 Acres	FD-12628.1	CCC / Brentwood	
DA 108	JQ	2593	7593	Repealed	11/10/07	11/10/07	\$0.00	Per Sq Ft	100 Sq Ft	\$0	2 Acres	FD-12629.1	CCC / Brentwood	
DA 109	JS	2595	7595	94-75	02/16/95	02/16/95	\$ 0.35	Per Sq Ft	400 Sq Ft	\$310	2 Acres	FD-13041	CCC / Brentwood	
DA 128	LM	2537	7537	85-72	01/18/86	01/18/86	\$ 0.17	Per Sq Ft	100 Sq Ft	\$145	2 Acres	FD-12415 thru 7	CCC/Concord/W.C.	
DA 130*	KG	2562	7562	2007-06	11/10/07	01/01/22	\$ 0.85	Per Sq Ft	100 Sq Ft	\$748	2 Acres	FD-13111	CCC/Antioch/Oakley/Brent	

Hi, Maureen,

Thank you for the opportunity to comment on your NOP. As I mentioned in the scoping meeting earlier, we respectfully request the following:

- A map (could be online ArcView map) that shows where the parcels included in the Housing Element are located more clearly
- Review [BART's Transit-Oriented Design Guidelines \(2017\)](#) and align zoning and parking to make sure parcels within ½ mile of BART stations are zoned appropriately for their access to a regionally significant station.
- BART's adopted [Station Access Policy](#) is to reduce driving and parking demand at our stations and encourage station access by walking, biking, transit, and shared modes. To that end, we encourage the EIR to set standards for transportation analysis that prioritizes the safety and mobility of sustainable forms of transportation over car access, particularly on the roads leading up to and surrounding our stations and other major transit hubs. Our [station access performance measures](#) identify, in particular, targets for modes of access to and from our stations systemwide.
- Create residential density ranges that make more sense. Some examples:
  - Residential – High Density is 30 to 70 DU/a. Why not go to 75 DU/a?
  - Sometimes, Mixed Use is 30 to 75 for some parcels and 75 to 125 for others. Maybe use a term that distinguishes the difference between mixed-use densities.
  - Residential – Very High Density is 70 to 125 DU/a. Why not align with 75 to 125 DU/a that you have for Mixed Use?
  - Have you thought about using terms for the General Plan Designation that is less leading? For example, instead of “Residential – Medium Density”, use “R7-17” or “R-17”. Terms like “Very High Density”, “Low Medium Density”, etc. are really contextual. “Very High Density” means something different in urban, suburban, and rural environments. On the other hand, R70-125 or MU 75-125 offers the shorthand levels of residential density no matter the context.
  - I've attached my notes directly on your NOP.

Do not hesitate to reach out if you have any questions about our comments.

In office: Monday, Tuesday, Friday

Remote: Wednesday, Thursday

Sincerely,

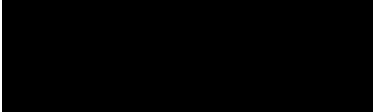
*Kamala Parks (She/her)*

Senior Planner, Stations Planning

San Francisco Bay Area Rapid Transit District (BART)

2150 Webster Street, 8<sup>th</sup> Floor

Oakland, CA 94612



**Department of  
Conservation and  
Development**

30 Muir Road  
Martinez, CA 94553

Phone:1-855-323-2626

**Contra  
Costa  
County**



**John Kopchik**  
Director

**Aruna Bhat**  
Deputy Director

**Jason Crapo**  
Deputy Director

**Maureen Toms**  
Deputy Director

**Amalia Cunningham**  
Assistant Deputy Director

**NOTICE OF PREPARATION AND  
NOTICE OF PUBLIC SCOPING MEETING**

- Date:** July 27, 2022
- To:** California State Clearinghouse  
Contra Costa County Clerk  
Responsible and Trustee Agencies  
Interested Parties and Organizations
- Subject:** Notice of Preparation (NOP) for the Contra Costa County Housing Element Update Environmental Impact Report (EIR) and Notice of Public Scoping Meeting
- Lead Agency:** Contra Costa County
- Applicant:** Contra Costa County,  
30 Muir Road, Martinez, CA 94553  
(925) 655-2901
- Contact:** Daniel Barrios, Senior Planner (925) 655-2901
- Project Title:** Contra Costa County 6<sup>th</sup> Cycle Housing Element Update
- Project Location:** Contra Costa County is located on the eastern side of San Francisco Bay in Northern California. Contra Costa County is surrounded by Solano County and Sacramento County to the north, San Joaquin County to the east, Alameda County to the south, and Marin County to the west. Interstates 80 and 680, and State Routes 4 and 24, traverse the county and offer access to neighboring counties (See Figure 1, *Regional Location*).
- Scoping Meeting:** August 15, 2022, 3:30 PM

**PURPOSE**

In accordance with Section 15021 of the California Environmental Quality Act (CEQA) Guidelines, Contra Costa County, as lead agency, will prepare an Environmental Impact Report (EIR) for the Contra Costa County 6<sup>th</sup> Cycle Housing Element Update (Housing Element Update). Pursuant to Section 15082(a) of the CEQA Guidelines, Contra Costa County (County) has issued this Notice of Preparation (NOP) to provide responsible agencies, trustee agencies, and other interested

parties with information describing the Housing Element Update and its potential effects. The County is soliciting your comments on the scope of the environmental analysis.

Section 15082(b) of the CEQA Guidelines requires comments to be provided within 30 days of receipt of a NOP. In compliance with the time limits mandated by CEQA, the comment period for this NOP begins **Wednesday, July 27, 2022**, and ends **Friday, August 26, 2022, at 4:00 PM**. Please email your written comments to Daniel Barrios at [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us) or physically mail them to:

Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94553  
Attn: Daniel Barrios

When providing comments, please include the name, email and/or telephone number for a contact person at your agency or organization who can answer questions about the comment.

### **PROJECT DESCRIPTION & SUMMARY**

The Housing Element is one of the required elements of the General Plan. As a policy document, the Housing Element does not normally result in physical changes to the environment but encourages the provision of affordable housing within the land use designations shown in the Land Use Element of the General Plan. The Housing Element identifies policy direction to meet the housing needs of the County by preserving existing homes and clarifying priorities for housing creation. The proposed Housing Element will include an overview of housing policies and programs and will identify locations that can accommodate future housing. One of the programs in the proposed Housing Element will require that the County redesignate up to approximately 1,304 acres of land to meet the Regional Housing Needs Allocation (RHNA) of 7,610 total housing units. The parcels that may be redesignated to meet the RHNA are identified in Table 1, *Housing Element Sites Inventory*, and on Figures 2 through 5, *Housing Element Sites*.

Development under the Housing Element Update would be located within the Urban Limit Line and comply with the County's 65/35 Standard, which limits urban development to no more than 35 percent of the land area of the County, preserving the remaining 65 percent for agriculture, open space, wetlands, parks, and other non-urban uses.

The update to the Contra Costa County General Plan and Zoning Ordinance is underway (<https://envisioncontracosta2040.org/>) but will not be complete before the Housing Element adoption deadline of January 2023. Therefore, because it is not known for certain which of the sites shown in Table 1 will be redesignated to meet the RHNA, the County is preparing this EIR to evaluate the cumulative impacts of developing all of the sites in Table 1 at a programmatic level. Additional information regarding the Housing Element Update can be found on the County's website: <https://www.contracosta.ca.gov/8525/Housing-Element-Update>.

## Project Objectives

The Housing Element is an integral part of the County's General Plan and is the only element that must be certified by the State. Adoption of a certified Housing Element is essential to meeting grant funding requirements for the County. The proposed Housing Element has the following goals that form the project objectives for the purpose of this EIR:

- Maintain and improve the quality of the existing housing stock and residential neighborhoods in Contra Costa County;
- Preserve the existing affordable housing stock in Contra Costa County;
- Increase the supply of housing with a priority on developing affordable housing, including housing affordable to extremely low-income households;
- Increase the supply of appropriate and supportive housing for special-needs populations;
- Improve housing affordability for renters and homeowners;
- Provide adequate sites through appropriate land use and zoning designations to accommodate the County's share of regional housing needs;
- Mitigate potential governmental constraints to housing development and affordability;
- Promote equal opportunity for all residents to reside in the housing of their choice; and,
- Promote energy-efficient retrofits of existing dwellings and exceedance of building code requirements in new construction.

## ENVIRONMENTAL IMPACT REPORT

As all the CEQA topics will be included in the EIR, the County has not prepared an Initial Study as permitted in Section 15060(d) of the CEQA Guidelines.

### Probable Environmental Effects

The County has determined that implementation of the Housing Element Update may have a significant effect on the environment. The EIR will evaluate the potential for the Housing Element Update to cause direct and indirect growth-inducing impacts, as well as cumulative impacts. Mitigation will be proposed for those impacts that are determined to be significant. Mitigation will be identified, and a mitigation monitoring and reporting program will be developed as required by the CEQA Guidelines (Section 15150). The EIR will evaluate the following topics:

- **Aesthetics:** The potential for new development to affect aesthetics in the county will be evaluated in the EIR.
- **Agriculture and Forestry Resources:** There is a possibility that one or more sites in Table 1 is on prime agricultural land; therefore, the EIR will evaluate the potential for agricultural land conversion.
- **Air Quality:** Construction and operation of housing could result in air pollutant emissions. Ground disturbance during site development activities will generate dust and construction

equipment will create short-term pollutant emissions. Development accommodated under the Housing Element update could result in additional vehicular traffic that would generate air pollution, exacerbated by the county's location in a climate with high winds present, and proximity to high-traffic corridors. Air quality impacts will be evaluated in the EIR.

- **Biological Resources:** Development under the Housing Element Update may have an adverse effect on rare, threatened, or endangered species and/or the habitat that supports them, which could impact potential development outcomes. Such development could potentially affect existing wildlife corridors. The Housing Element Update could also affect riparian habitat and/or wetlands. The EIR will evaluate the potential for the sites to affect mapped habitat but will not provide information on a parcel level basis.
- **Cultural and Tribal Cultural Resources:** Development accommodated under the Housing Element Update may have an adverse effect on historic archaeological, and/or tribal cultural resources. There is the potential for construction-related effects on historical and archaeological resources. As part of the EIR process, both SB 18 and AB 52 tribal consultation will be completed. Cumulative impacts will be discussed at a programmatic level in the EIR, but individual site analysis will not be part of this effort.
- **Geological Resources:** Development accommodated under the Housing Element Update may result in soil erosion or the loss of topsoil and/or allow development in areas with geologic or soils constraints. There could be impacts associated with grading, such as increased wind and water erosion potential. Impacts may involve disruptions of the soil, changes in topography, erosion from wind or water, and other impacts, as well as a potential for development on paleontological resources. The EIR will summarize the construction process and identify sites possibly within areas of known geologic concern.
- **Greenhouse Gas:** It is likely that future development will contribute to cumulative increases in greenhouse gases. The EIR will analyze impacts of the Housing Element Update on greenhouse gas emissions and provide reduction methods, as needed.
- **Hazards:** The EIR will identify hazards that could be created or made worse because of the Housing Element Update.
- **Hydrology and Water Quality:** Development accommodated under the Housing Element Update may affect groundwater supplies, could change drainage patterns, and/or could have the potential to contribute polluted stormwater runoff. There could be impacts related to urban runoff and flooding potential, as well as to water quality. The EIR will evaluate these issues at a programmatic level.
- **Land Use:** The Housing Element Update will affect some of the land use designations currently under review as part of the larger General Plan Update. As the Housing Element Update must be approved before the updated General Plan will be adopted, the EIR will evaluate the potential for impact associated with the new land use designations.
- **Noise:** Increases in traffic because of future development accommodated under the Housing Element Update may result in an increase in ambient and transportation noise. Noise impacts will be evaluated in the EIR.

- **Public Services and Utilities:** Additional growth generated by the development accommodated under the Housing Element Update will increase demand on services and utilities. The EIR will evaluate the availability and capacity of the systems to provide for the increase in growth.
- **Recreation:** Additional growth would increase use of recreational facilities. The EIR will evaluate impacts to existing facilities resulting from the Housing Element Update.
- **Transportation:** Future development may result in impacts on the circulation system, including facilities outside the County's jurisdiction. The EIR will include an analysis of vehicle miles traveled.
- **Wildfire:** Portions of the county are subject to an increase in fire hazards due to ongoing drought conditions. The Housing Element Update EIR will include a discussion of potential impacts related to fire hazard at a programmatic level.

### **TYPE OF EIR**

The County will prepare a program EIR pursuant to Section 15168 of the CEQA Guidelines. Use of a program EIR allows analysis consistent with the high-level nature of the Housing Element. The Housing Element Update EIR will serve as a cumulative impact analysis for implementation of the Housing Element Update.

### **USE OF THE HOUSING ELEMENT UPDATE EIR**

Later projects implemented after the Housing Element Update will be examined considering the Housing Element Update EIR to determine whether an additional environmental document must be prepared. In addition, the CEQA Guidelines currently provide for streamlining through Section 15183 (Projects Consistent with a Community Plan or Zoning), Section 15183.3 (Streamlining for Infill Projects), and Section 15183.5 (Tiering and Streamlining the Analysis of Greenhouse Gas Emissions). The County intends to promote streamlining for future development through certification of the Housing Element Update EIR. Later development may have to conduct site-specific environmental analysis; however, the cumulative analysis will be addressed in the Housing Element Update EIR and proposed policies.

### **PUBLIC SCOPING MEETING**

The Contra Costa County Zoning Administrator will conduct a public scoping meeting for the Housing Element Update EIR on **Monday, August 15, 2022, at 3:30 PM**. Interested agencies, organizations, and members of the public are encouraged to attend and provide comments on environmental issues related to the Housing Element Update. The comments provided during the meeting will assist the County in scoping the potential environmental effects of the Housing Element Update to be addressed by the EIR.

The scoping meeting will be held on Zoom and will be accessible online and by phone using the following information:



Online:

<https://cccouny-us.zoom.us/j/84028702795>

Meeting ID: 84028702795

Phone:

(214) 765-0478 US Toll

(888) 278-0254 US Toll-free

Conference code: 198675

If you have questions or require additional information, please contact Daniel Barrios, Senior Planner, at (925) 655-2901, or by email at [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us).

Attachments:

Table 1 – Housing Element Sites Inventory

Figure 1 – Regional Location

Figure 2 – Housing Sites Inventory (Northwest Quadrant)

Figure 3 – Housing Sites Inventory (Northeast Quadrant)

Figure 4 – Housing Sites Inventory (Southwest Quadrant)

Figure 5 – Housing Sites Inventory (Southeast Quadrant)



**Table 1 Housing Element Sites Inventory**

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
197010013	0.23	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197010014	0.24	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197010016	0.24	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197010029	0.23	Alamo	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
197030026	5.68	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium High Density	17 to 30
197030027	0.61	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium High Density	17 to 30
196370032	3.79	Alamo	Single-Family Residential - Very Low Density	0.2 to 0.9	Residential – Low Medium Density	3 to 7
191062022	1.64	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
191080001	1.18	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
188330038	5.55	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
192142031	6.90	Alamo	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
093036010	0.21	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093036014	0.37	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093036015	1.23	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093081028	0.52	Bay Point	Willow Pass Road Commercial Mixed Use	21 to 29	Mixed Use	30 to 75
093081029	0.77	Bay Point	Willow Pass Road Commercial Mixed Use	21 to 29	Mixed Use	30 to 75
093090029	0.51	Bay Point	Willow Pass Road Commercial Mixed Use	21 to 29	Mixed Use	30 to 75
093100059	0.98	Bay Point	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
093100060	2.87	Bay Point	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
093121001	10.99	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
093170056	0.56	Bay Point	Multiple-Family Residential - High Density	12.0 to 20.9	Residential – High Density	30 to 70
093170069	1.41	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093170071	0.53	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093170074	0.05	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093170080	0.27	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
093191025	0.16	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
093192026	0.29	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
093193002	0.14	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
093193035	0.18	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
094012021	0.13	Bay Point	Bay Point Residential Mixed Use	21 to 40 <sup>2</sup>	Mixed Use	75 to 125
094012022	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012023	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012024	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012025	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012026	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012027	0.16	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012030	0.10	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012031	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
094012032	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012033	0.13	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012038	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012039	0.15	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094012040	0.13	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013001	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013002	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013003	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013004	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013005	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013006	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013012	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013013	0.18	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013014	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013015	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094013016	0.10	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014001	0.20	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014010	0.19	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014011	0.20	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014012	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014013	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094014014	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015006	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015010	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015011	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015012	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015013	0.14	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015014	0.15	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015027	0.30	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094015028	0.21	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094016002	0.22	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026001	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026002	0.12	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026007	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
094026008	0.11	Bay Point	Bay Point Residential Mixed Use	21 to 40	Mixed Use	75 to 125
095021002	0.57	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
095021009	0.62	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095022025	0.30	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095022026	0.10	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095022027	0.07	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095034002	0.12	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095071010	0.50	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17

APN	Acreeage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>2</sup>
095075025	0.21	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
095081020	0.77	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
095081023	0.71	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095083023	0.16	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
095084025	0.22	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
095101001	0.42	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095101002	0.42	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095102003	0.66	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095102020	0.44	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095107015	0.40	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
095120041	0.13	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
096012008	0.13	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096012009	0.06	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096015011	0.22	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096015015	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096015016	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016002	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016003	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016005	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016013	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096016018	0.20	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096017008	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096018007	0.18	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096018015	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096019017	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096019025	0.25	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096020022	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020039	0.08	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020042	0.09	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020050	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020062	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020081	0.62	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
096020082	0.17	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096020093	0.09	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096020173	0.17	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096031018	0.62	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096031019	1.02	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096032011	0.12	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	30 to 75
096032016	0.12	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	30 to 75
096032028	0.31	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096032032	0.92	Bay Point	Multiple-Family Residential - Low Density, Willow Pass Road Mixed Use	7.3 to 11.9, 21 to 29 <sup>3</sup>	Mixed Use	30 to 75

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>2</sup>
096033028	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096033035	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096033037	0.15	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096033039	0.35	Bay Point	Willow Pass Road Mixed Use	21 to 29	Mixed Use	30 to 75
096041001	0.33	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096041013	0.35	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096041026	0.37	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096042007	0.63	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096042020	0.41	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096042025	0.63	Bay Point	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
096043002	0.64	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044001	0.42	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044002	0.20	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044003	0.41	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044007	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096044009	0.33	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050011	0.80	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050012	0.15	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050013	0.15	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
096050014	0.16	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
098052006	0.13	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
098052053	0.12	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
098180005	1.46	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
098180041	0.76	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
098180043	0.82	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium Density	7 to 17
098210001	2.35	Bay Point	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium High Density	17 to 30
098230023	0.61	Bay Point	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
098250013	256.18	Bay Point	Multiple-Family Residential – Medium Density, Commercial Recreation, Parks and Recreation, Open Space, Water	12.0 to 21.9 <sup>4</sup>	Residential – Medium High Density	17 to 30
093160005	0.24	Bay Point	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium Density	7 to 17
093160006	0.27	Bay Point	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium Density	7 to 17
093170018	0.12	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170021	0.13	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170022	0.13	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170076	0.06	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
093170078	0.19	Bay Point	Commercial	1.0 FAR	Mixed Use	75 to 125
403030005	12.79	Bayview	Montalvin Manor Mixed Use	12.0 to 21.9	Mixed Use	30 to 75
403461003	0.16	Bayview	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
403020009	2.77	Bayview	Public and Semi-Public	0	Residential – Medium High Density	17 to 30
403020013	0.59	Bayview	Public and Semi-Public	0	Residential – Medium High Density	17 to 30
403482043	4.55	Bayview	Public and Semi-Public	0	Residential – Medium High Density	17 to 30



APN	Acreege	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
031240031	0.15	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240032	0.18	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240046	0.17	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240056	0.13	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240061	0.17	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240062	0.16	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240063	0.23	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240070	0.15	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031240071	0.15	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
031250007	0.14	Bethel Island	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Medium Density	7 to 17
003120008	4.94	Byron	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium High Density	17 to 30
003120009	5.08	Byron	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Medium High Density	17 to 30
100303008	0.14	Clyde	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
148170051	2.36	Contra Costa Centre	Multiple-Family Residential - Very High Special	45.0 to 99.9	Residential – Very High Density	70 to 125
172040025	0.30	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
172040026	0.29	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
172040034	0.35	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
172040035	0.13	Contra Costa Centre	Single-Family Residential - Medium Density	3.0 to 4.9	Mixed Use	75 to 125
354042029	0.11	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354064025	0.24	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
354072003	0.16	Crockett	Commercial, Multiple-Family Residential - Low Density	7.3 to 11.9 <sup>5</sup>	Mixed Use	0 to 30
354072020	0.08	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	0 to 30
354072027	0.12	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
354094009	0.09	Crockett	Commercial, Multiple-Family Residential - Low Density	7.3 to 11.9 <sup>5</sup>	Mixed Use	0 to 30
354094014	0.04	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
354095024	0.15	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
354155004	0.11	Crockett	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – High Density	30 to 70
354155007	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – High Density	30 to 70
354173009	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354173010	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354177007	0.12	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
354030013	2.39	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Very Low Density	< 1
354041016	0.16	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
354054006	0.22	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
354231028	0.18	Crockett	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
011220010	22.96	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
011220017	40.45	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7

APN	Acreege	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
011220018	6.73	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
011230006	44.70	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
011230007	42.22	Discovery Bay	Single-Family Residential - High Density, Parks and Recreation, Open Space, Water	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
004500005	545.22	Discovery Bay	Delta Recreation and Resources	1 unit per 20 acres	Agricultural	N/A
004182006	6.00	Discovery Bay	Commercial	1.0 FAR	Mixed Use	30 to 75
008010039	4.60	Discovery Bay	Commercial	1.0 FAR	Mixed Use	30 to 75
011220039	6.42	Discovery Bay	Office	1.5 FAR	Mixed Use	30 to 75
520032002	1.09	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520042013	0.96	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520050001	3.42	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520062001	1.59	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
520070004	2.10	East Richmond Heights	Public and Semi-Public	0	Mixed Use	30 to 75
420090029	3.07	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
420140003	2.12	El Sobrante	Commercial, Single-Family Residential - High Density	5.0 to 7.2 <sup>6</sup>	Mixed Use	0 to 30
420150030	0.45	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420150033	0.93	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420184015	2.78	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420192037	0.76	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420192042	0.19	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
420192043	0.47	El Sobrante	San Pablo Dam Road Mixed Use	12	Mixed Use	0 to 30
425023011	2.94	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425040016	3.64	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425040024	2.33	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061012	4.57	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061032	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061033	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425061034	0.17	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425072024	0.49	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425100054	0.30	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425100056	0.56	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425110025	0.18	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425110027	1.17	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
425142015	0.41	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
425160015	0.40	El Sobrante	Multiple-Family Residential-Low Density, Open Space	7.3 to 11.9 <sup>5</sup>	Mixed Use	0 to 30
425200006	3.12	El Sobrante	Multiple-Family Residential - Low Density, Single-Family Residential - High Density	7.3 to 11.9, 5.0 to 7.2 <sup>7</sup>	Residential – Medium Density	7 to 17
425210037	0.90	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30



APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
425210039	0.91	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425210042	0.91	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425210044	0.33	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
425210045	1.30	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	0 to 30
425230017	0.89	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425230036	0.47	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425230037	0.45	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425230038	0.91	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425240041	1.68	El Sobrante	Appian Way General Mixed Use	8	Mixed Use	0 to 30
425252045	0.30	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
425252048	0.12	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
425252064	1.33	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
426261050	0.20	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
426261060	0.87	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430012022	3.21	El Sobrante	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Low Medium Density	3 to 7
430152062	0.16	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152092	0.14	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152093	0.23	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152094	0.27	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430152095	0.48	El Sobrante	Triangle Area Mixed Use	8	Mixed Use	0 to 30
430184021	0.24	El Sobrante	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Low Medium Density	3 to 7
431010010	0.79	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
431010011	0.26	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
431020017	0.45	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
431070027	0.19	El Sobrante	Single-Family Residential - High Density, Open Space	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
433060014	1.55	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
435070008	0.16	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
435080005	0.99	El Sobrante	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
435171006	0.45	El Sobrante	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Low Medium Density	3 to 7
420071012	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420071014	0.28	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420071020	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420071021	0.30	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172017	0.24	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172019	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172020	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172021	0.25	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420172039	0.13	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420192018	0.39	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425130002	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425130010	6.06	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
425141005	0.44	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425150046	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180010	0.57	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180018	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180021	0.87	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425180041	0.92	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425190019	0.16	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425190028	0.22	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425210003	0.60	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425220014	0.42	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
425220029	0.99	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426030070	0.97	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426030071	5.46	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426163052	0.35	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426182001	3.90	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426182017	1.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426192005	1.55	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426192007	0.26	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426192008	1.81	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426200008	1.11	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426200010	2.43	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426210007	1.31	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426210022	1.83	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426221049	0.29	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243005	1.83	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243019	0.57	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243039	0.49	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426243045	0.55	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426270013	3.06	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
430132002	0.19	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
430161004	0.44	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
430161020	0.37	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
431070026	0.27	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
431070028	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
431070035	0.20	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433190041	0.22	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433190043	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433190060	0.93	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433241057	0.45	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433241065	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
433460007	0.35	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
435120070	0.16	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7

APN	Acres	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
435130015	0.23	El Sobrante	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
420010001	0.39	El Sobrante	Commercial, Open Space	1.0 FAR	Mixed Use	0 to 30
420010002	1.19	El Sobrante	Commercial, Open Space	1.0 FAR	Mixed Use	0 to 30
425170030	0.77	El Sobrante	Commercial, Open Space	1.0 FAR	Mixed Use	0 to 30
425251006	0.09	El Sobrante	Commercial	1.0 FAR	Mixed Use	0 to 30
403202011	2.76	Montalvin Manor	Montalvin Manor Mixed Use	12.0 to 21.9	Residential – Medium Density	7 to 17
403211024	1.69	Montalvin Manor	Commercial	1.0 FAR	Mixed Use	30 to 75
403211026	1.14	Montalvin Manor	Commercial	1.0 FAR	Mixed Use	30 to 75
403211027	3.63	Montalvin Manor	Commercial	1.0 FAR	Mixed Use	30 to 75
375311001	0.96	Mountain View	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
375311003	0.49	Mountain View	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
408160016	0.16	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409011012	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021007	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021008	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021010	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021027	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021028	0.09	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021032	0.15	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021034	0.08	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021037	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021040	0.05	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409021041	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409031004	0.05	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409032013	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409032015	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409032019	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033001	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033012	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033023	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409033025	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409041006	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409042014	0.45	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409042021	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409042022	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409051002	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409051008	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409052001	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409052003	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409052009	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060009	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060013	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30

APN	Acreege	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
409060018	0.35	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060029	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060043	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409060044	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409080005	0.05	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409100004	0.58	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409100009	0.04	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Mixed Use	30 to 75
409110007	0.19	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409120005	0.18	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409120011	0.41	North Richmond	Multiple-Family Residential - Low Density, Single-Family Residential - High Density	7.3 to 11.9, 5.0 to 7.2 <sup>7</sup>	Mixed Use	30 to 75
409120012	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131003	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131010	0.09	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131014	0.04	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409131015	0.04	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409132002	0.12	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409132007	0.51	North Richmond	Multiple-Family Residential - Low Density, Industrial - Light Industrial	7.3 to 11.9 <sup>5</sup>	Mixed Use	30 to 75
409132016	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409141006	0.18	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409141012	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142005	0.49	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142012	0.10	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142014	0.40	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142015	0.10	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409142016	0.10	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409151005	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409151011	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409152002	0.10	North Richmond	Multiple-Family Residential - Medium Density	12.0 to 20.9	Mixed Use	30 to 75
409152007	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409161001	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409161003	0.17	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Mixed Use	30 to 75
409161008	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162008	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162018	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409162025	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171012	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171015	0.24	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171023	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409171024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30

APN	Acreeage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
409172017	0.13	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409172019	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409172027	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409172028	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409181008	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409182002	0.26	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409182020	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409182023	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409182024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409191001	0.35	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409191009	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409191013	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409192001	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409200009	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200015	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200016	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200024	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409200025	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409210011	0.53	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210020	0.67	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210021	1.37	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210022	2.16	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210023	3.03	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210024	1.28	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210025	0.70	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409210026	1.60	North Richmond	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium High Density	17 to 30
409220006	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409220007	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409220008	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409230015	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409240017	0.15	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409240019	0.08	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409240029	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409240030	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251019	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251020	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251021	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409251022	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409252008	0.19	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409261009	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409261012	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409261013	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
409261015	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409261016	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409262012	0.06	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
409262013	0.06	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
409262015	0.06	North Richmond	Multiple-Family Residential - High Density	21.0 to 29.9	Residential – Medium High Density	17 to 30
409271005	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409271007	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409271011	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409271021	0.09	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409271025	0.07	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409272007	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409272009	0.23	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409272010	0.04	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409281001	0.40	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409281011	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409281014	0.06	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409282005	0.34	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409282006	0.12	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409282019	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Mixed Use	30 to 75
409291008	0.11	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409291009	0.17	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
409292001	0.61	North Richmond	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium High Density	17 to 30
125071011	0.23	Pacheco	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
125071012	0.27	Pacheco	Multiple-Family Residential - Medium Density	12.0 to 20.9	Residential – Medium High Density	17 to 30
125140005	0.47	Pacheco	Office, Single-Family Residential - High Density	5.0 to 7.2 <sup>6</sup>	Mixed Use	30 to 75
154210027	0.58	Pacheco	Single-Family Residential - Low Density	1.0 to 2.9	Residential – Low Density	1 to 3
125077024	0.08	Pacheco	Commercial	1.0 FAR	Mixed Use	30 to 75
125130018	0.79	Pacheco	Commercial, Public and Semi-Public	1.0 FAR	Mixed Use	30 to 75
125130020	0.19	Pacheco	Commercial	1.0 FAR	Mixed Use	30 to 75
125155021	0.21	Pacheco	Office	1.5 FAR	Mixed Use	30 to 75
169231011	0.29	Reliez Valley	Single-Family Residential - Medium Density	3.0 to 4.9	Residential – Low Medium Density	3 to 7
357042008	0.07	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357042016	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357052002	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357052015	0.05	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357061010	0.14	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357081003	0.26	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357140010	0.12	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140016	0.12	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140039	0.65	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140041	0.65	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75

APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
357140045	0.07	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140056	0.14	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140057	0.07	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140058	0.11	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140059	0.08	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140060	0.14	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140062	0.11	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140063	0.12	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357140064	0.19	Rodeo	Parker Avenue Mixed Use	29	Mixed Use	30 to 75
357151002	0.56	Rodeo	Downtown/Waterfront Rodeo Mixed Use	30	Mixed Use	30 to 75
357151035	0.12	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357151036	1.07	Rodeo	Downtown/Waterfront Rodeo Mixed Use	30	Mixed Use	30 to 75
357161001	0.22	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357161002	0.17	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357161006	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357161013	0.90	Rodeo	Downtown/Waterfront Rodeo Mixed Use	30	Mixed Use	30 to 75
357171002	0.10	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357171008	0.23	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357171010	0.42	Rodeo	Downtown/Waterfront Rodeo Mixed Use	25	Mixed Use	30 to 75
357171019	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357171020	0.04	Rodeo	Downtown/Waterfront Rodeo Mixed Use	16	Mixed Use	30 to 75
357194001	0.74	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357196012	0.15	Rodeo	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium Density	7 to 17
357224013	0.13	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357371013	0.17	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
357260071	0.24	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
357281005	0.31	Rodeo	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
357101002	0.13	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357111010	0.16	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357120002	0.65	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357120003	0.79	Rodeo	Commercial	1.0 FAR	Mixed Use	30 to 75
357120074	0.99	Rodeo	Commercial	1.0 FAR	Residential – Very High Density	70 to 125
184010035	0.60	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
184010046	0.69	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
184450025	0.62	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370010	0.76	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370012	0.19	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370018	0.27	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
185370033	0.31	Saranap	Saranap Village Mixed Use	53.5	Mixed Use	30 to 75
184342008	0.21	Saranap	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
426070020	2.98	Tara Hills	Single-Family Residential - High Density, Public and Semi-Public	5.0 to 7.2	Residential – Low Medium Density	3 to 7

APN	Acres	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
403152020	0.51	Tara Hills	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
161262010	0.59	Vine Hill	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium Density	7 to 17
161262013	0.69	Vine Hill	Multiple-Family Residential - Low Density	7.3 to 11.9	Residential – Medium Density	7 to 17
380070035	0.18	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070036	0.15	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070037	0.14	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070038	0.15	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070039	0.14	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070040	0.14	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070041	0.22	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070042	0.16	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070043	0.23	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380070044	0.34	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380080030	0.18	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380080031	0.20	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380080058	0.42	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120060	0.30	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120061	0.30	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120066	0.63	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120087	0.17	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380120088	0.28	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
380193024	1.79	Vine Hill	Single-Family Residential - High Density, Multiple-Family Residential - High Density	5.0 to 7.2, 21.0 to 29.9 <sup>8</sup>	Mixed Use	30 to 75
380194004	0.10	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380194009	0.76	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380194010	0.39	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380220066	0.75	Vine Hill	Multiple-Family Residential - High Density	21.0 - 29.9	Mixed Use	30 to 75
380231020	0.31	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Medium Density	7 to 17
159180028	0.23	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
159190043	2.39	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
159230007	9.75	Vine Hill	Single-Family Residential - High Density, Light Industrial	5.0 to 7.2 <sup>6</sup>	Residential – Low Medium Density	3 to 7
161280005	1.98	Vine Hill	Single-Family Residential - High Density	5.0 to 7.2	Residential – Low Medium Density	3 to 7
159210004	0.26	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159210039	1.05	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159210042	4.33	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159210043	0.87	Vine Hill	Commercial	1.0 FAR	Mixed Use	30 to 75
159240005	10.00	Vine Hill	Light Industry	0.67 FAR	Residential – Very Low Density	< 1

Source: Contra Costa County Department of Conservation and Development

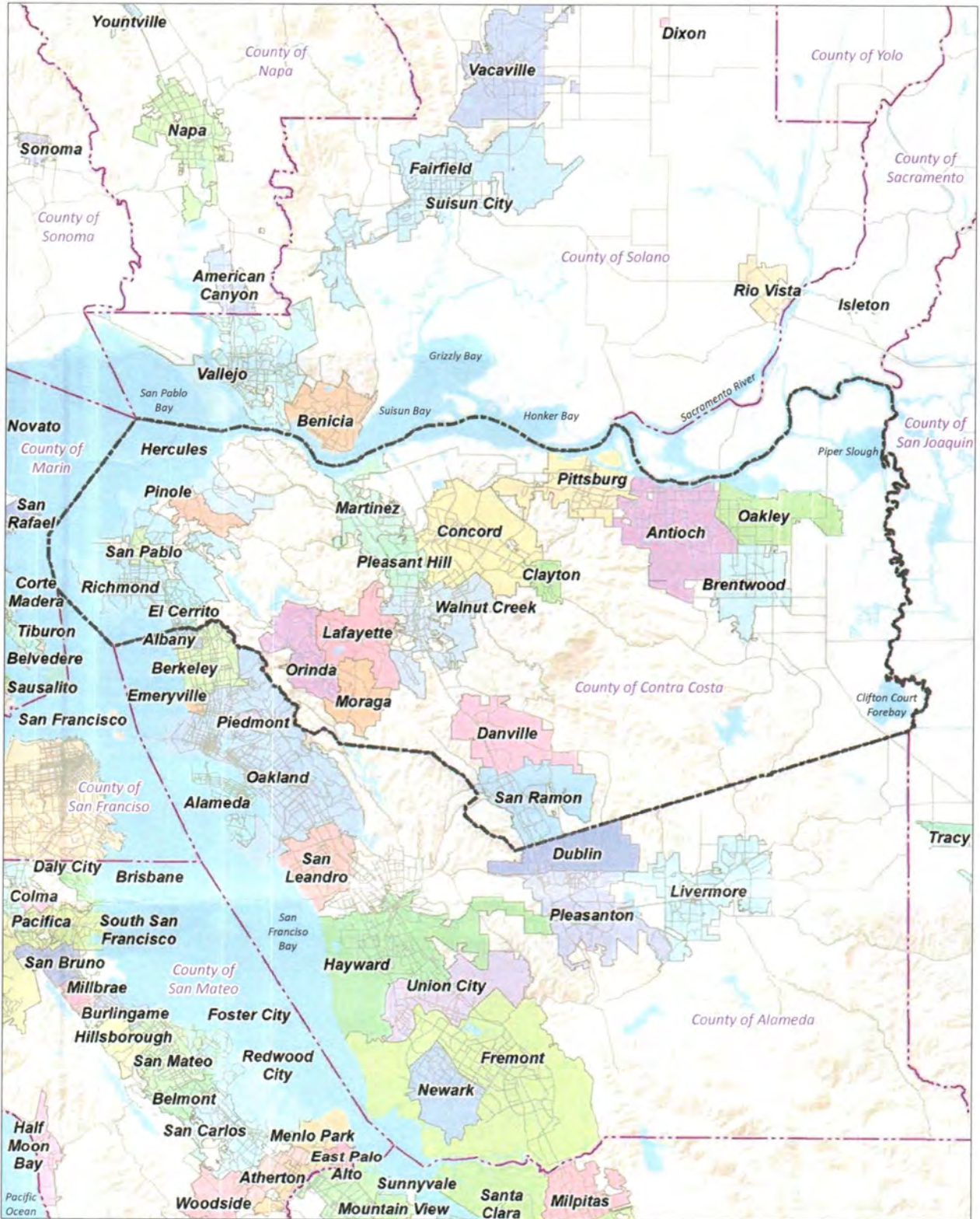
<sup>1</sup> Units per net acre, unless otherwise indicated

<sup>2</sup> The allowable density range shown in this table for all parcels with the Bay Point Residential Mixed Use (M-6) designation is the combined range of both Dev. Zone 2 and Dev. Zone 3. Dev. Zone 2 has a required density of 40 minimum units per net acre and Dev. Zone 3 allows a range of 21 to 29.9 units.



APN	Acreage	Community Name	Existing General Plan Designation	Existing Allowed Density Range (units per net acre) <sup>1</sup>	Proposed General Plan Designation	Proposed Allowed Density Range (units per net acre) <sup>1</sup>
<p><sup>3</sup> 7.3 to 11.9 is the allowable density range for the Multiple-Family Residential – Low Density designation and 21 to 29 is the allowable density range for the Willow Pass Road Mixed Use designation.</p> <p><sup>4</sup> This is the allowable density range of the Multiple-Family Residential – Medium Density designation.</p> <p><sup>5</sup> This is the allowable density range of the Multiple-Family Residential - Low Density designation.</p> <p><sup>6</sup> This is the allowable density range of the Single-Family Residential - High Density designation.</p> <p><sup>7</sup> 7.3 to 11.9 is the allowable density range of the Multiple-Family Residential - Low Density designation and 5.0 to 7.2 is the allowable density for the Single-Family Residential - High Density designation.</p> <p><sup>8</sup> 5.0 to 7.2 is the allowable density range of the Single-Family Residential - High Density designation and 21.0 to 29.9 is the allowable density range of the Multiple-Family Residential - High Density designation.</p>						

### NOTICE OF PREPARATION



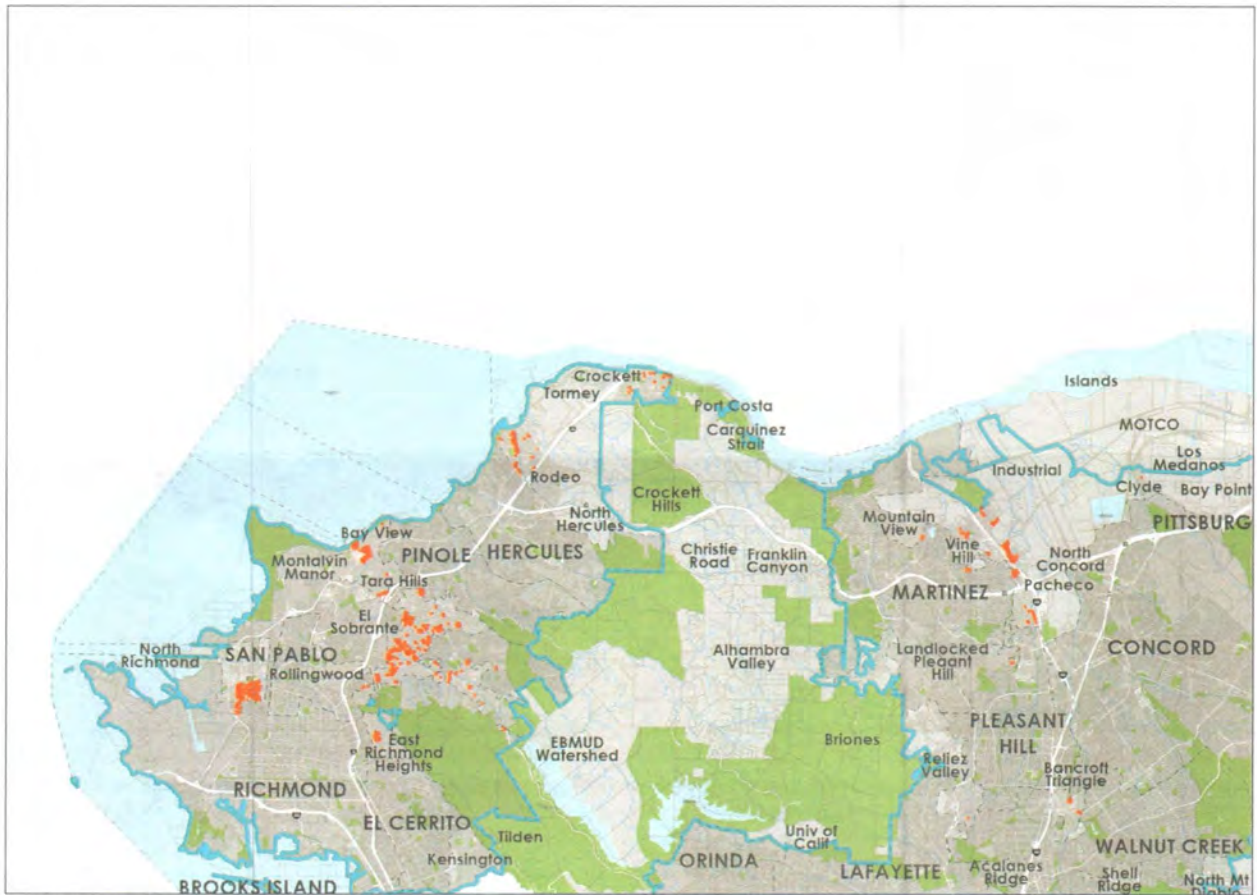
Source: ESRI, 2022

--- Contra Costa County Boundary  
- - - County Boundary

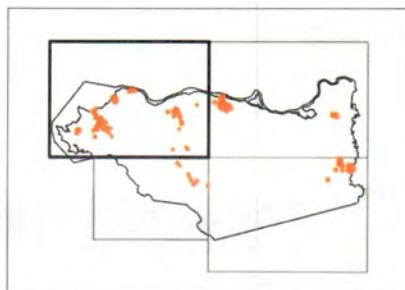


Figure 1  
Regional Location

# NOTICE OF PREPARATION



Source: Contra Costa County, 2022.



- City Limits
- Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

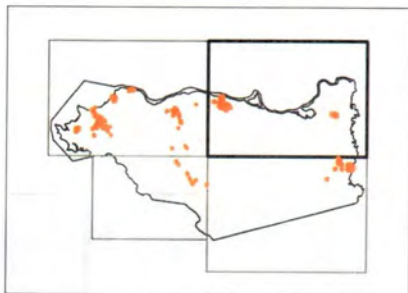


Figure 2  
Housing Element Sites (Northwest Quadrant)

### NOTICE OF PREPARATION



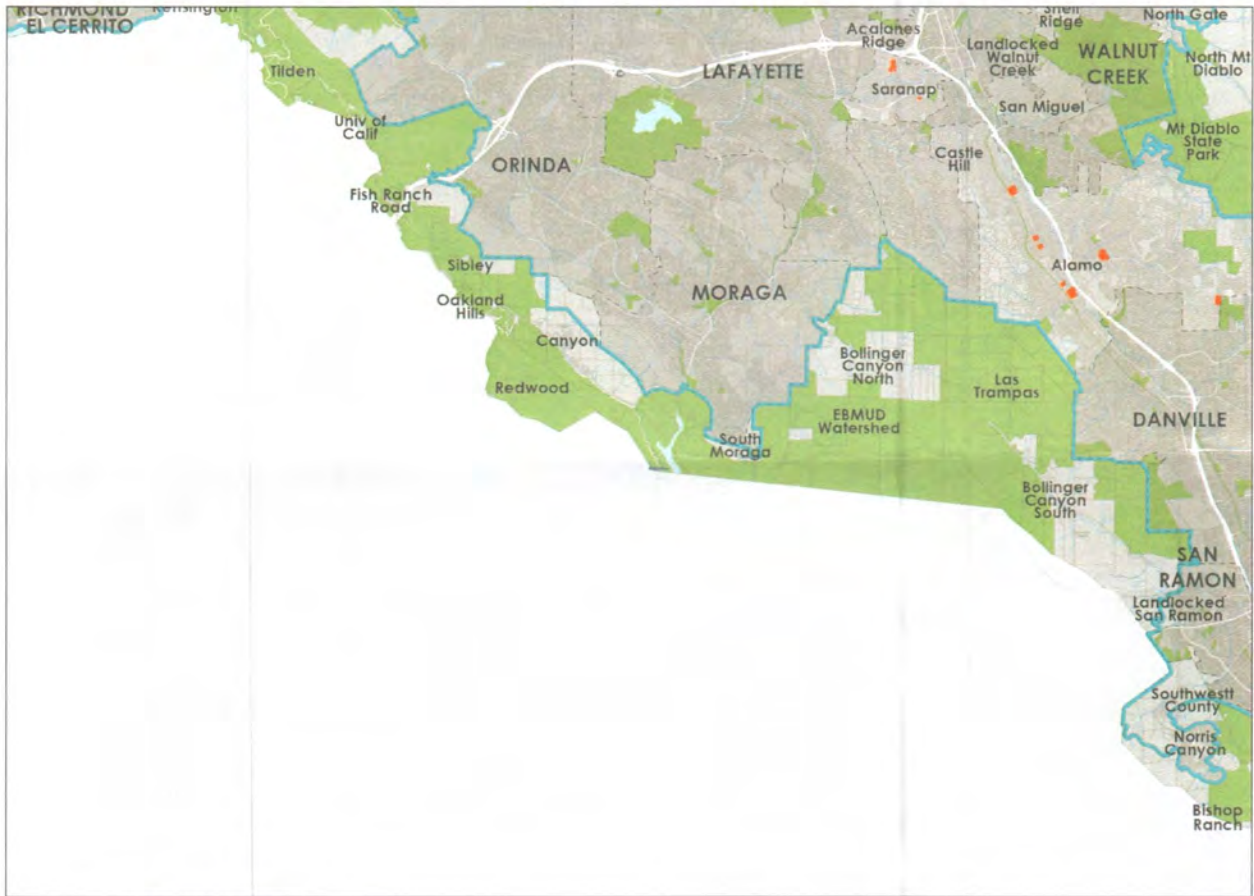
Source: Contra Costa County, 2022.



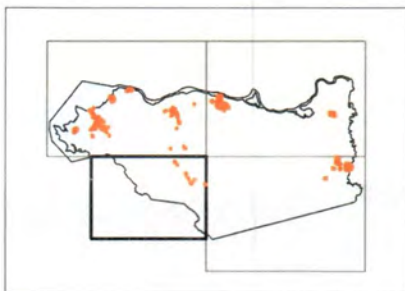
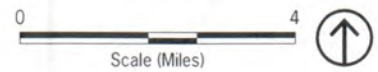
- City Limits
- Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 3  
Housing Element Sites (Northeast Quadrant)

### NOTICE OF PREPARATION



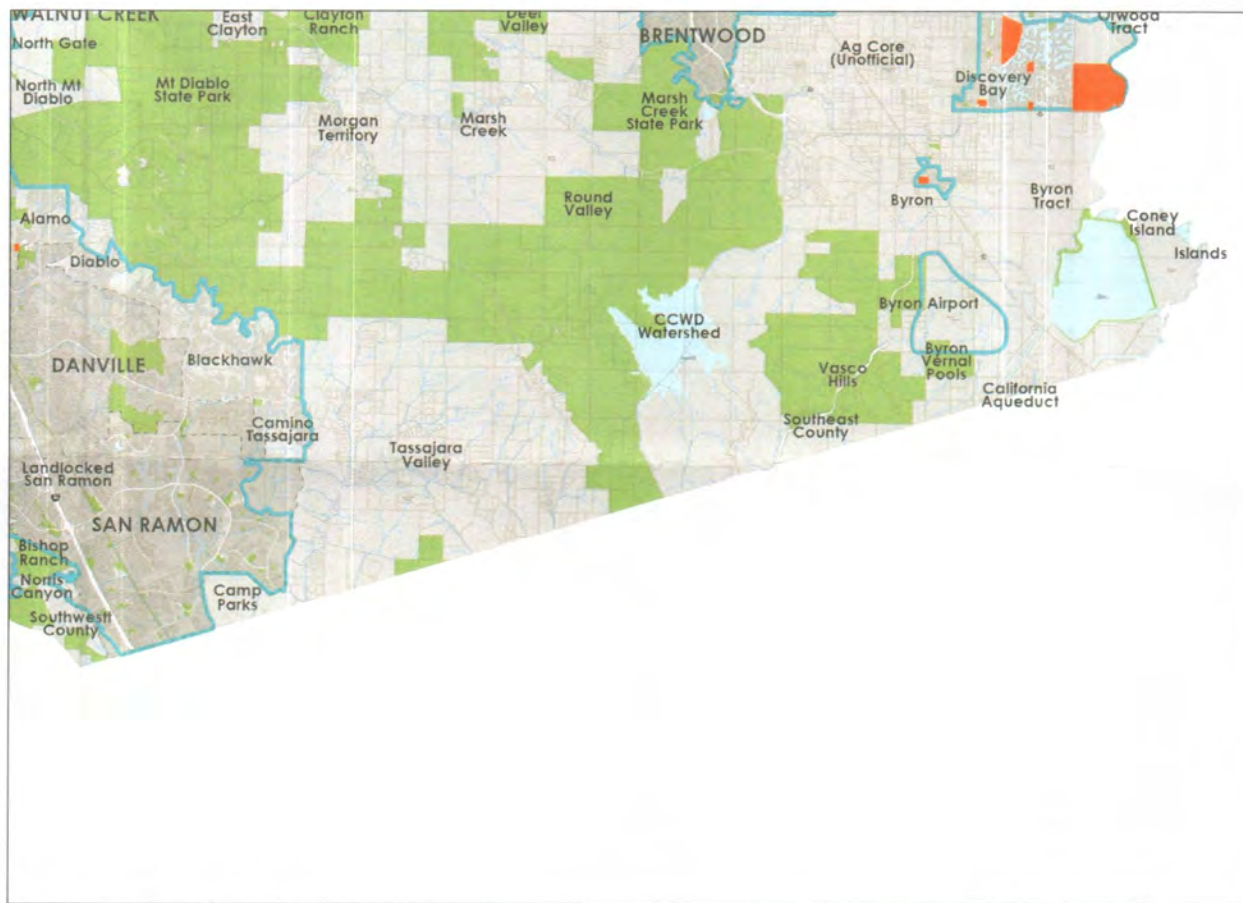
Source: Contra Costa County, 2022.



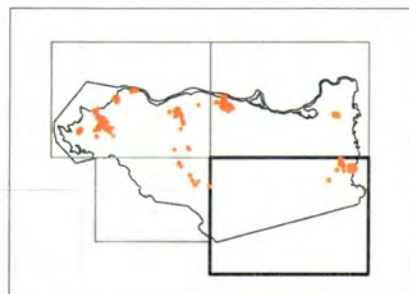
- City Limits
- ▭ Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 4  
Housing Element Sites (Southwest Quadrant)

# NOTICE OF PREPARATION



Source: Contra Costa County, 2022.



- City Limits
- Urban Limit Line
- Incorporated City
- Unincorporated
- Housing Element Sites

Figure 5  
Housing Element Sites (Southeast Quadrant)

Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94553

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT  
OF THE RETURN ADDRESS. FOLD AT DOTTED LINE  
**CERTIFIED MAIL**



7001 0320 0003 5598 0988

REC

JUL 28 2022

DISTRICT SECRETARY'S  
OFFICE

BART DISTRICT HQ  
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Oakland CA 94612

neopost  
07/27/2022

US POSTAGE \$008.51<sup>12</sup>



ZIP 94553  
041L10245397

**Current NOP Comment Letters**

**(December 19, 2022 – January 19, 2022)**



**Department of  
Conservation and  
Development**

30 Muir Road  
Martinez, CA 94553

Phone: 1-855-323-2626

**Contra  
Costa  
County**



**John Kopchik**  
Director

**Aruna Bhat**  
Deputy Director

**Jason Crapo**  
Deputy Director

**Maureen Toms**  
Deputy Director

**Gabriel Lemus**  
Assistant Deputy Director

**NOTICE OF PREPARATION AND  
NOTICE OF PUBLIC SCOPING MEETING**

- Date:** December 19, 2022
- To:** California State Clearinghouse  
Contra Costa County Clerk  
Responsible and Trustee Agencies  
Interested Parties and Organizations
- Subject:** Re-Issued Notice of Preparation (NOP) for the Contra Costa County Housing Element Update Environmental Impact Report (EIR)
- Lead Agency:** Contra Costa County
- Applicant:** Contra Costa County  
30 Muir Road, Martinez, CA 94553  
(925) 655-2901
- Contact:** Daniel Barrios, Senior Planner (925) 655-2901
- Project Title:** Contra Costa County 6<sup>th</sup> Cycle Housing Element Update
- Project Location:** Contra Costa County is located on the eastern side of San Francisco Bay in Northern California. Contra Costa County is surrounded by Solano County and Sacramento County to the north, San Joaquin County to the east, Alameda County to the south, and Marin County to the west. Interstates 80 and 680, and State Routes 4 and 24, traverse the county and offer access to neighboring counties (See Figure 1, *Regional Location*).

**RE-ISSUED NOP**

This Notice of Preparation (NOP) replaces the previous NOP issued July 27, 2022, titled "Notice of Preparation and Notice of Public Scoping Meeting" for the Contra Costa Housing Element Update Environmental Impact Report (EIR). A public scoping meeting was conducted on August 15, 2022 and the public comment period for the NOP closed on August 26, 2022. The County is re-issuing the NOP because substantial changes have been made to the County's Housing Sites Inventory including the addition of 42 new sites that were not previously included in the original NOP and the subtraction of 114 sites that are no longer in the sites inventory. The sites that

have been added to the inventory are bolded in Tables 1 through 3, while the sites that have been removed from the inventory are listed in Table 4. These sites are included in the Draft Housing Element issued on November 18, 2022. Please disregard the July 27, 2022, NOP and use this NOP when commenting on the project. **Comments submitted in response to the original NOP are on record and will be considered.** Note that the State Clearinghouse Number 2022070481 will remain unchanged. Please email your written comments to Daniel Barrios at [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us) or physically mail them to:

Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94553  
Attn: Daniel Barrios

When providing comments, please include the name, email and/or telephone number for a contact person at your agency or organization who can answer questions about the comment.

## **PURPOSE**

In accordance with Section 15021 of the California Environmental Quality Act (CEQA) Guidelines, Contra Costa County, as lead agency, will prepare an Environmental Impact Report (EIR) for the Contra Costa County Housing Element Update (Housing Element Update). Pursuant to Section 15082(a) of the CEQA Guidelines, Contra Costa County (County) has issued this Notice of Preparation (NOP) to provide responsible agencies, trustee agencies, and other interested parties with information describing the Housing Element Update and its potential effects. The County is soliciting your comments on the scope of the environmental analysis.

Section 15082(b) of the CEQA Guidelines requires comments to be provided within 30 days of receipt of a NOP. In compliance with the time limits mandated by CEQA, the comment period for this NOP is from **December 19, 2022, to January 18, 2023.** Please email your written comments to [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us) or physically mail them to the Conservation and Development Department at 30 Muir Road, Martinez, CA 94553. Please include the name, email and/or telephone number of a contact person at your agency or organization who can answer questions about the comment. **Comments submitted in response to the original NOP are on record and will be considered.**

## **PROJECT DESCRIPTION & SUMMARY**

The Contra Costa County Housing Element Update (proposed project) is one of the required elements of the General Plan. As a policy document, the Housing Element does not normally result in physical changes to the environment but rather encourages the provision of affordable housing within the land use designations shown in the Land Use Element of the General Plan. The Housing Element identifies policy direction to meet the housing needs of the County by preserving existing homes and clarifying priorities for housing creation. The proposed Housing Element will include an overview of housing policies and programs and will identify locations that can accommodate future housing.

The proposed project will require that the County redesignate land to meet the Regional Housing Needs Allocation (RHNA) of 7,610 total housing units. The County also intends to comply with No-Net-Loss (Gov. Code Section 65863) through identifying a surplus of sites available to meet its RHNA allocation. In total, the County's surplus unit capacity is 2,485 units. In order to meet this requirement, the County must redesignate up to approximately 560 acres of land.

The proposed project would require changes in land use designations for sites that currently allow residential uses but would need to be redesignated to allow for increased residential density, in addition to sites with designations that do not currently allow residential density and would need to be redesignated to allow residential development.

The Housing Element Update also includes an additional 92 acres of land that do not require a designation or zone change but are counted toward the County's RHNA.

For the purposes of the analysis, the housing sites will be categorized in the following way:

- **Residential Sites with Increasing Allowable Density:** Shown in Table 1, Residential Sites with Increasing Allowable Density, these sites are currently designated for residential uses and are proposed to be redesignated to accommodate increased residential densities. This category encompasses approximately 473 acres across 330 parcels. Maximum buildout<sup>1</sup> of these sites result in 15,572 residential units. The sites in this category correspond to those in Table B in Appendix A of the draft Housing Element Update.
- **Non-Residential Sites Proposed to Allow Residential Units:** Shown in Table 2, Non-Residential Sites Proposed to Allow Residential Units, these sites are currently designated for a variety of non-residential uses and are proposed to be redesignated to allow residential uses. This category encompasses approximately 86 acres across 46 parcels. Maximum buildout of these sites under their new designations would result in 4,053 residential units. The sites in this category correspond to those in Table B in Appendix A of the draft Housing Element Update.
- **Suitably Designated/Zoned Sites:** Shown in Table 3, these are sites in the Housing Element sites inventory that do not require a designation or zone change to contribute to the County's RHNA. This category includes 153 parcels that encompass a combined approximate 92 acres. Maximum buildout of these sites is 791 residential units. The sites in this category correspond to those in Table A in Appendix A of the draft Housing Element Update.

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<sup>1</sup> "Maximum buildout" refers to the maximum allowed units under each site's proposed maximum allowable density. This is generated by multiplying the proposed maximum allowable density by each site's acreage. Note that this calculation assumes that the entire acreage of every site is developable for residential uses. It is furthermore assumed that all sites will be developed to 100 percent of their maximum allowed density.

**As shown in Tables 1 through 3, each site’s “proposed maximum allowable units” assumes that the entire acreage of the site will be developed at its maximum allowable density. This was calculated by multiplying the acreage of the site by its proposed maximum allowable density. This scenario is highly conservative as it is unlikely that 100 percent of the sites would be developed at 100 percent of their allowed capacity. The proposed Housing Element Update used a different methodology to calculate the unit allocation of each site for the purposes of the County’s RHNA. The “realistic capacity” used in the proposed Housing Element was based on a variety of assumptions including current and historic development trends in the County and the units contributed by current development applications (see page 155 of the draft Housing Element, for more details). For purposes of this EIR, full development of the properties at the allowable density is assumed.**

The location of all parcels affected by the proposed project is shown on Figures 2 through 20. It should also be noted that this project will not change the land use designations or zoning of any of the parcels in Tables 1 through 3, as this action will occur with the larger General Plan Update that is already in progress and will have its own EIR. However, this EIR will evaluate the sites using the proposed general plan land use designations as currently under consideration. An objective of this project is to publicly review the list of sites to determine if there are significant environmental impacts that would affect any future change in designation or density.

Development under the Housing Element Update would be located within the Urban Limit Line and comply with the 65/35 Standard, which limits urban development to no more than 35 percent of the land area of the County, preserving the remaining 65 percent for agriculture, open space, wetlands, parks, and other non-urban uses.

The update to the Contra Costa County General Plan and Zoning Ordinance is underway (<https://envisioncontracosta2040.org/>) but will not be complete before the housing element adoption deadline of January 2023. Therefore, because it is not known for certain which of the sites shown in Tables 1 and 2 will be redesignated to meet the RHNA, the County is preparing this EIR to evaluate the cumulative impacts of all the sites in Tables 1 through 3 at a programmatic level. Additional information regarding the Housing Element Update can be found on the County’s website: <https://www.contracosta.ca.gov/8525/Housing-Element-Update>.

## **Project Objectives**

The Housing Element is an integral part of the County’s General Plan and is the only element that must be certified by the state. Adoption of a certified Housing Element is essential to meeting grant funding requirements for the County. The proposed Housing Element has the following goals that form the project objectives for the purpose of this EIR:

- Maintain and improve the quality of the existing housing stock and residential neighborhoods in Contra Costa County;
- Preserve the existing affordable housing stock in Contra Costa County;
- Increase the supply of housing with a priority on the development of affordable housing, including housing affordable to extremely low-income households;

- Increase the supply of appropriate and supportive housing for special-needs populations;
- Improve housing affordability for both renters and homeowners;
- Provide adequate sites through appropriate land use and zoning designations to accommodate the County's share of regional housing needs;
- Mitigate potential governmental constraints to housing development and affordability;
- Promote equal opportunity for all residents to reside in the housing of their choice; and
- Promote energy-efficient retrofits of existing dwellings and exceeding building code requirements in new construction.

## **ENVIRONMENTAL IMPACT REPORT**

As all the CEQA topics will be included in the EIR, the County has not prepared an Initial Study as permitted in Section 15060(d) of the CEQA Guidelines.

### **Probable Environmental Effects**

The County has determined that implementation of the Housing Element Update may have a significant effect on the environment. The EIR will evaluate the potential for the Housing Element Update to cause direct and indirect growth-inducing impacts, as well as cumulative impacts. Mitigation will be proposed for those impacts that are determined to be significant. Mitigation will be identified, and a mitigation monitoring and reporting program will be developed as required by the CEQA Guidelines (Section 15150). The EIR will evaluate the following topics:

**Probable Environmental Effects:** The County has determined that the implementation of the Housing Element Update may have a significant effect on the environment. The EIR will evaluate the potential for the Housing Element Update to cause direct and indirect growth-inducing impacts, as well as cumulative impacts. Mitigation will be proposed for those impacts that are determined to be significant. Mitigation will be identified, and a mitigation monitoring and reporting program will be developed as required by the CEQA Guidelines (Section 15150). The EIR will evaluate the following topics:

- **Aesthetics:** The potential for new development to affect aesthetics in the County will be evaluated in the EIR.
- **Agriculture and Forestry Resources:** There is a possibility that one or more sites in Table 1 is on prime agricultural land; therefore, the EIR will evaluate the potential for agricultural land conversion.
- **Air Quality:** Construction and operation of housing could result in air pollutant emissions. Ground disturbance during site development activities will generate dust and construction equipment will create short-term pollutant emissions. Development accommodated under the Housing Element update could result in additional vehicular traffic that would generate air pollution, exacerbated by the County's location in a climate with high winds present, and proximity to high-traffic corridors. Air quality impacts will be evaluated in the EIR.

- **Biological Resources:** Development under the Housing Element Update may have an adverse effect on rare, threatened, or endangered species and/or the habitat that supports them, which could impact potential development outcomes. In addition, such development could potentially affect existing wildlife corridors. The Housing Element Update could affect riparian habitat and/or wetlands. The EIR will evaluate the potential for the sites to affect mapped habitat but will not provide information on a parcel level basis.
- **Cultural and Tribal Cultural Resources:** Development accommodated under the Housing Element Update may have an adverse effect on historic archaeological, and/or tribal cultural resources. There is the potential for construction-related effects on historical and archaeological resources. As part of the EIR process, both SB-18 and AB-2 tribal consultation will be completed. Cumulative impacts will be discussed at a programmatic level in the EIR, but individual site analysis will not be part of this effort.
- **Geological Resources:** Development accommodated under the Housing Element Update may result in soil erosion or the loss of topsoil and/or allow development in areas with geologic or soils constraints. There could be impacts associated with grading, such as increased wind and water erosion potential. Impacts may involve disruptions of the soil, changes in topography, erosion from wind or water, and other impacts, as well as a potential of development on paleontological resources. The EIR will summarize the construction process and identify any sites that may be within areas of known geologic concern.
- **Greenhouse Gas:** It is likely that future development may contribute to cumulative increases in greenhouse gases. The EIR will analyze impacts of the Housing Element Update on greenhouse gas emissions and provide reduction methods, as needed.
- **Hazards:** The EIR will identify hazards that could be created or made worse because of the Housing Element Update.
- **Hydrology and Water Quality:** Development accommodated under the Housing Element Update may affect groundwater supplies, could change drainage patterns, and/or could have the potential to contribute polluted stormwater runoff. There could be impacts related to urban runoff and flooding potential, as well as to water quality. The EIR will evaluate these issues at a programmatic level.
- **Land Use:** The Housing Element Update will affect some of the land use designations currently under review as part of the larger General Plan Update. As the Housing Element Update must be approved before the updated General Plan will be adopted, the EIR will evaluate the potential for impact associated with the new land use designations.
- **Noise:** Increases in traffic because of future development accommodated under the Housing Element Update may result in an increase in ambient and transportation noise. Noise impacts will be evaluated in the EIR.
- **Public Services and Utilities:** Additional growth generated by the development accommodated under the Housing Element Update will increase demand on the County's services and utilities. The EIR will evaluate the availability and capacity of the systems to provide for the increase in growth.

- **Recreation:** The proposed project would result in an increase in recreational use. The EIR will evaluate impacts to existing recreational facilities because of the Housing Element Update.
- **Transportation:** Future development may result in impacts on the circulation system, including facilities outside the County’s jurisdiction. The EIR will include an analysis of vehicle miles traveled.
- **Wildfire:** Portions of the County are subject to an increase in fire hazards due to ongoing drought conditions. The Housing Element Update EIR will include a discussion of potential environmental impacts, as well as mitigation to reduce impacts.

**TYPE OF EIR**

The County will prepare a program EIR pursuant to Section 15168 of the CEQA Guidelines. Use of a program EIR allows analysis consistent with the high-level nature of the Housing Element. The Housing Element Update EIR will serve as a cumulative impact analysis for implementation of the Housing Element Update.

**USE OF THE HOUSING ELEMENT UPDATE EIR**

Later projects implemented after the Housing Element Update will be examined considering the Housing Element Update EIR to determine whether an additional environmental document must be prepared. In addition, the CEQA Guidelines currently provide for streamlining through Section 15183 (Projects Consistent with a Community Plan or Zoning), Section 15183.3 (Streamlining for Infill Projects), and Section 15183.5 (Tiering and Streamlining the Analysis of Greenhouse Gas Emissions). The County intends to promote streamlining for future development through certification of the Housing Element Update EIR. Later development may have to conduct site-specific environmental analysis; however, the cumulative analysis will be addressed in the Housing Element Update EIR and proposed policies.

If you have questions or require additional information, please contact Daniel Barrios, Senior Planner, at (925) 655-2901, or by email at [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us).

Attachments:

- Table 1 – Residential Sites with Increasing Allowable Density
- Table 2 – Non-Residential Sites Proposed to Allow Residential Units
- Table 3 – Suitably Designated/Zoned Sites
- Table 4 – Sites that have been Removed from the Inventory
- Figure 1 – Regional Location
- Figure 2 – Housing Sites Inventory - Alamo
- Figure 3 – Housing Sites Inventory - Byron
- Figure 4 – Housing Sites Inventory – Saranap/Parkmead
- Figure 5 – Housing Sites Inventory – Discovery Bay
- Figure 6 – Housing Sites Inventory – Reliez Valley
- Figure 7 – Housing Sites Inventory – Contra Costa Centre
- Figure 8 – Housing Sites Inventory – North Richmond
- Figure 9 – Housing Sites Inventory – East Richmond Heights
- Figure 10 – Housing Sites Inventory – El Sobrante
- Figure 11 – Housing Sites Inventory – El Sobrante/Tara Hills (South)
- Figure 12 – Housing Sites Inventory – Pleasant Hill (Unincorporated)

- Figure 13 – Housing Sites Inventory – Pacheco
- Figure 14 – Housing Sites Inventory – Bayview/Tara Hills (North)
- Figure 15 – Housing Sites Inventory – Vine Hill
- Figure 16 – Housing Sites Inventory – Clyde
- Figure 17 – Housing Sites Inventory – Bay Point (West)
- Figure 18 – Housing Sites Inventory – Bay Point (East)
- Figure 19 – Housing Sites Inventory – Rodeo
- Figure 20 – Housing Sites Inventory – Crockett



Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
003120008	4.94	Byron	Single-Family Residential - Medium Density	RMH	30	148
003120009	5.08	Byron	Single-Family Residential - Medium Density	RMH	30	153
011230041	5.07	Discovery Bay	Single Family Residential	RM	17	86
093036010	0.21	Bay Point	Willow Pass Road Mixed Use	MU*	75	16
093036014	0.37	Bay Point	Willow Pass Road Mixed Use	MU*	75	28
093036015	1.23	Bay Point	Willow Pass Road Mixed Use	MU*	75	92
093121001	10.99	Bay Point	Single-Family Residential - High Density	RMH	30	330
093170056	0.56	Bay Point	Multiple-Family Residential - High Density	RH	70	39
093170069	1.41	Bay Point	Bay Point Residential Mixed Use	MU*	125	176
093170071	0.53	Bay Point	Bay Point Residential Mixed Use	MU*	125	66
093170074	0.05	Bay Point	Bay Point Residential Mixed Use	MU*	125	6
093170080	0.27	Bay Point	Bay Point Residential Mixed Use	MU*	125	34
093191025	0.16	Bay Point	Willow Pass Road Mixed Use	MU*	75	12
093192026	0.29	Bay Point	Single-Family Residential - High Density	RM	17	5
093193002	0.14	Bay Point	Single-Family Residential - High Density	RM	17	2
093193035	0.18	Bay Point	Single-Family Residential - High Density	RM	17	3
095021002	0.57	Bay Point	Single-Family Residential - High Density	RMH	30	17
095022025	0.30	Bay Point	Willow Pass Road Mixed Use	MU*	75	23
095022026	0.10	Bay Point	Willow Pass Road Mixed Use	MU*	75	7
095022027	0.07	Bay Point	Willow Pass Road Mixed Use	MU*	75	6
095034002	0.12	Bay Point	Willow Pass Road Mixed Use	MU*	75	9
095071010	0.50	Bay Point	Single-Family Residential - High Density	RM	17	8
095075025	0.21	Bay Point	Single-Family Residential - High Density	RM	17	4
095081020	0.77	Bay Point	Single-Family Residential - High Density	MU*	75	58
095081023	0.71	Bay Point	Willow Pass Road Mixed Use	MU*	75	53
095083023	0.16	Bay Point	Willow Pass Road Mixed Use	MU*	75	12
095084025	0.22	Bay Point	Single-Family Residential - High Density	RM	17	4
095101001	0.42	Bay Point	Single-Family Residential - Medium Density	RM	17	7
095101002	0.42	Bay Point	Single-Family Residential - Medium Density	RM	17	7
095102003	0.66	Bay Point	Single-Family Residential - Medium Density	RM	17	11
095102020	0.44	Bay Point	Single-Family Residential - Medium Density	RM	17	7
095107015	0.40	Bay Point	Single-Family Residential - Medium Density	RM	17	7
096012008	0.13	Bay Point	Single-Family Residential - High Density	RMH	30	4
096012009	0.06	Bay Point	Single-Family Residential - High Density	RMH	30	2
096015011	0.22	Bay Point	Single-Family Residential - High Density	RMH	30	7
096015015	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096015016	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016002	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
096016003	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016005	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016013	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096016018	0.20	Bay Point	Single-Family Residential - High Density	RMH	30	6
096017008	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096018007	0.18	Bay Point	Single-Family Residential - High Density	RMH	30	5
096018015	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096019017	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096019025	0.25	Bay Point	Willow Pass Road Mixed Use	MU*	75	19
096020022	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096020039	0.08	Bay Point	Single-Family Residential - High Density	RMH	30	2
096020042	0.09	Bay Point	Single-Family Residential - High Density	RMH	30	3
096020050	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096020062	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096020082	0.17	Bay Point	Willow Pass Road Mixed Use	MU*	75	13
096020093	0.09	Bay Point	Single-Family Residential - High Density	RMH	30	3
096020173	0.17	Bay Point	Single-Family Residential - High Density	RMH	30	5
096031018	0.62	Bay Point	Multiple-Family Residential - Low Density	RH	70	43
096031019	1.02	Bay Point	Multiple-Family Residential - Low Density	RH	70	71
096032011	0.12	Bay Point	Multiple-Family Residential - Low Density	MU*	75	9
096032016	0.12	Bay Point	Multiple-Family Residential - Low Density	MU*	75	9
096032028	0.31	Bay Point	Willow Pass Road Mixed Use	MU*	75	24
096032032	0.92	Bay Point	Multiple-Family Residential - Low Density	MU*	75	69
096033028	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096033035	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096033037	0.15	Bay Point	Single-Family Residential - High Density	MU*	75	11
096033039	0.35	Bay Point	Willow Pass Road Mixed Use	MU*	75	26
096041001	0.33	Bay Point	Single-Family Residential - High Density	RMH	30	10
096041013	0.35	Bay Point	Single-Family Residential - High Density	RMH	30	11
096041026	0.37	Bay Point	Single-Family Residential - High Density	RMH	30	11
096042020	0.41	Bay Point	Single-Family Residential - High Density	RMH	30	12
096043002	0.64	Bay Point	Single-Family Residential - High Density	RMH	30	19
096044001	0.42	Bay Point	Single-Family Residential - High Density	RMH	30	12
096044009	0.33	Bay Point	Single-Family Residential - High Density	RMH	30	10
096044010	0.34	Bay Point	Single Family Residential	RMH	30	10
096050007	1.09	Bay Point	Single Family Residential	RMH	30	33
096044002	0.20	Bay Point	Single-Family Residential - High Density	RMH	30	6
096044003	0.41	Bay Point	Single-Family Residential - High Density	RMH	30	12

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
096044007	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096050011	0.80	Bay Point	Single-Family Residential - High Density	RMH	30	24
096050012	0.15	Bay Point	Single-Family Residential - High Density	RMH	30	4
096050013	0.15	Bay Point	Single-Family Residential - High Density	RMH	30	4
096050014	0.16	Bay Point	Single-Family Residential - High Density	RMH	30	5
096050016	2.96	Bay Point	Single Family Residential	RMH	30	89
098052053	0.12	Bay Point	Single-Family Residential - High Density	RM	17	2
098180005	1.46	Bay Point	Single-Family Residential - Medium Density	RM	17	25
098180041	0.76	Bay Point	Single-Family Residential - Medium Density	RM	17	13
098180043	0.82	Bay Point	Single-Family Residential - Medium Density	RM	17	14
098230023	0.61	Bay Point	Single-Family Residential - High Density	RM	17	10
098250013	256.18	Bay Point	Multi-Family Residential - Medium Density	RMH	30	7685
125071011	0.23	Pacheco	Multiple-Family Residential - Medium Density	RMH	30	7
125071012	0.27	Pacheco	Multiple-Family Residential - Medium Density	RMH	30	8
148221033	1.81	Walnut Creek	Pleasant Hill BART Mixed Use	MU*	125	226
148350009	0.45	Walnut Creek	Single-Family Residential - Low Density	RH	60	27
148350010	0.48	Walnut Creek	Single-Family Residential - Low Density	RH	60	29
148350011	1.01	Walnut Creek	Single-Family Residential - Low Density	RH	60	61
148350020	1.79	Walnut Creek	Single-Family Residential - Low Density	RH	60	107
166030001	1.00	Pleasant Hill	Single-Family Residential - Low Density	RL	3	3
166030002	2.12	Pleasant Hill	Single-Family Residential - Low Density	RL	3	6
172040025	0.30	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	37
172040026	0.29	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	37
172040034	0.35	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	44
172040035	0.13	Contra Costa Centre	Single-Family Residential - Medium Density	MU*	125	16
172080007	17.21	Contra Costa Centre	Single Family Residential	RM	17	293
172120002	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172120003	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172120004	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120005	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120006	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120007	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120008	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120009	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120010	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	44
172120011	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172120012	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120013	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
172120025	0.33	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120027	0.36	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	45
172120028	0.37	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	46
172120051	0.34	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	42
172120052	0.35	Walnut Creek	Multiple-Family Residential - High Density	RVH	125	43
172150012	13.47	Contra Costa Centre	Single Family Residential	RM	17	229
191062022	1.64	Alamo	Single-Family Residential - Low Density	RM	17	28
191080001	1.18	Alamo	Single-Family Residential - Low Density	RM	17	20
197010013	0.23	Alamo	Multiple-Family Residential - Medium Density	RMH	30	7
197010014	0.24	Alamo	Multiple-Family Residential - Medium Density	RMH	30	7
197010016	0.24	Alamo	Multiple-Family Residential - Medium Density	RMH	30	7
197030001	0.61	Alamo	Single-Family Residential - Low Density	RM	17	10
197030026	5.68	Alamo	Single-Family Residential - Low Density	RMH	30	170
197030027	0.61	Alamo	Single-Family Residential - Low Density	RMH	30	18
197040011	0.55	Alamo	Single-Family Residential - Low Density	RM	17	9
197040012	3.64	Alamo	Single-Family Residential - Low Density	RM	17	62
354173009	0.12	Crockett	Single-Family Residential - High Density	RMH	30	3
354173010	0.12	Crockett	Single-Family Residential - High Density	RMH	30	3
354177007	0.12	Crockett	Single-Family Residential - High Density	RMH	30	3
357042016	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	11
357052002	0.14	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	11
357081003	0.26	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	19
357140010	0.12	Rodeo	Parker Avenue Mixed Use	MU*	75	9
357140016	0.12	Rodeo	Parker Avenue Mixed Use	MU*	75	9
357140045	0.07	Rodeo	Parker Avenue Mixed Use	MU*	75	5
357161001	0.22	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	16
357161002	0.17	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	13
357161006	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	8
357161013	0.90	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	68
357171002	0.10	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	8
357171008	0.23	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	18
357171010	0.42	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	31
357171019	0.11	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	8
357171020	0.04	Rodeo	Downtown/Waterfront Rodeo Mixed Use	MU*	75	3
357194001	0.74	Rodeo	Single-Family Residential - High Density	RM	17	13
357196012	0.15	Rodeo	Multiple-Family Residential - Low Density	RM	17	2
357371013	0.17	Rodeo	Single-Family Residential - High Density	RM	17	3
380120066	0.63	Vine Hill	Single-Family Residential - High Density	RM	17	11

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
380194010	0.39	Vine Hill	Multiple-Family Residential - High Density	MU*	75	29
380220066	0.75	Vine Hill	Multiple-Family Residential - High Density	MU*	75	57
403030005	12.79	Bay View	Montalvin Manor Mixed Use	MU*	75	959
405203018	0.73	San Pablo	Multiple-Family Residential - High Density	RMH	30	22
408160016	0.16	North Richmond	Single-Family Residential - High Density	RMH	30	5
409011012	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021007	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	3
409021008	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021010	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021027	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021028	0.09	North Richmond	Single-Family Residential - High Density	RMH	30	3
409021032	0.15	North Richmond	Single-Family Residential - High Density	RMH	30	4
409021034	0.08	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021037	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021040	0.05	North Richmond	Single-Family Residential - High Density	RMH	30	2
409021041	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409031004	0.05	North Richmond	Single-Family Residential - High Density	RMH	30	2
409032013	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409032015	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	4
409032019	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409033001	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409033012	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409033023	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409033025	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409041006	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409042014	0.45	North Richmond	Single-Family Residential - High Density	RMH	30	14
409042021	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409042022	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409051002	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409051008	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409052001	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409052003	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409052009	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409060009	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409060013	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409060018	0.35	North Richmond	Single-Family Residential - High Density	RMH	30	10
409060029	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	4
409060043	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409060044	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409080005	0.05	North Richmond	Single-Family Residential - High Density	RMH	30	2
409100004	0.58	North Richmond	Single-Family Residential - High Density	RMH	30	17
409110007	0.19	North Richmond	Single-Family Residential - High Density	RMH	30	6
409120005	0.18	North Richmond	Single-Family Residential - High Density	RMH	30	5
409120011	0.41	North Richmond	Multiple-Family Residential - Low Density	MU*	75	31
409120012	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409131003	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409131010	0.09	North Richmond	Single-Family Residential - High Density	RMH	30	3
409131014	0.04	North Richmond	Single-Family Residential - High Density	RMH	30	1
409131015	0.04	North Richmond	Single-Family Residential - High Density	RMH	30	1
409132002	0.12	North Richmond	Multiple-Family Residential - Low Density	RMH	30	4
409132007	0.51	North Richmond	Multiple-Family Residential - Low Density	MU*	75	38
409132016	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409141006	0.18	North Richmond	Single-Family Residential - High Density	RMH	30	6
409141012	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	3
409142005	0.49	North Richmond	Single-Family Residential - High Density	RMH	30	15
409142012	0.10	North Richmond	Single-Family Residential - High Density	RMH	30	3
409142014	0.40	North Richmond	Single-Family Residential - High Density	RMH	30	12
409142015	0.10	North Richmond	Single-Family Residential - High Density	RMH	30	3
409142016	0.10	North Richmond	Single-Family Residential - High Density	RMH	30	3
409151005	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409151011	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409152002	0.10	North Richmond	Multiple-Family Residential - Medium Density	MU*	75	7
409152007	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409161001	0.11	North Richmond	Single-Family Residential - High Density	MU*	75	9
409161003	0.17	North Richmond	Multiple-Family Residential - High Density	MU*	75	13
409161008	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409162008	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409162018	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409162024	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409162025	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409171012	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409171015	0.24	North Richmond	Single-Family Residential - High Density	RMH	30	7
409171023	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409171024	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409172017	0.13	North Richmond	Single-Family Residential - High Density	RMH	30	4
409172027	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409172028	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409181008	0.12	North Richmond	Single-Family Residential - High Density	RMH	30	4
409182002	0.26	North Richmond	Single-Family Residential - High Density	MU*	75	20
409182020	0.07	North Richmond	Single-Family Residential - High Density	RMH	30	2
409182023	0.07	North Richmond	Single-Family Residential - High Density	MU*	75	5
409182024	0.06	North Richmond	Single-Family Residential - High Density	MU*	75	4
409191001	0.35	North Richmond	Single-Family Residential - High Density	MU*	75	26
409191009	0.23	North Richmond	Single-Family Residential - High Density	MU*	75	17
409191013	0.17	North Richmond	Single-Family Residential - High Density	MU*	75	13
409192001	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409200009	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409200015	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409200016	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409200024	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409200025	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409210011	0.53	North Richmond	Multiple-Family Residential - Low Density	RMH	30	16
409210020	0.67	North Richmond	Multiple-Family Residential - Low Density	RMH	30	20
409210021	1.37	North Richmond	Multiple-Family Residential - Low Density	RMH	30	41
409210022	2.16	North Richmond	Multiple-Family Residential - Low Density	RMH	30	65
409210023	3.03	North Richmond	Multiple-Family Residential - Low Density	RMH	30	91
409210024	1.28	North Richmond	Multiple-Family Residential - Low Density	RMH	30	38
409210025	0.70	North Richmond	Multiple-Family Residential - Low Density	RMH	30	21
409210026	1.60	North Richmond	Multiple-Family Residential - Low Density	RMH	30	48
409220006	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409220007	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409220008	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409230015	0.07	North Richmond	Single-Family Residential - High Density	MU*	75	6
409240017	0.15	North Richmond	Single-Family Residential - High Density	MU*	75	11
409240019	0.08	North Richmond	Single-Family Residential - High Density	MU*	75	6
409240029	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409240030	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409251019	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409251020	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409251021	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409251022	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409252008	0.19	North Richmond	Single-Family Residential - High Density	RMH	30	6
409261009	0.06	North Richmond	Single-Family Residential - High Density	MU*	75	4
409261012	0.06	North Richmond	Single-Family Residential - High Density	MU*	75	4

Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
409261013	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409261015	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409261016	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409271005	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409271007	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409271011	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409271021	0.09	North Richmond	Single-Family Residential - High Density	RMH	30	3
409271025	0.07	North Richmond	Single-Family Residential - High Density	RMH	30	2
409272007	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409272009	0.23	North Richmond	Single-Family Residential - High Density	RMH	30	7
409272010	0.04	North Richmond	Single-Family Residential - High Density	RMH	30	1
409281001	0.40	North Richmond	Single-Family Residential - High Density	RMH	30	12
409281011	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409281014	0.06	North Richmond	Single-Family Residential - High Density	RMH	30	2
409282005	0.34	North Richmond	Single-Family Residential - High Density	RMH	30	10
409282006	0.12	North Richmond	Single-Family Residential - High Density	MU*	75	9
409282019	0.17	North Richmond	Single-Family Residential - High Density	MU*	75	13
409291008	0.11	North Richmond	Single-Family Residential - High Density	RMH	30	3
409291009	0.17	North Richmond	Single-Family Residential - High Density	RMH	30	5
409292001	0.61	North Richmond	Single-Family Residential - High Density	RMH	30	18
420090029	3.07	El Sobrante	Single-Family Residential - High Density	RM	17	52
420150030	0.45	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	13
420150033	0.93	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	28
420184015	2.78	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	83
420192018	0.39	El Sobrante	Single-Family Residential - High Density	RLM	7	3
420192037	0.76	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	23
420192042	0.19	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	6
420192043	0.47	El Sobrante	San Pablo Dam Road Mixed Use	MU*	30	14
425023011	2.94	El Sobrante	Single-Family Residential - High Density	RM	17	50
425040016	3.64	El Sobrante	Single-Family Residential - High Density	RM	17	62
425040024	2.33	El Sobrante	Single-Family Residential - High Density	RM	17	40
425061012	4.57	El Sobrante	Single-Family Residential - High Density	RM	17	78
425061032	0.20	El Sobrante	Single-Family Residential - High Density	RM	17	3
425061033	0.19	El Sobrante	Single-Family Residential - High Density	RM	17	3
425061034	0.17	El Sobrante	Single-Family Residential - High Density	RM	17	3
425072024	0.49	El Sobrante	Single-Family Residential - High Density	RM	17	8
425100054	0.30	El Sobrante	Appian Way General Mixed Use	MU*	30	9
425100056	0.56	El Sobrante	Appian Way General Mixed Use	MU*	30	17



Table 1 Residential Sites with Increasing Allowable Density

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
425142015	0.41	El Sobrante	Single-Family Residential - High Density	RM	17	7
425200006	3.12	El Sobrante	Multiple-Family Residential - Low Density	MU*	30	94
425210037	0.90	El Sobrante	Appian Way General Mixed Use	MU*	30	27
425210039	0.91	El Sobrante	Appian Way General Mixed Use	MU*	30	27
425210042	0.91	El Sobrante	Appian Way General Mixed Use	MU*	30	27
425210044	0.33	El Sobrante	Multiple-Family Residential - Low Density	MU*	30	10
425210045	1.30	El Sobrante	Multiple-Family Residential - Low Density	MU*	30	39
425230017	0.89	El Sobrante	Appian Way General Mixed Use	MU*	30	27
425230035	1.94	El Sobrante	Appian Way General Mixed Use	MU*	30	58
425230036	0.47	El Sobrante	Appian Way General Mixed Use	MU*	30	14
425230037	0.45	El Sobrante	Appian Way General Mixed Use	MU*	30	14
425230038	0.91	El Sobrante	Appian Way General Mixed Use	MU*	30	27
425240041	1.68	El Sobrante	Appian Way General Mixed Use	MU*	30	50
425252045	0.30	El Sobrante	Triangle Area Mixed Use	MU*	30	9
425252048	0.12	El Sobrante	Triangle Area Mixed Use	MU*	30	4
425252064	1.33	El Sobrante	Triangle Area Mixed Use	MU*	30	40
426261060	0.87	El Sobrante	Triangle Area Mixed Use	MU*	30	26
430012022	3.21	El Sobrante	Single-Family Residential - Medium Density	RLM	7	23
430152062	0.16	El Sobrante	Triangle Area Mixed Use	MU*	30	5
431010010	0.79	El Sobrante	Single-Family Residential - High Density	RMH	30	24
431010011	0.26	El Sobrante	Single-Family Residential - High Density	RMH	30	8
431020017	0.45	El Sobrante	Multiple-Family Residential - Low Density	RMH	30	13
433060014	1.55	El Sobrante	Multiple-Family Residential - Low Density	MU*	30	46
435070008	0.16	El Sobrante	Multiple-Family Residential - Low Density	RMH	30	5
435080005	0.99	El Sobrante	Multiple-Family Residential - Low Density	RMH	30	30
435171006	0.45	El Sobrante	Single-Family Residential - Medium Density	RLM	7	3
<b>TOTAL</b>	<b>473</b>					<b>15,572</b>

<sup>1</sup> Dwelling units per net acre unless otherwise indicated

<sup>2</sup> The maximum allowed density multiplied by the site's acreage

RMH = Residential Medium High Density

RM = Residential Medium Density

MU = Mixed Use

RH = Residential High Density

RL = Residential Low Density

RVH = Residential Very High Density

Note that bolded values are sites that have been added to the inventory since the release of the previous NOP

Table 2 Non-Residential Sites Proposed to Allow Residential Units

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
004182006	6.00	Discovery Bay	Commercial	MU*	75	450
008010039	4.60	Discovery Bay	Commercial	MU	75	345
011220039	6.42	Discovery Bay	Office	RMH	30	193
093170018	0.12	Bay Point	Commercial	MU*	125	16
093170021	0.13	Bay Point	Commercial	MU*	125	16
093170022	0.13	Bay Point	Commercial	MU*	125	16
093170076	0.06	Bay Point	Commercial	MU*	125	8
093170078	0.19	Bay Point	Commercial	MU*	125	23
095010010	6.97	Bay Point	Commercial	MU*	125	871
125130018	0.79	Pacheco	Public and Semi-Public	MU*	75	59
125130020	0.19	Pacheco	Commercial	MU*	75	14
125140005	0.47	Pacheco	Office	MU*	75	35
125155021	0.21	Pacheco	Office	MU*	75	15
159210004	0.26	Vine Hill	Commercial	MU	75	20
159210039	1.05	Vine Hill	Commercial	MU	75	79
159210042	4.33	Vine Hill	Commercial	MU	75	325
159210043	0.87	Vine Hill	Commercial	MU	75	65
159240005	10.00	Vine Hill	Light Industry	RVL	1	10
191093043	1.50	Alamo	Commercial	MU*	75	113
191093044	0.65	Alamo	Commercial	MU*	75	49
193070021	7.74	Alamo	Public and Semi-Public	PS	2.9	22
354072003	0.16	Crockett	Commercial	MU*	30	5
354094009	0.09	Crockett	Commercial	MU*	30	3
357101002	0.13	Rodeo	Commercial	MU*	75	10
357111010	0.16	Rodeo	Commercial	MU*	75	12
357120002	0.65	Rodeo	Commercial	MU*	75	49
357120003	0.79	Rodeo	Commercial	MU*	75	59
403020009	2.77	Bay View	Public and Semi-Public	RMH	30	83
403020013	0.59	Bay View	Public and Semi-Public	RMH	30	18
403211024	1.69	Montalvin Manor	Commercial	MU*	75	127
403211026	1.14	Montalvin Manor	Commercial	MU*	75	86
403211027	3.63	Montalvin Manor	Commercial	MU*	75	272
403482043	4.55	Bay View	Public and Semi-Public	RMH	30	137
420010001	0.39	El Sobrante	Commercial	MU*	30	12
420010002	1.19	El Sobrante	Commercial	MU*	30	36
420140003	2.12	El Sobrante	Commercial	MU*	30	64

Table 2 Non-Residential Sites Proposed to Allow Residential Units

APN	Acreage	Community Name	Existing General Plan Designation	Proposed General Plan Designation	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
425160015	0.40	El Sobrante	Open Space	MU*	30	12
425170030	0.77	El Sobrante	Commercial	MU*	30	23
425251006	0.09	El Sobrante	Commercial	MU*	30	3
426070020	2.98	Tara Hills	Public and Semi-Public	RLM	7	21
431070027	0.19	El Sobrante	Open Space	RLM	7	1
520032002	1.09	East Richmond	Public and Semi-Public	MU*	30	33
520042013	0.96	East Richmond	Public and Semi-Public	MU*	30	29
520050001	3.42	East Richmond	Public and Semi-Public	MU*	30	103
520062001	1.59	East Richmond	Public and Semi-Public	MU*	30	48
520070004	2.10	East Richmond	Public and Semi-Public	MU*	30	63
<b>TOTAL</b>	<b>86.34</b>					<b>4,053</b>

<sup>1</sup> Dwelling units per net acre unless otherwise indicated.

<sup>2</sup> The maximum allowed density multiplied by the site's acreage

RMH = Residential Medium High Density

RM = Residential Medium Density

MU = Mixed Use

RH = Residential High Density

RL = Residential Low Density

RVL = Residential Very Low Density

PS = Public/Semi Public

RLM = Residential Low Medium Density

Note that bolded values are sites that have been added to the inventory since the release of the previous NOP

Table 3 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
093081027*	0.52	Bay Point	Willow Pass Road Commercial Mixed Use	29.9	15
093081028*	0.52	Bay Point	Willow Pass Road Commercial Mixed Use	29.9	15
093081029*	0.77	Bay Point	Willow Pass Road Commercial Mixed Use	29.9	23
093160005	0.24	Bay Point	Multiple-Family Residential - High Density	29.9	7
093160006	0.27	Bay Point	Multiple-Family Residential - High Density	29.9	8
094012021*	0.13	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012022*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012023*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012024*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012025*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012026*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5
094012027*	0.16	Bay Point	Bay Point Residential Mixed Use	29.9	5

Table 3 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
094012030*	0.10	Bay Point	Bay Point Residential Mixed Use	29.9	3
094012031*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012032*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012033*	0.13	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012038*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012039*	0.15	Bay Point	Bay Point Residential Mixed Use	29.9	4
094012040*	0.13	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013001*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013002*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013003*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013004*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013005*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013006*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013012*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	4
094013013*	0.18	Bay Point	Bay Point Residential Mixed Use	29.9	5
094013014*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013015*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094013016*	0.10	Bay Point	Bay Point Residential Mixed Use	29.9	3
094014001*	0.20	Bay Point	Bay Point Residential Mixed Use	29.9	6
094014010*	0.19	Bay Point	Bay Point Residential Mixed Use	29.9	6
094014011*	0.20	Bay Point	Bay Point Residential Mixed Use	29.9	6
094014012*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094014013*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094014014*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094015006*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094015010*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015011*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015012*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015013*	0.14	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015014*	0.15	Bay Point	Bay Point Residential Mixed Use	29.9	4
094015027*	0.30	Bay Point	Bay Point Residential Mixed Use	29.9	9
094015028*	0.21	Bay Point	Bay Point Residential Mixed Use	29.9	6
094016002*	0.22	Bay Point	Bay Point Residential Mixed Use	29.9	7
094026001*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	3
094026002*	0.12	Bay Point	Bay Point Residential Mixed Use	29.9	3
094026007*	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
094026008	0.11	Bay Point	Bay Point Residential Mixed Use	29.9	3
095120041	0.13	Bay Point	Single-Family Residential - High Density	7.2	1
098052006	0.13	Bay Point	Single-Family Residential - High Density	7.2	1
100303008	0.14	Clyde	Single-Family Residential - High Density	7.2	1
154210027	0.58	Pacheco	Single-Family Residential - Low Density	2.9	2
159180028	0.23	Vine Hill	Single-Family Residential - High Density	7.2	2
159190043	2.39	Vine Hill	Single-Family Residential - High Density	7.2	17
159230007	9.75	Vine Hill	Single-Family Residential - High Density	7.2	70
161262010	0.59	Vine Hill	Multiple-Family Residential - Low Density	6	4

Table 3 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
161262013	0.69	Vine Hill	Multiple-Family Residential - Low Density	6	4
169231011	0.29	Reliez Valley	Single-Family Residential - Medium Density	12	3
184342008	0.21	Saranap	Single-Family Residential - High Density	7.2	2
197050025	9.89	Alamo	Single-Family Residential - Very Low Density	1	10
197050026	2.50	Alamo	Single-Family Residential - Very Low Density	1	3
354030013	2.39	Crockett	Single-Family Residential - High Density	7.2	17
354041016	0.16	Crockett	Single-Family Residential - High Density	7.2	1
354042029	0.11	Crockett	Single-Family Residential - High Density	7.2	1
354054006	0.22	Crockett	Single-Family Residential - High Density	7.2	2
354064025	0.24	Crockett	Multiple-Family Residential - Low Density	6	1
354072020	0.08	Crockett	Single-Family Residential - High Density	7.2	1
354072027	0.12	Crockett	Multiple-Family Residential - Low Density	6	1
354094014	0.04	Crockett	Multiple-Family Residential - Low Density	6	0
354095024	0.15	Crockett	Single-Family Residential - High Density	7.2	1
354155004	0.11	Crockett	Multiple-Family Residential - Low Density	6	1
354155007	0.12	Crockett	Single-Family Residential - High Density	7.2	1
354231028	0.18	Crockett	Single-Family Residential - High Density	7.2	1
357061010	0.14	Rodeo	Single-Family Residential - High Density	7.2	1
357224013	0.13	Rodeo	Single-Family Residential - High Density	7.2	1
357260071	0.24	Rodeo	Single-Family Residential - High Density	7.2	2
357281005	0.31	Rodeo	Single-Family Residential - High Density	7.2	2
380070035	0.18	Vine Hill	Single-Family Residential - High Density	7.2	1
380070036	0.15	Vine Hill	Single-Family Residential - High Density	7.2	1
380070037	0.14	Vine Hill	Single-Family Residential - High Density	7.2	1
380070038	0.15	Vine Hill	Single-Family Residential - High Density	7.2	1
380070039	0.14	Vine Hill	Single-Family Residential - High Density	7.2	1
380070040	0.14	Vine Hill	Single-Family Residential - High Density	7.2	1
380070041	0.22	Vine Hill	Single-Family Residential - High Density	7.2	2
380070042	0.16	Vine Hill	Single-Family Residential - High Density	7.2	1
380070043	0.23	Vine Hill	Single-Family Residential - High Density	7.2	2
380070044	0.34	Vine Hill	Single-Family Residential - High Density	7.2	2
380080030	0.18	Vine Hill	Single-Family Residential - High Density	7.2	1
380080031	0.20	Vine Hill	Single-Family Residential - High Density	7.2	1
380080058	0.42	Vine Hill	Single-Family Residential - High Density	7.2	3
380120060	0.30	Vine Hill	Single-Family Residential - High Density	7.2	2
380120061	0.30	Vine Hill	Single-Family Residential - High Density	7.2	2
380120087	0.17	Vine Hill	Single-Family Residential - High Density	7.2	1
380120088	0.28	Vine Hill	Single-Family Residential - High Density	7.2	2
403152020	0.51	Tara Hills	Single-Family Residential - High Density	7.2	4
403461003	0.16	Bay View	Single-Family Residential - High Density	7.2	1
409100009	0.04	North Richmond	Multiple-Family Residential - Low Density	6	0
409262012	0.06	North Richmond	Multiple-Family Residential - High Density	29.9	2
409262013	0.06	North Richmond	Multiple-Family Residential - High Density	29.9	2
409262015	0.06	North Richmond	Multiple-Family Residential - High Density	29.9	2
420071012	0.20	El Sobrante	Single-Family Residential - High Density	7.2	1

Table 3 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
420071014	0.28	EI Sobrante	Single-Family Residential - High Density	7.2	2
420071020	0.23	EI Sobrante	Single-Family Residential - High Density	7.2	2
420071021	0.30	EI Sobrante	Single-Family Residential - High Density	7.2	2
420172019	0.20	EI Sobrante	Single-Family Residential - High Density	7.2	1
420172021	0.25	EI Sobrante	Single-Family Residential - High Density	7.2	2
425110025	0.18	EI Sobrante	Single-Family Residential - High Density	7.2	1
425130002	0.19	EI Sobrante	Single-Family Residential - High Density	7.2	1
425130010	6.06	EI Sobrante	Single-Family Residential - High Density	7.2	44
425141005	0.44	EI Sobrante	Single-Family Residential - High Density	7.2	3
425150046	0.20	EI Sobrante	Single-Family Residential - High Density	7.2	1
425180018	0.19	EI Sobrante	Single-Family Residential - High Density	7.2	1
425180021	0.87	EI Sobrante	Single-Family Residential - High Density	7.2	6
425180041	0.92	EI Sobrante	Single-Family Residential - High Density	7.2	7
425190019	0.16	EI Sobrante	Single-Family Residential - High Density	7.2	1
425190028	0.22	EI Sobrante	Single-Family Residential - High Density	7.2	2
425210003	0.60	EI Sobrante	Single-Family Residential - High Density	7.2	4
425220014	0.42	EI Sobrante	Single-Family Residential - High Density	7.2	3
425220029	0.99	EI Sobrante	Single-Family Residential - High Density	7.2	7
426030070	0.97	EI Sobrante	Single-Family Residential - High Density	7.2	7
426030071	5.46	EI Sobrante	Single-Family Residential - High Density	7.2	39
426163052	0.35	EI Sobrante	Single-Family Residential - High Density	7.2	3
426182001	3.90	EI Sobrante	Single-Family Residential - High Density	7.2	28
426182017	1.23	EI Sobrante	Single-Family Residential - High Density	7.2	9
426192005	1.55	EI Sobrante	Single-Family Residential - High Density	7.2	11
426192007	0.26	EI Sobrante	Single-Family Residential - High Density	7.2	2
426192008	1.81	EI Sobrante	Single-Family Residential - High Density	7.2	13
426200008	1.11	EI Sobrante	Single-Family Residential - High Density	7.2	8
426200010	2.43	EI Sobrante	Single-Family Residential - High Density	7.2	18
426210007	1.31	EI Sobrante	Single-Family Residential - High Density	7.2	9
426210022	1.83	EI Sobrante	Single-Family Residential - High Density	7.2	13
426221049	0.29	EI Sobrante	Single-Family Residential - High Density	7.2	2
426243005	1.83	EI Sobrante	Single-Family Residential - High Density	7.2	13
426243019	0.57	EI Sobrante	Single-Family Residential - High Density	7.2	4
426243039	0.49	EI Sobrante	Single-Family Residential - High Density	7.2	4
426243045	0.55	EI Sobrante	Single-Family Residential - High Density	7.2	4
426270013	3.06	EI Sobrante	Single-Family Residential - High Density	7.2	22
430132002	0.19	EI Sobrante	Single-Family Residential - High Density	7.2	1
430161004	0.44	EI Sobrante	Single-Family Residential - High Density	7.2	3
430161020	0.37	EI Sobrante	Single-Family Residential - High Density	7.2	3
430184021	0.24	EI Sobrante	Single-Family Residential - Low Density	2.9	1
431070026	0.27	EI Sobrante	Single-Family Residential - High Density	7.2	2
431070028	0.20	EI Sobrante	Single-Family Residential - High Density	7.2	1
431070035	0.20	EI Sobrante	Single-Family Residential - High Density	7.2	1
433190041	0.22	EI Sobrante	Single-Family Residential - High Density	7.2	2
433190043	0.23	EI Sobrante	Single-Family Residential - High Density	7.2	2

Table 3 Suitably Designated/Zoned Sites

APN	Acreage	Community Name	Existing General Plan Designation	Maximum Allowable Density (units/net acre) <sup>1</sup>	Proposed Maximum Allowable Units <sup>2</sup>
433190060	0.93	El Sobrante	Single-Family Residential - High Density	7.2	7
433241057	0.45	El Sobrante	Single-Family Residential - High Density	7.2	3
433241065	0.23	El Sobrante	Single-Family Residential - High Density	7.2	2
433460007	0.35	El Sobrante	Single-Family Residential - High Density	7.2	3
435120070	0.16	El Sobrante	Single-Family Residential - High Density	7.2	1
435130015	0.23	El Sobrante	Single-Family Residential - High Density	7.2	2
TOTAL	92.42				791

<sup>1</sup> Dwelling units per net acre unless otherwise indicated.

<sup>2</sup> The maximum allowed density multiplied by the site's acreage

Note that sites with asterisks (\*) are sites that include pending development projects which may have undergone land use changes that are being evaluated outside of the proposed project.

Note that bolded values are sites that have been added to the inventory since the release of the previous NOP.

Table 4 Sites that have been Removed from the Inventory

APN	Acreage	Community Name	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup> in Previous NOP
425110027	1.17	El Sobrante	30
426261050	0.20	El Sobrante	30
430152092	0.14	El Sobrante	30
430152093	0.23	El Sobrante	30
430152094	0.27	El Sobrante	30
430152095	0.48	El Sobrante	30
197010029	0.23	Alamo	30
093100059	0.98	Bay Point	30
093100060	2.87	Bay Point	30
096020081	0.62	Bay Point	30
098210001	2.35	Bay Point	30
375311001	0.96	Mt View	30
375311003	0.49	Mt View	30
409172019	0.23	North Richmond	30
011220010	22.96	Discovery Bay	7
011220017	40.45	Discovery Bay	7
011220018	6.73	Discovery Bay	7
011230006	44.70	Discovery Bay	7
011230007	42.22	Discovery Bay	7
420172017	0.24	El Sobrante	7
420172020	0.20	El Sobrante	7
420172039	0.13	El Sobrante	7
425180010	0.57	El Sobrante	7
161280005	1.98	Vine Hill	7
096042007	0.63	Bay Point	70
096042025	0.63	Bay Point	70
093090029	0.51	Bay Point	75

Table 4 Sites that have been Removed from the Inventory

APN	Acreage	Community Name	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup> in Previous NOP
095021009	0.62	Bay Point	75
125077024	0.08	Pacheco	75
357042008	0.07	Rodeo	75
357052015	0.05	Rodeo	75
357140039	0.65	Rodeo	75
357140041	0.65	Rodeo	75
357140056	0.14	Rodeo	75
357140057	0.07	Rodeo	75
357140058	0.11	Rodeo	75
357140059	0.08	Rodeo	75
357140060	0.14	Rodeo	75
357140062	0.11	Rodeo	75
357140063	0.12	Rodeo	75
357140064	0.19	Rodeo	75
357151002	0.56	Rodeo	75
357151035	0.12	Rodeo	75
357151036	1.07	Rodeo	75
184010035	0.60	Saranap	75
184010046	0.69	Saranap	75
184450025	0.62	Saranap	75
185370010	0.76	Saranap	75
185370012	0.19	Saranap	75
185370018	0.27	Saranap	75
185370033	0.31	Saranap	75
380193024	1.79	Vine Hill	75
380194004	0.10	Vine Hill	75
380194009	0.76	Vine Hill	75
031010012	3.85	Bethel Island	17
031160001	0.14	Bethel Island	17
031160021	0.17	Bethel Island	17
031160022	0.17	Bethel Island	17
031160023	0.17	Bethel Island	17
031170008	0.12	Bethel Island	17
031170009	0.14	Bethel Island	17
031170011	0.18	Bethel Island	17
031170012	0.16	Bethel Island	17
031170013	0.18	Bethel Island	17
031180017	0.18	Bethel Island	17
031180018	0.16	Bethel Island	17
031180019	0.17	Bethel Island	17
031180039	0.14	Bethel Island	17
031180042	0.18	Bethel Island	17
031180043	0.16	Bethel Island	17
031180044	0.19	Bethel Island	17



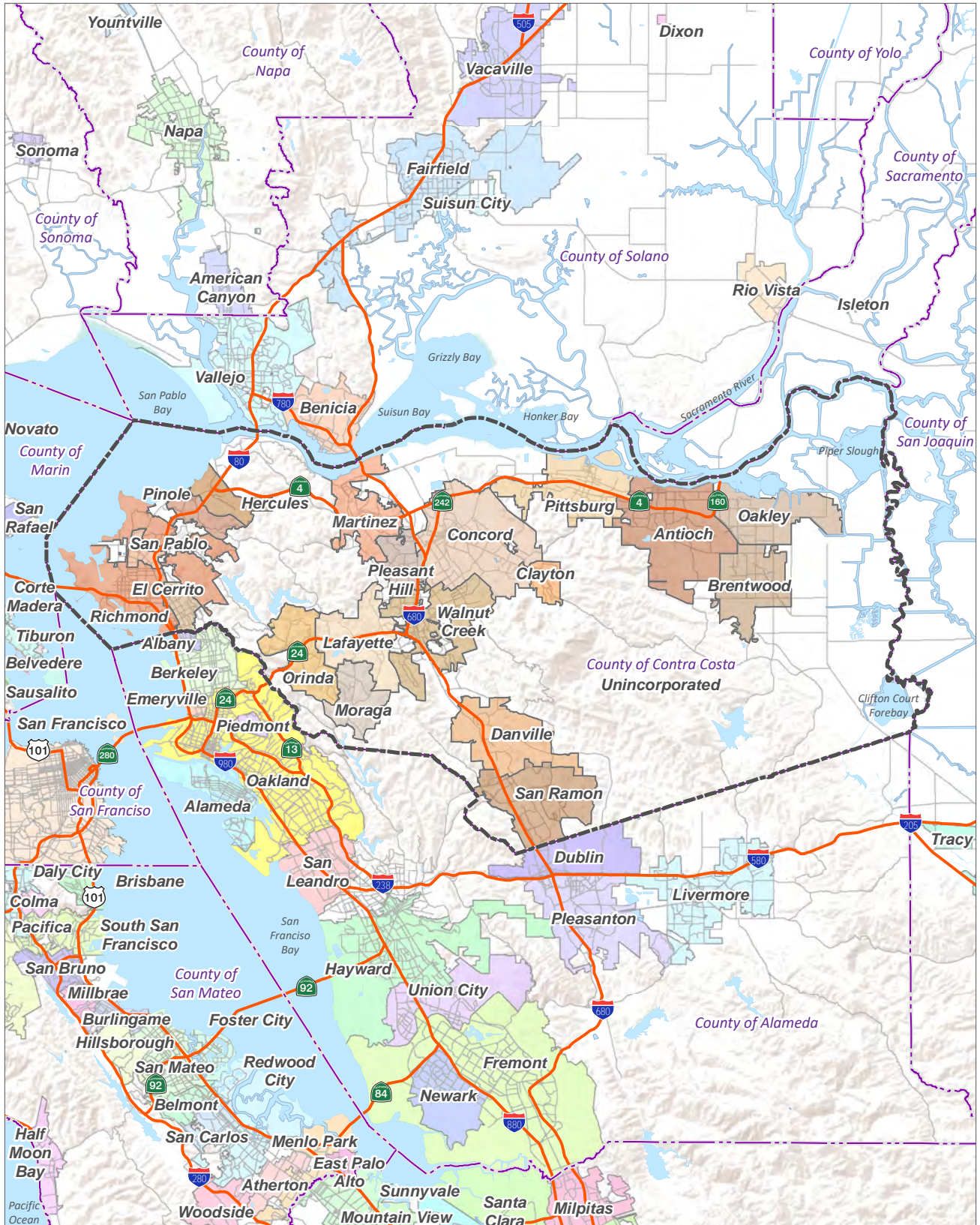
Table 4 Sites that have been Removed from the Inventory

APN	Acreage	Community Name	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup> in Previous NOP
031200010	0.15	Bethel Island	17
031200012	0.18	Bethel Island	17
031200013	0.16	Bethel Island	17
031200014	0.18	Bethel Island	17
031200036	0.18	Bethel Island	17
031200037	0.16	Bethel Island	17
031200038	0.18	Bethel Island	17
031210009	0.18	Bethel Island	17
031210010	0.15	Bethel Island	17
031210011	0.18	Bethel Island	17
031210014	0.14	Bethel Island	17
031210020	0.15	Bethel Island	17
031210041	0.14	Bethel Island	17
031220016	0.17	Bethel Island	17
031220017	0.16	Bethel Island	17
031220018	0.18	Bethel Island	17
031220034	0.14	Bethel Island	17
031230015	0.14	Bethel Island	17
031230016	0.18	Bethel Island	17
031230017	0.16	Bethel Island	17
031230018	0.17	Bethel Island	17
031230021	0.14	Bethel Island	17
031230047	0.15	Bethel Island	17
031240011	0.16	Bethel Island	17
031240030	0.18	Bethel Island	17
031240031	0.15	Bethel Island	17
031240032	0.18	Bethel Island	17
031240046	0.17	Bethel Island	17
031240056	0.13	Bethel Island	17
031240061	0.17	Bethel Island	17
031240062	0.16	Bethel Island	17
031240063	0.23	Bethel Island	17
031240070	0.15	Bethel Island	17
031240071	0.15	Bethel Island	17
031250007	0.14	Bethel Island	17
403202011	2.76	Montalvin Manor	17
380231020	0.31	Vine Hill	17
148170051	2.36	Contra Costa Centre	125
357120074	0.99	Rodeo	125
004500005	545.22	Discovery Bay	0
196370032	3.79	Alamo	7
188330038	5.55	Alamo	17
192142031	6.90	Alamo	17
TOTAL	764.08		

Table 4 Sites that have been Removed from the Inventory

APN	Acreage	Community Name	Proposed Maximum Allowed Density (units/net acre) <sup>1</sup> in Previous NOP
<i><sup>1</sup> Dwelling units per net acre unless otherwise indicated.</i>			

# HOUSING ELEMENT UPDATE



Source: ESRI, 2022



--- Contra Costa County Boundary

--- County Boundary

Figure 1  
Regional Location

# HOUSING ELEMENT UPDATE

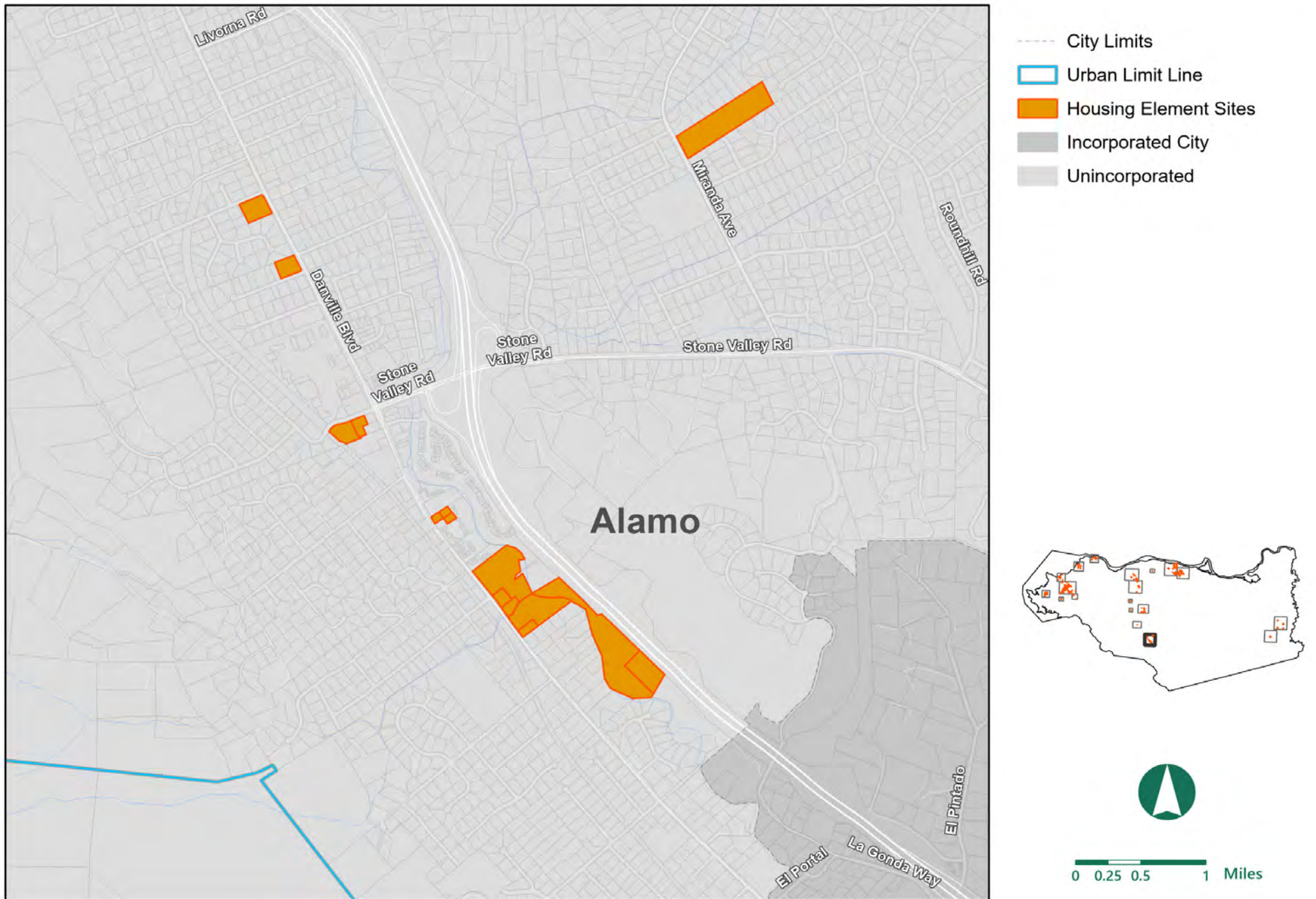


Figure 2  
Housing Sites Inventory- Alamo

# HOUSING ELEMENT UPDATE

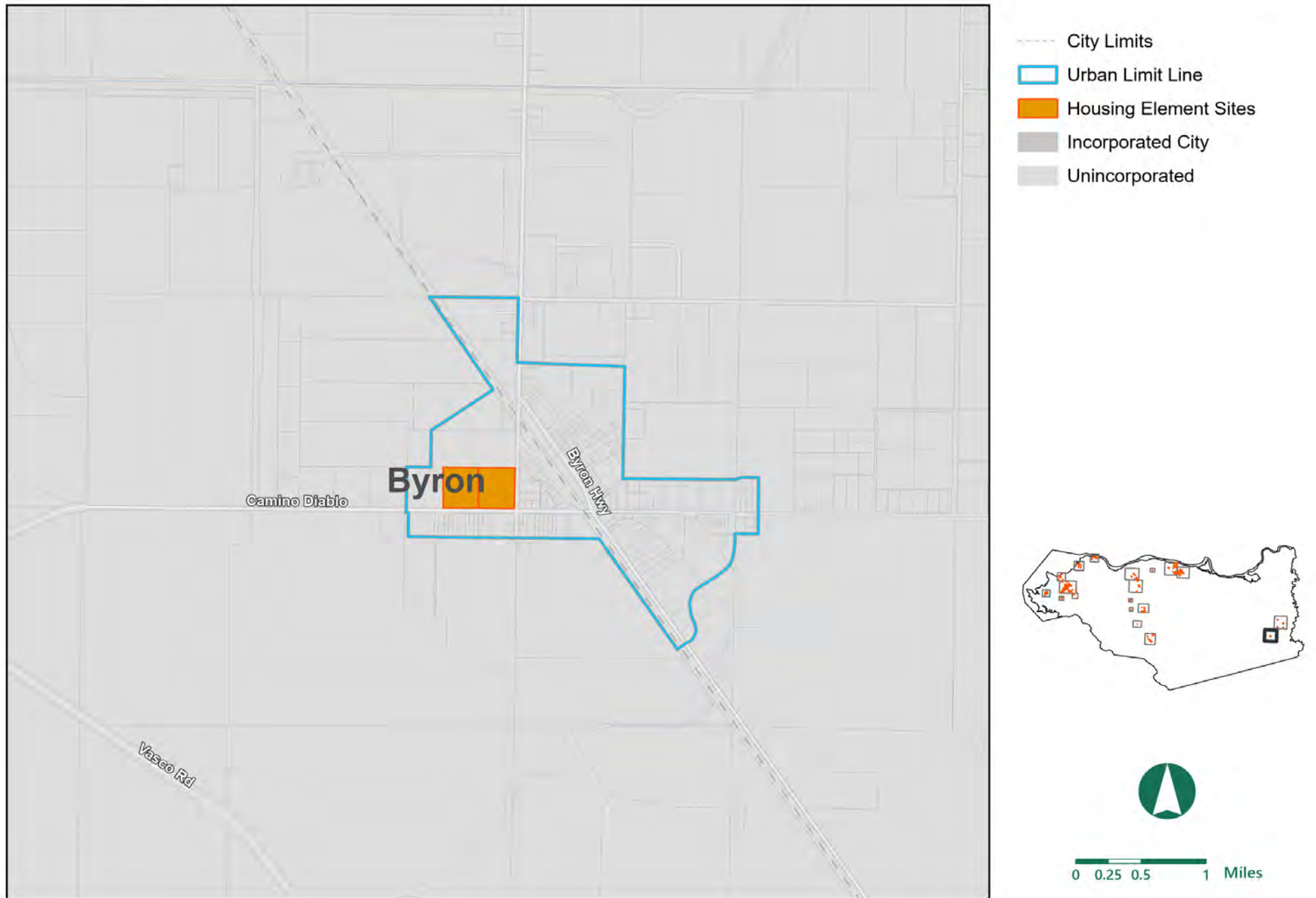


Figure 3  
Housing Sites Inventory- Byron

## HOUSING ELEMENT UPDATE

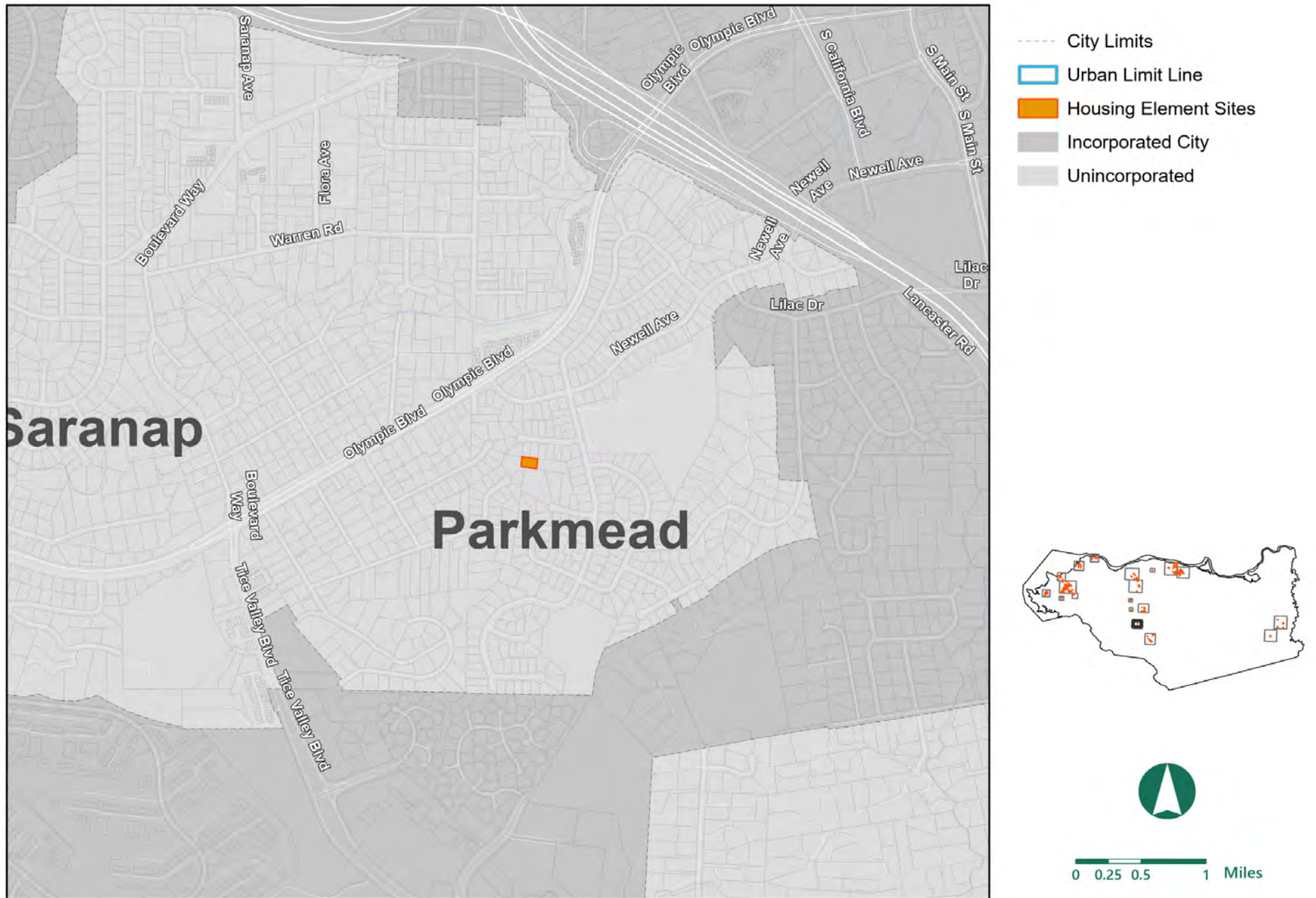


Figure 4  
Housing Sites Inventory- Saranap/Parkmead

# HOUSING ELEMENT UPDATE

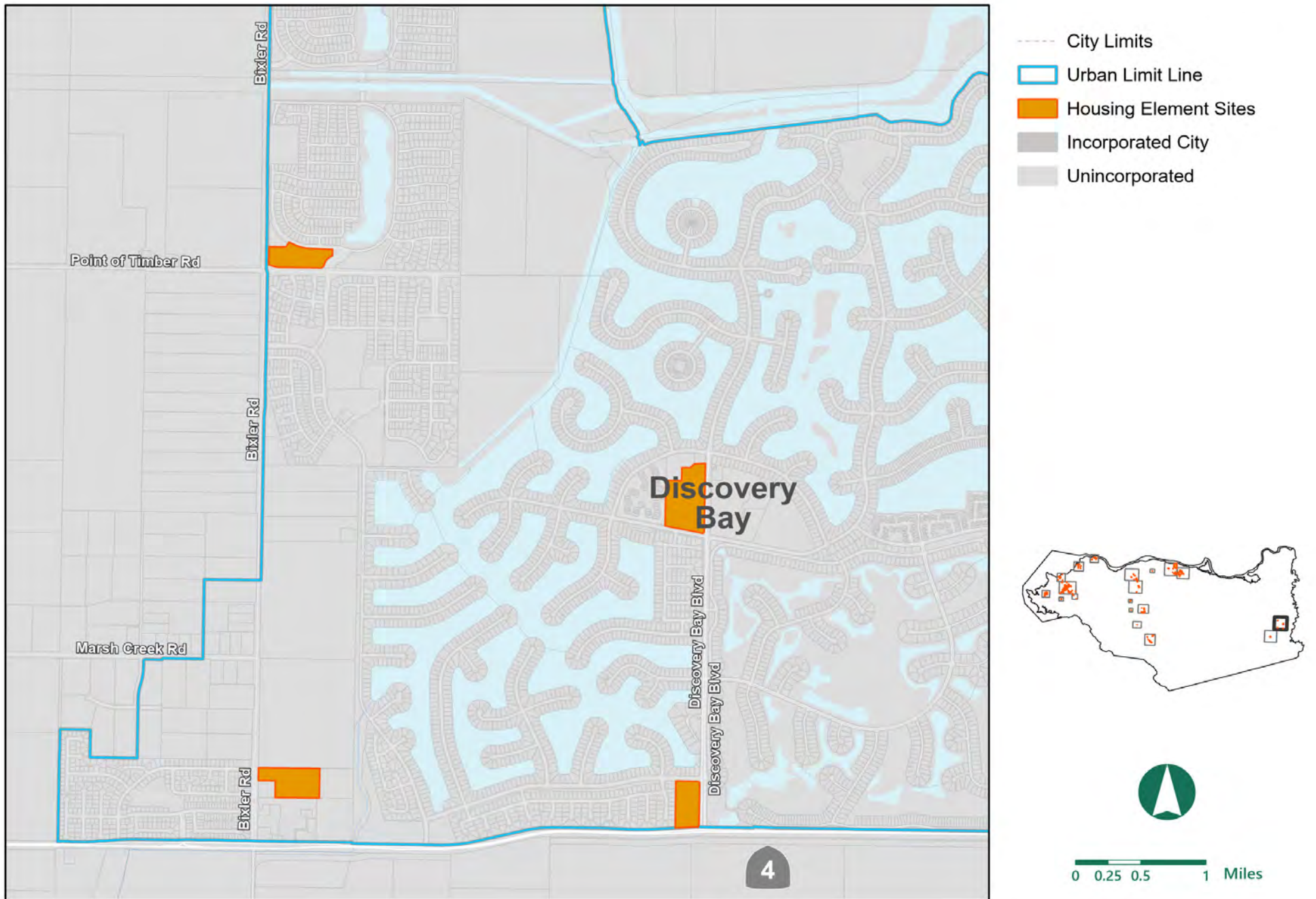


Figure 5  
Housing Sites Inventory- Discovery Bay

# HOUSING ELEMENT UPDATE



Figure 6  
Housing Sites Inventory- Reliez Valley



## HOUSING ELEMENT UPDATE

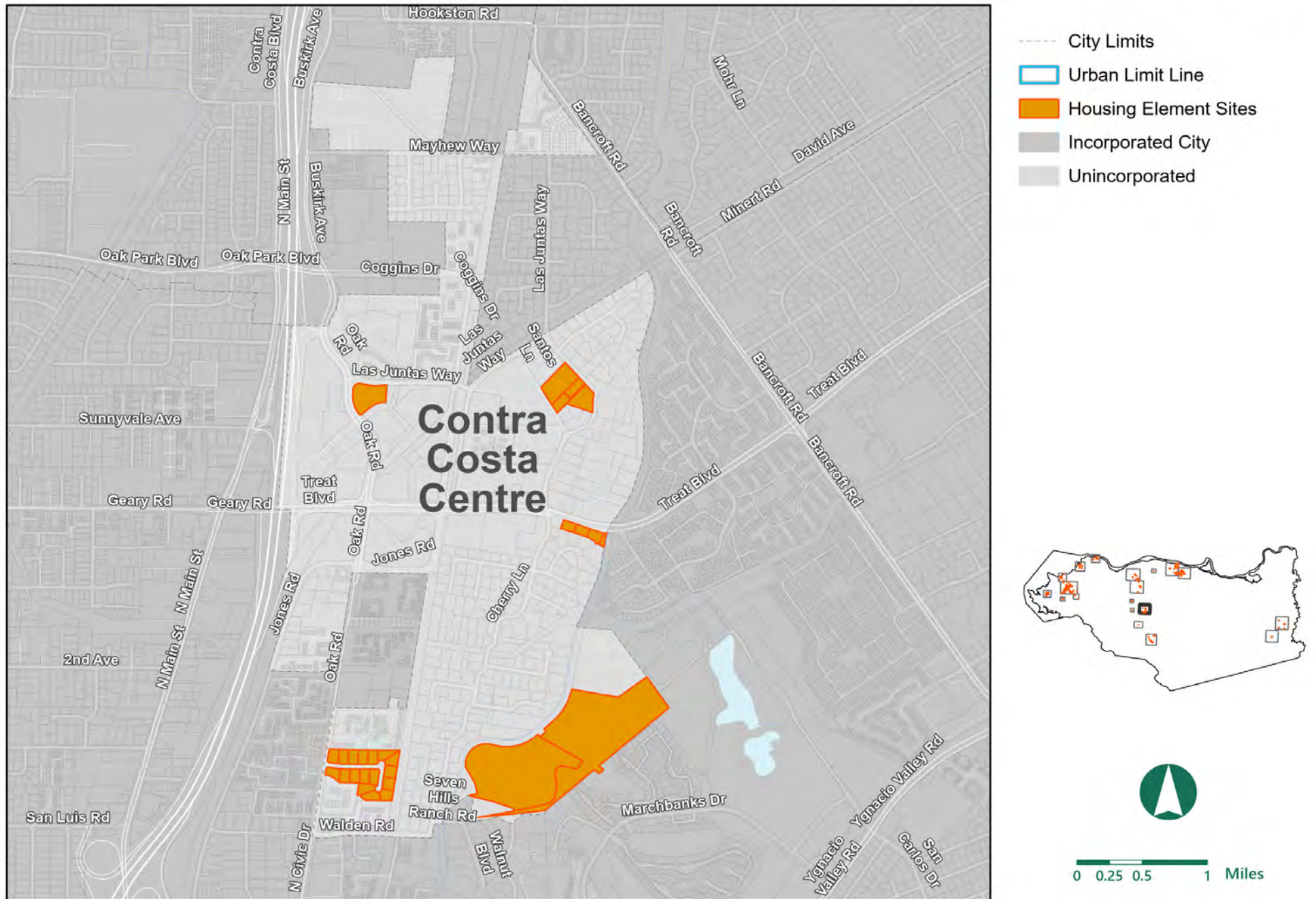


Figure 7  
Housing Sites Inventory- Contra Costa Centre

# HOUSING ELEMENT UPDATE

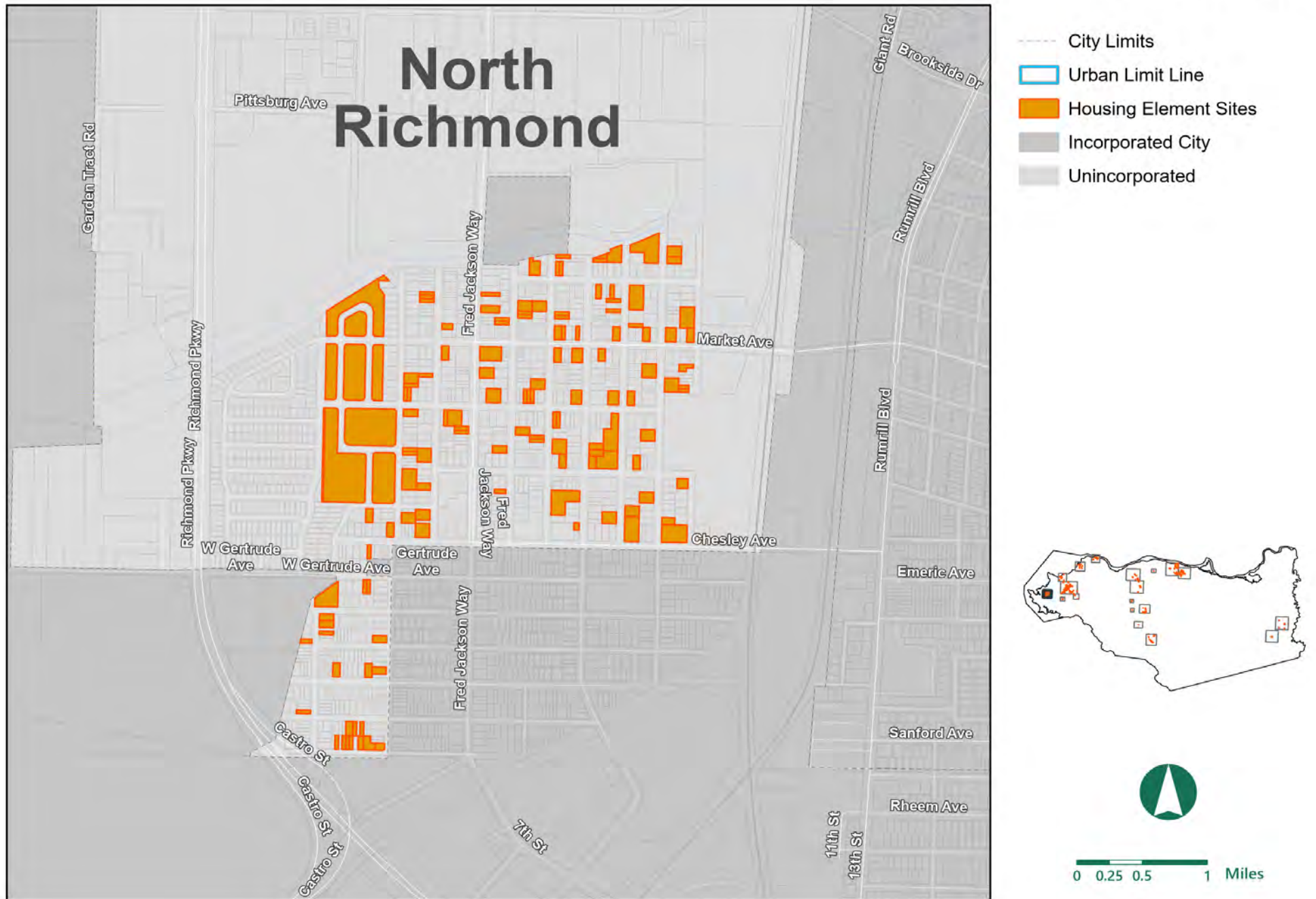


Figure 8  
Housing Sites Inventory- North Richmond

HOUSING ELEMENT UPDATE

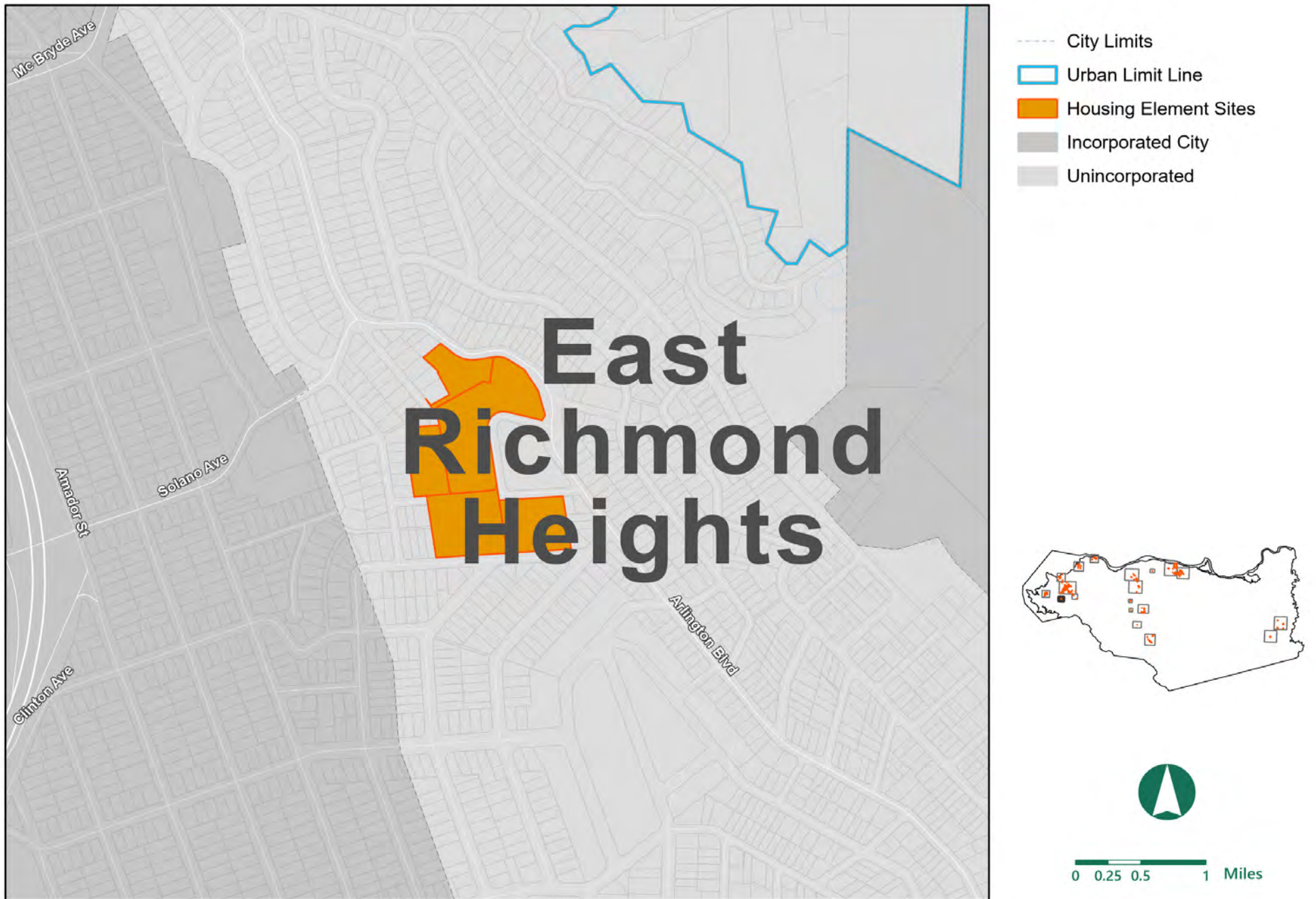


Figure 9  
Housing Sites Inventory- East Richmond Heights

## HOUSING ELEMENT UPDATE

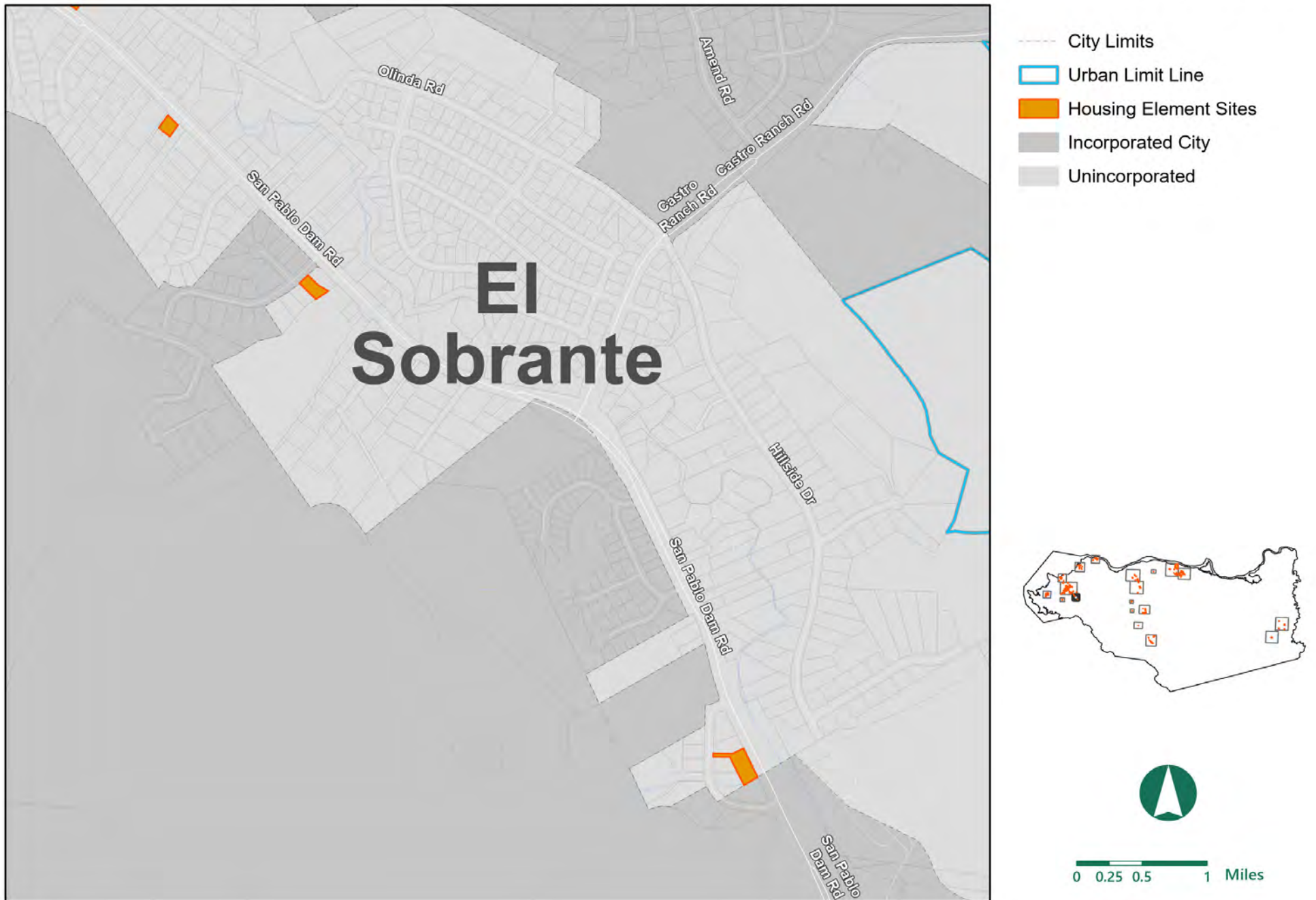


Figure 10  
Housing Sites Inventory- El Sobrante

## HOUSING ELEMENT UPDATE

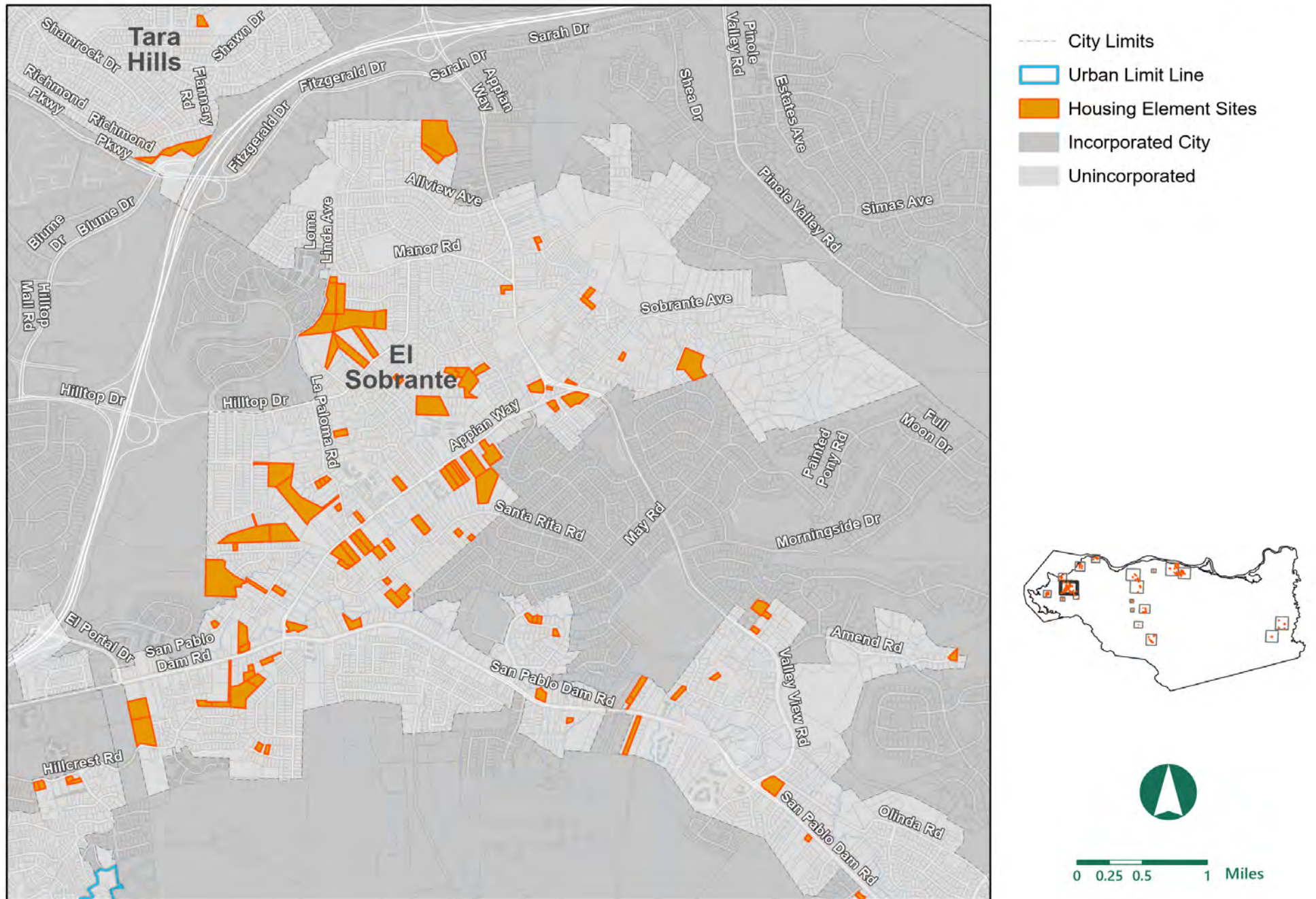


Figure 11  
Housing Sites Inventory- El Sobrante/Tara Hills (South)

# HOUSING ELEMENT UPDATE

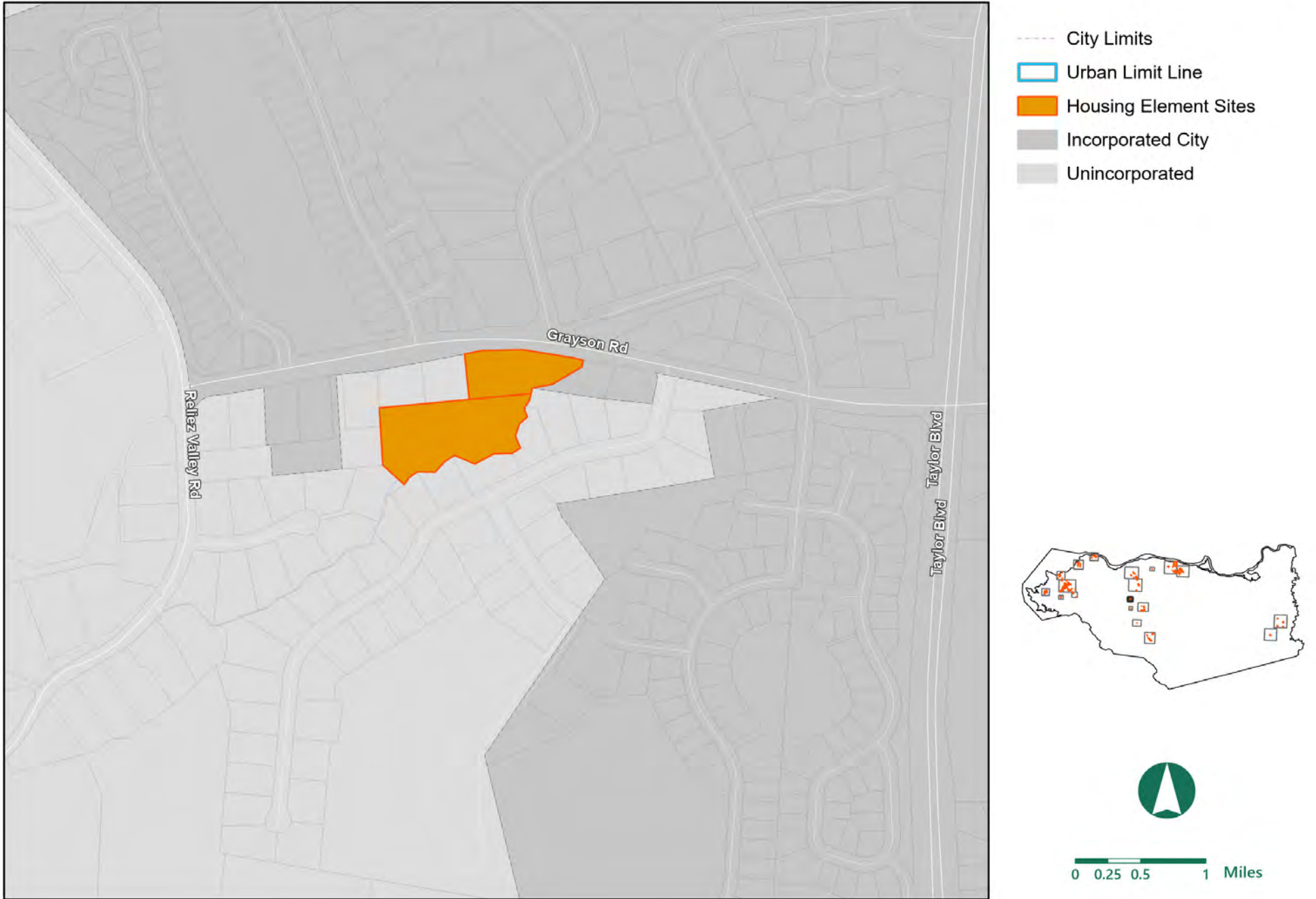


Figure 12  
Housing Sites Inventory- Pleasant Hill (Unincorporated)

# HOUSING ELEMENT UPDATE

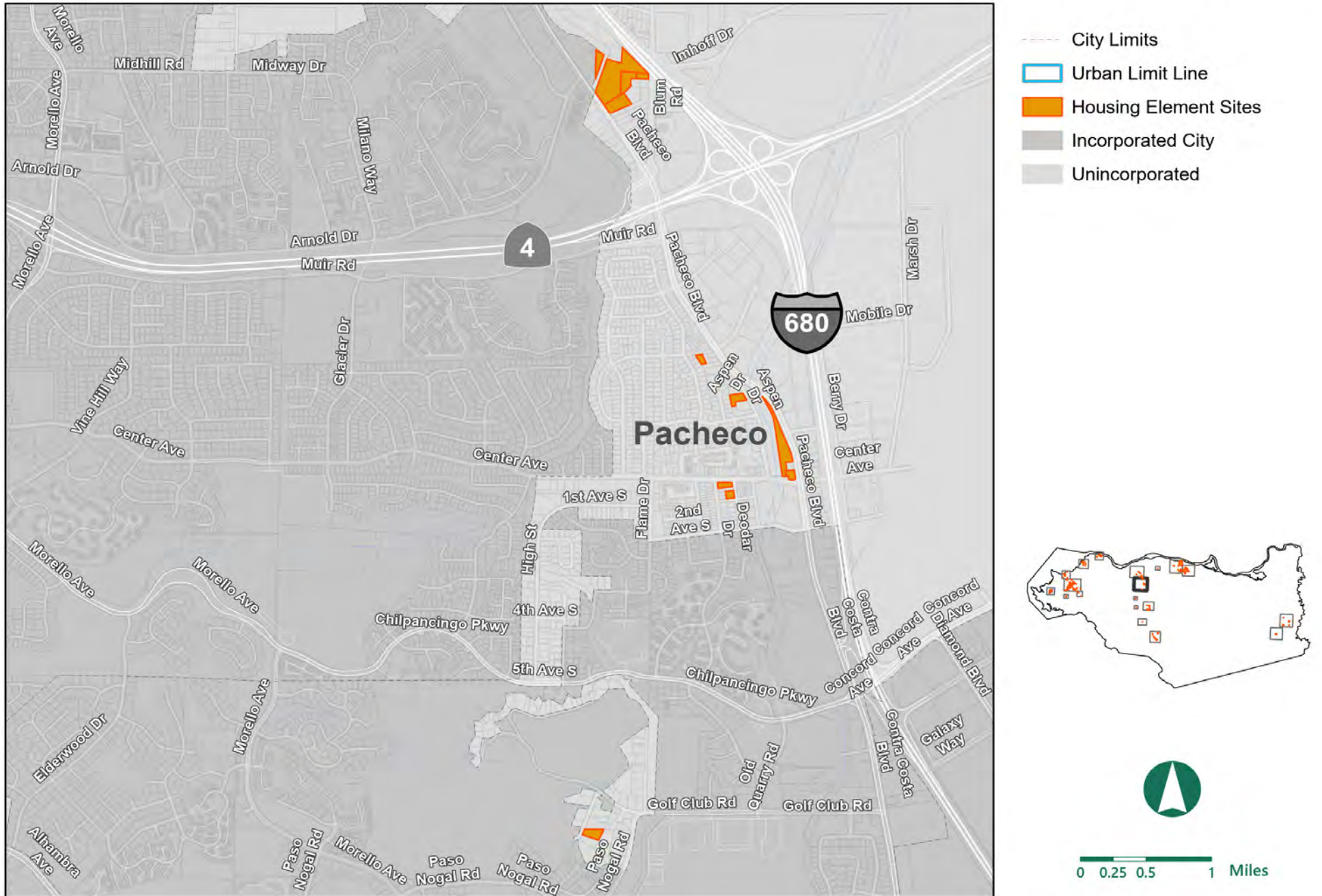


Figure 13  
Housing Sites Inventory- Pacheco

HOUSING ELEMENT UPDATE

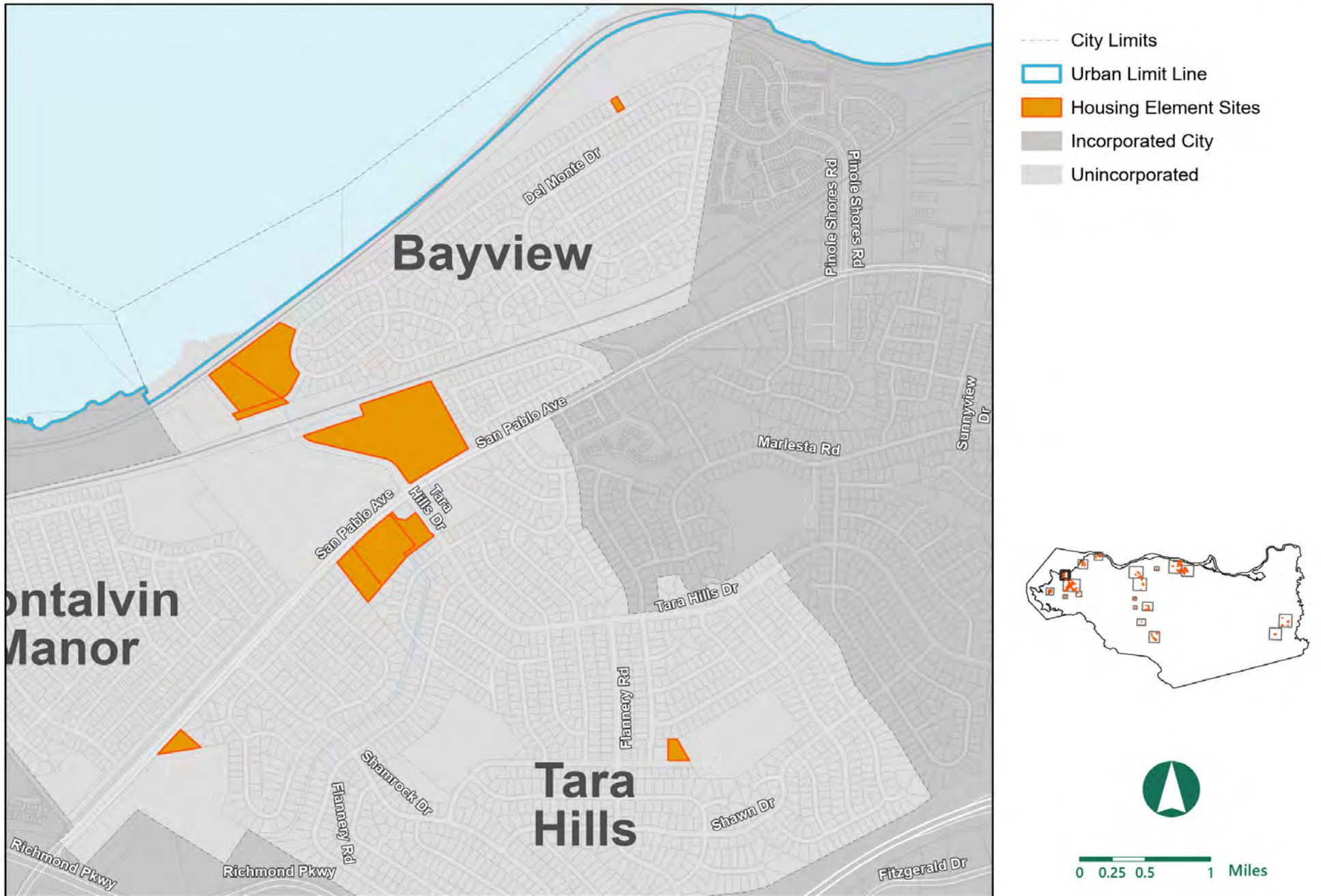


Figure 14  
Housing Sites Inventory- Bayview/Tara Hills (North)



# HOUSING ELEMENT UPDATE

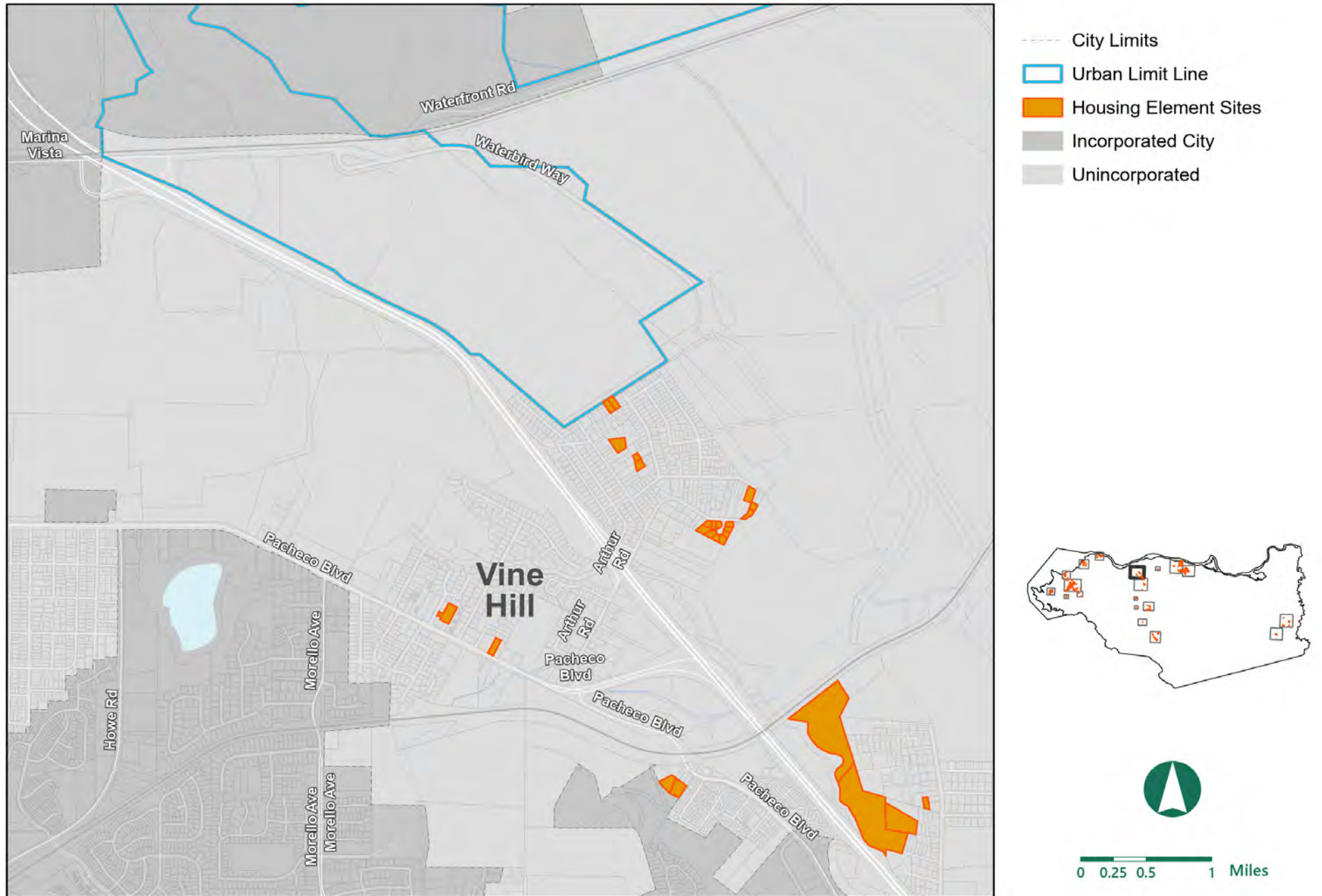


Figure 15  
Housing Sites Inventory- Vine Hill

## HOUSING ELEMENT UPDATE

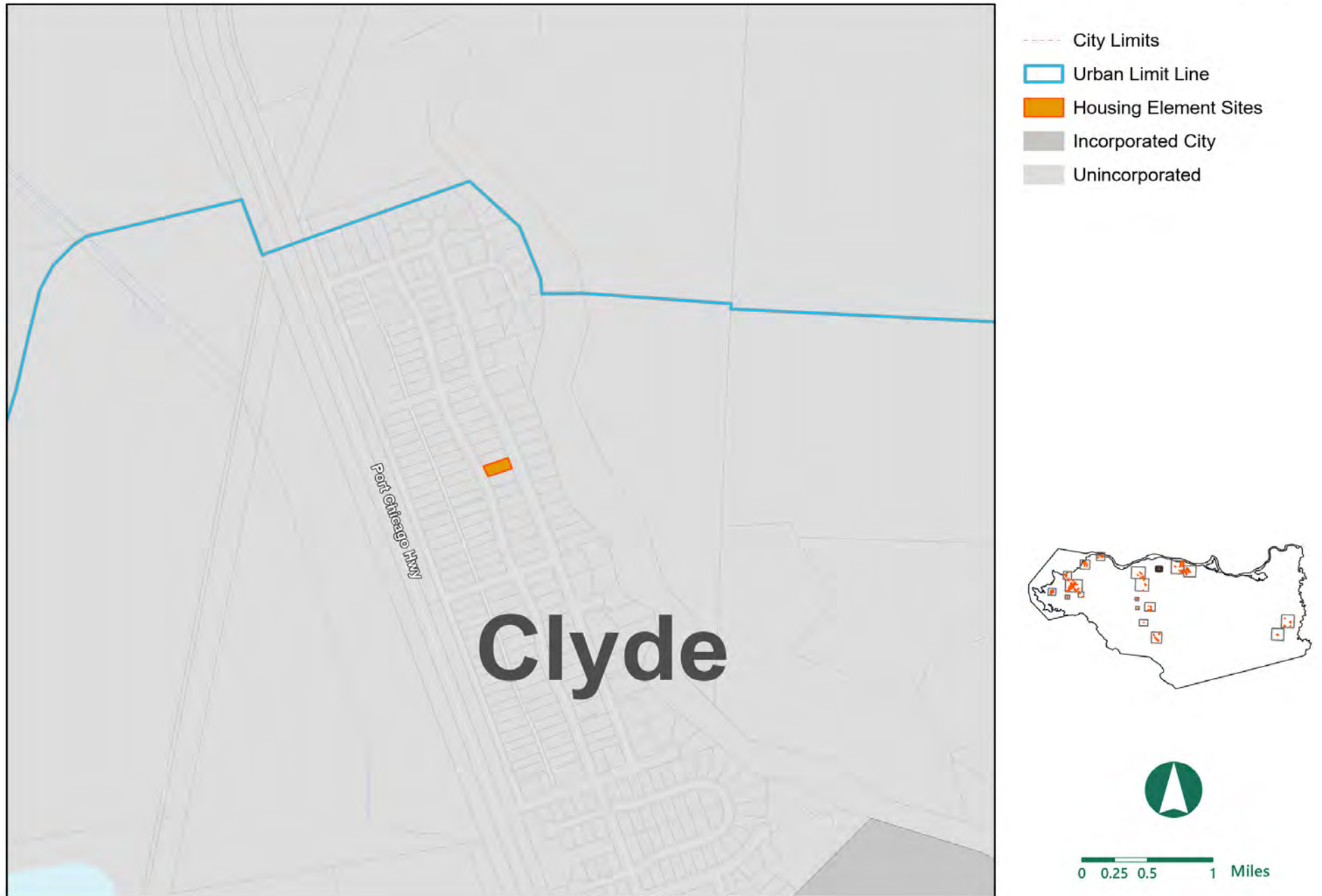


Figure 16  
Housing Sites Inventory- Clyde

# HOUSING ELEMENT UPDATE

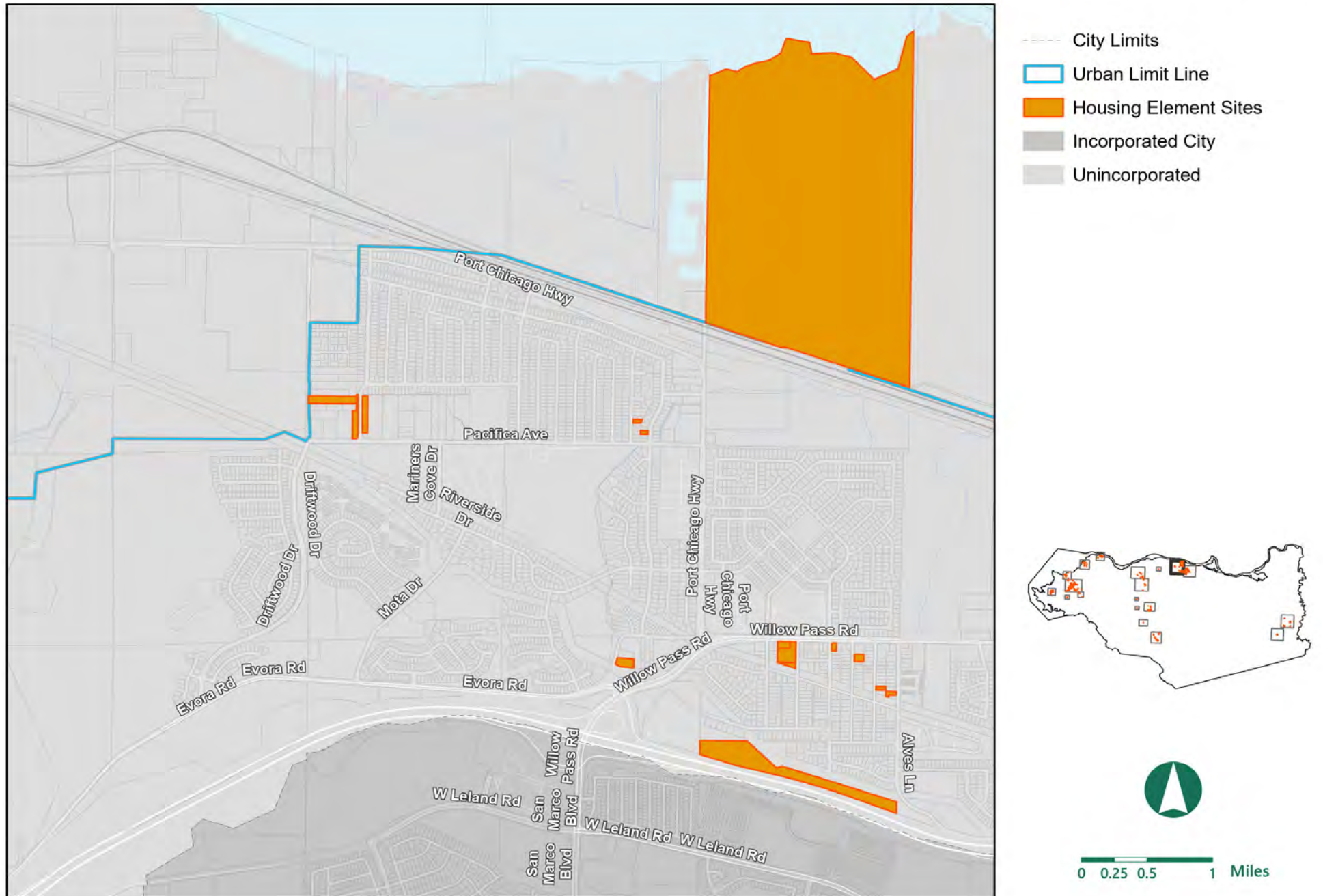


Figure 17  
Housing Sites Inventory- Bay Point (West)

# HOUSING ELEMENT UPDATE

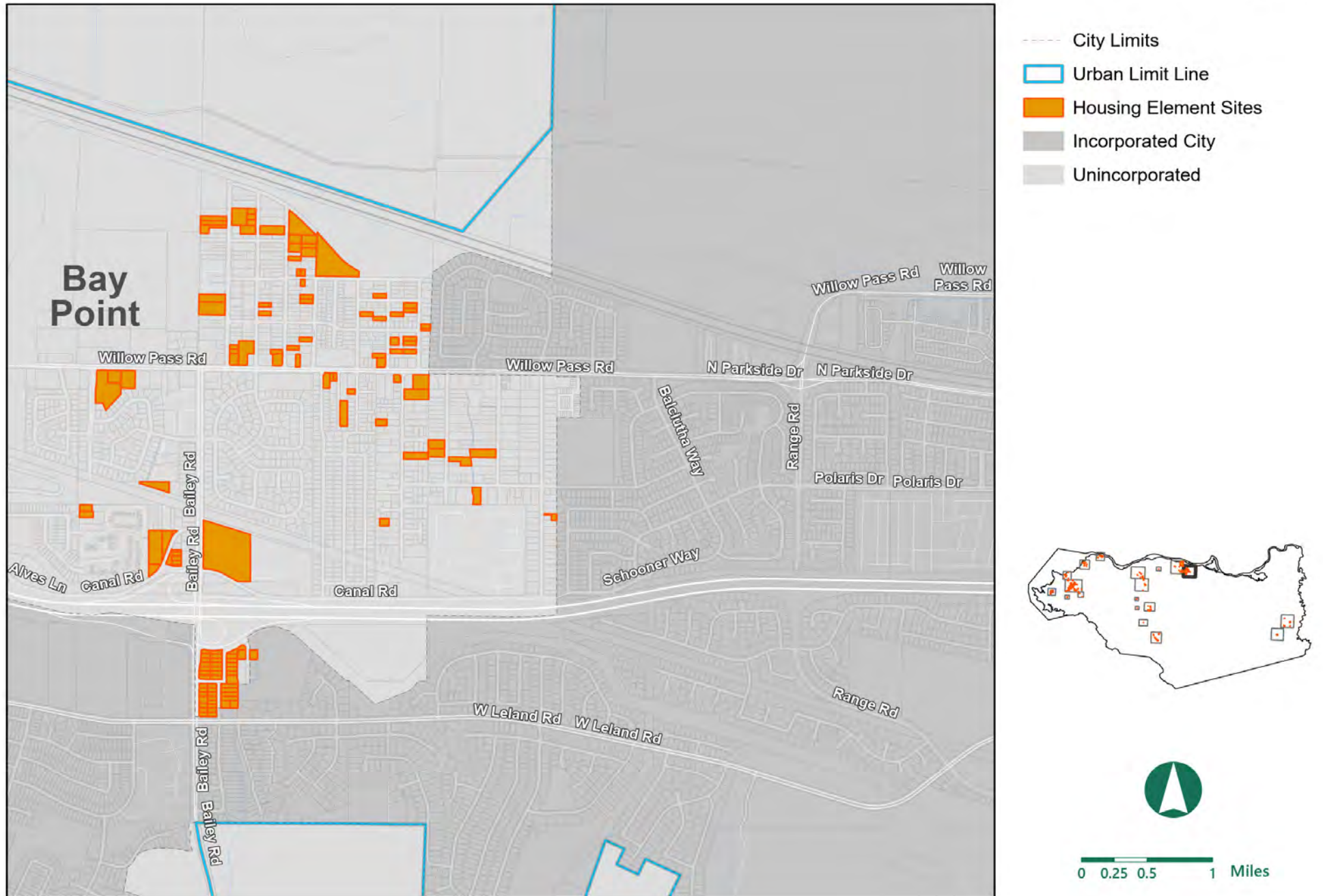


Figure 18  
Housing Sites Inventory- Bay Point (East)

# HOUSING ELEMENT UPDATE

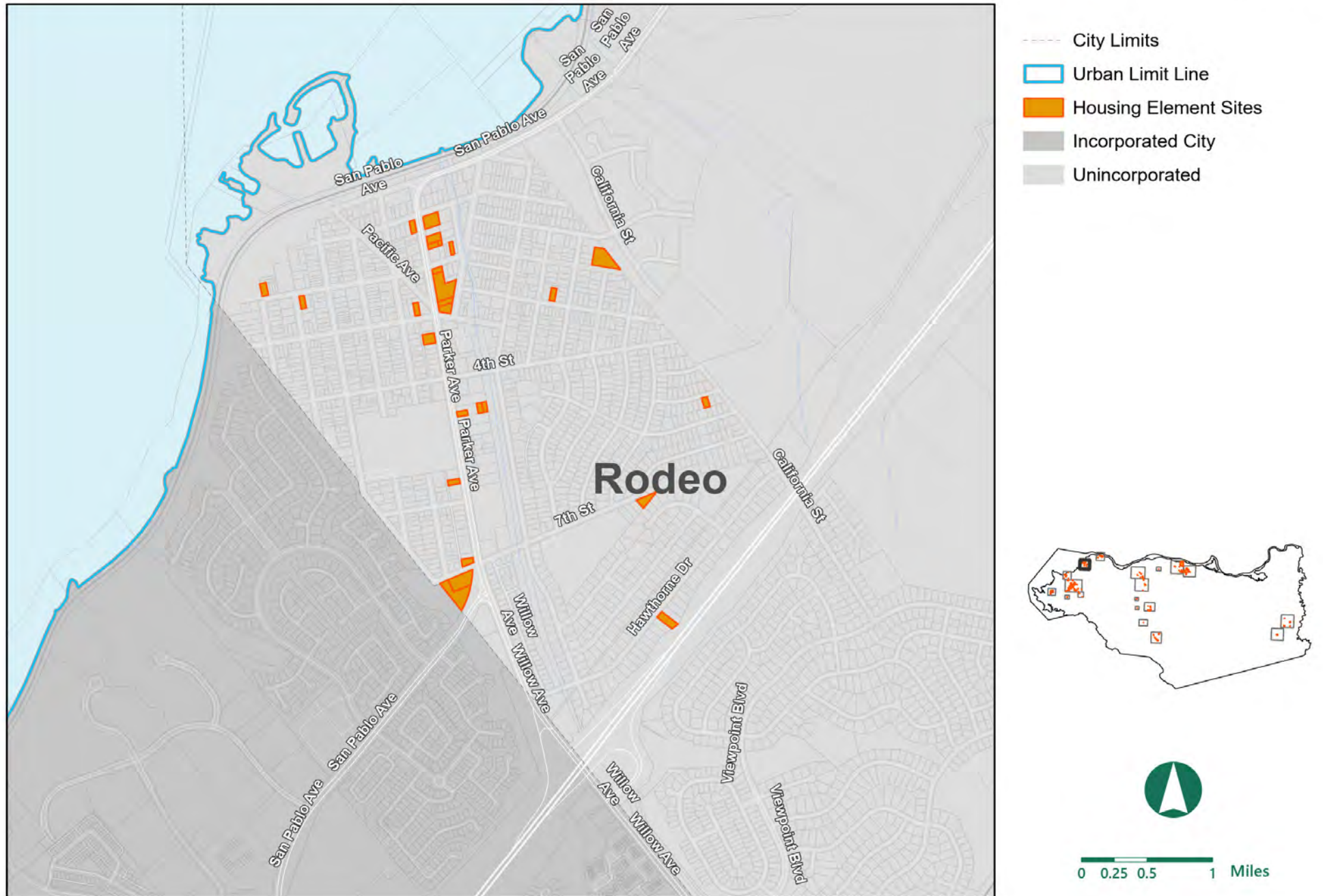


Figure 19  
Housing Sites Inventory- Rodeo

# HOUSING ELEMENT UPDATE

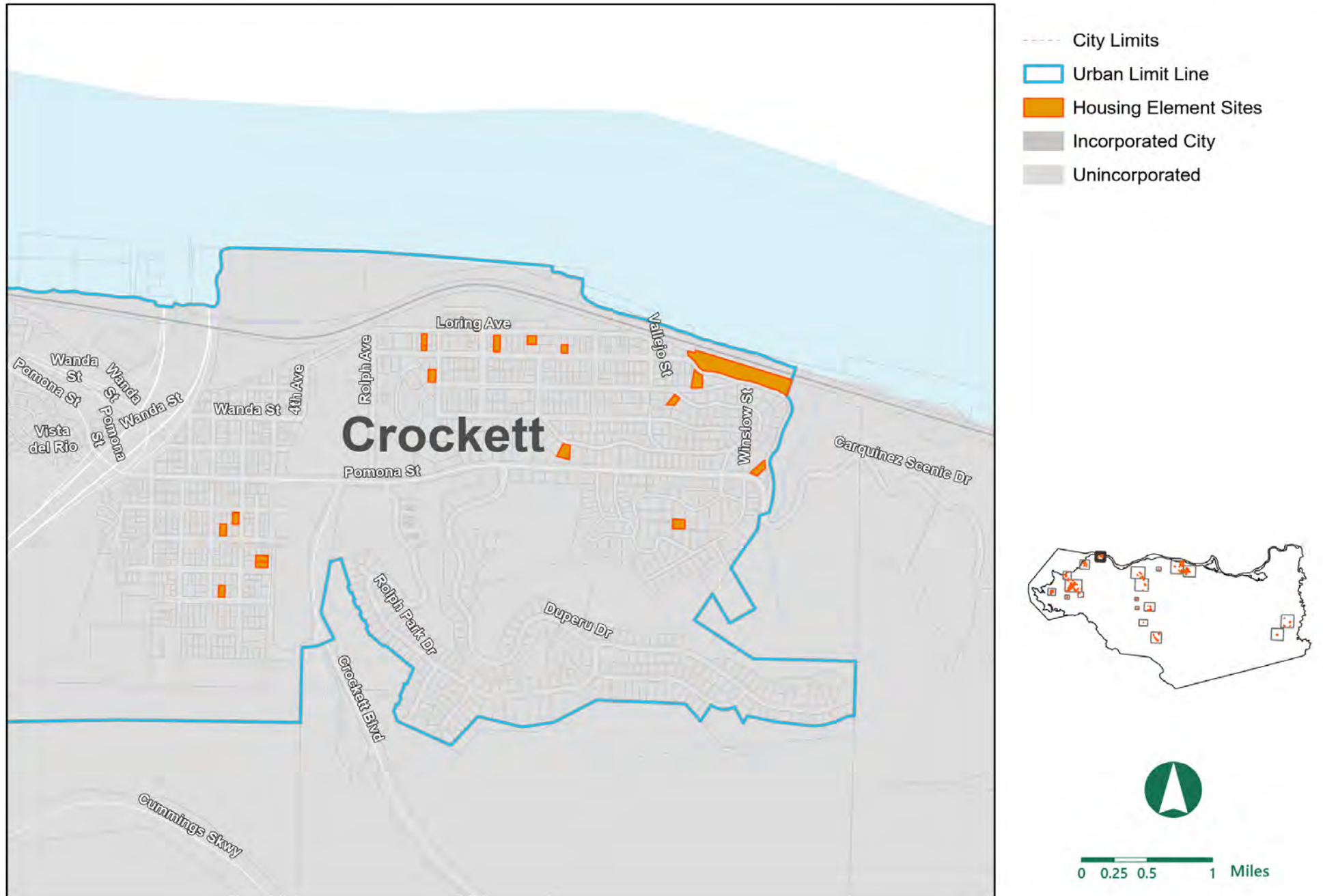


Figure 20  
Housing Sites Inventory- Crockett

## NATIVE AMERICAN HERITAGE COMMISSION

December 29, 2022

Daniel Barrios, Senior Planner  
Contra Costa County  
30 Muir Road  
Martinez, CA 94553

**Re: 2022070481, Contra Costa County 6<sup>th</sup> Cycle Housing Element Update Project, Contra Costa County**

Dear Mr. Barrios:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

**Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**



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Luiseño

VICE CHAIRPERSON  
**Reginald Pagaling**  
Chumash

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[NAHC.ca.gov](http://NAHC.ca.gov)



AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
  - a.** A brief description of the project.
  - b.** The lead agency contact information.
  - c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
  - d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
  
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subs. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
  - a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
  
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
  - a.** Alternatives to the project.
  - b.** Recommended mitigation measures.
  - c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).
  
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:
  - a.** Type of environmental review necessary.
  - b.** Significance of the tribal cultural resources.
  - c.** Significance of the project's impacts on tribal cultural resources.
  - d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
  
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
  
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
  - a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
  - b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).



- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
  - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
    - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
    - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
  - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
    - i.** Protecting the cultural character and integrity of the resource.
    - ii.** Protecting the traditional use of the resource.
    - iii.** Protecting the confidentiality of the resource.
  - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
  - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
  - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
  - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
  - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
  - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: [http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation\\_CalEPAPDF.pdf](http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf)

## SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: [https://www.opr.ca.gov/docs/09\\_14\\_05\\_Updated\\_Guidelines\\_922.pdf](https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf).

Some of SB 18's provisions include:

1. **Tribal Consultation**: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation**. There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality**: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation**: Consultation should be concluded at the point in which:
  - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
  - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

## NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center ([https://ohp.parks.ca.gov/?page\\_id=30331](https://ohp.parks.ca.gov/?page_id=30331)) for an archaeological records search. The records search will determine:
  - a. If part or all of the APE has been previously surveyed for cultural resources.
  - b. If any known cultural resources have already been recorded on or adjacent to the APE.
  - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
  - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
  - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
  - b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
  - a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
  - b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
  
4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
  - a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
  - b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
  - c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address:  
[Cody.Campagne@nahc.ca.gov](mailto:Cody.Campagne@nahc.ca.gov).

Sincerely,

*Cody Campagne*

Cody Campagne  
Cultural Resources Analyst

cc: State Clearinghouse



State of California – Natural Resources Agency  
DEPARTMENT OF FISH AND WILDLIFE  
Bay Delta Region  
2825 Cordelia Road, Suite 100  
Fairfield, CA 94534  
(707) 428-2002  
[www.wildlife.ca.gov](http://www.wildlife.ca.gov)

**GAVIN NEWSOM, Governor**  
**CHARLTON H. BONHAM, Director**



January 10, 2023

Daniel Barrios, Senior Planner  
Contra Costa County Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94533  
[Daniel.Barrios@dcd.cccounty.us](mailto:Daniel.Barrios@dcd.cccounty.us)

Subject: Contra Costa County 6th Cycle Housing Element Update, Re-Issued Notice of Preparation for the Contra Costa County Housing Element Update Environmental Impact Report, SCH No. 2022070481, Contra Costa County

Dear Mr. Barrios:

The California Department of Fish and Wildlife (CDFW) reviewed the Re-Issued Notice of Preparation (NOP) for the Contra Costa County (County) Housing Element Update Environmental Impact Report (EIR) for the Contra Costa County 6th Cycle Housing Element Update (Project).

CDFW is providing the County, as the lead agency, with specific detail about the scope and content of the environmental information related to CDFW's area of statutory responsibility that must be included in the EIR (Cal. Code Regs., tit. 14, § 15082, subd. (b)).

## **CDFW ROLE**

CDFW is a **Trustee Agency** with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact fish, plant, and wildlife resources (Pub. Resources Code, § 21000 et seq.; Cal. Code Regs., tit. 14, § 15386). CDFW is also considered a **Responsible Agency** if a project would require discretionary approval, such as a permit pursuant to the California Endangered Species Act (CESA) or Native Plant Protection Act (NPPA), Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources. Pursuant to our authority, CDFW has the following concerns, comments, and recommendations regarding the Project.

## **PROJECT DESCRIPTION AND LOCATION**

The Project includes updates to the County's General Plan. The Project will not result in physical changes to the environment, but rather affects land use designations for the Housing Element of the County's General Plan, such as identifying locations that can accommodate future housing and redesignating land use to meet State mandated

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housing needs. Subsequent projects associated with the construction of housing dependent on the Project will result in physical changes to the environment. The updates to the Housing Element and related sections of the County's General Plan will be adopted by January 2023 and apply across the County as identified in the NOP.

The proposed Project will require that the County redesignate land to meet the Regional Housing Needs Allocation (RHNA) of 7,610 total housing units. The County also intends to comply with No-Net-Loss (Gov. Code § 65863) through identifying a surplus of sites available to meet its RHNA. In total, the County's surplus unit capacity is 2,485 units. In order to meet this requirement, the County must redesignate up to approximately 560 acres of land. The proposed Project would require changes in land use designations for sites that currently allow residential uses but would need to be redesignated to allow for increased residential density, in addition to sites with designations that do not currently allow residential density and would need to be redesignated to allow residential development. The Housing Element Update also includes an additional 92 acres of land that do not require a designation or zoning changes.

The Project categorizes the following sites for analysis in the NOP: Residential sites with increasing allowable density that currently designated for residential use encompassing 473 acres across 330 parcels; non-residential sites proposed under the Project to allow for residential use encompassing 86 acres across 46 parcels; and sites already zoned for housing that encompass 92 acres across 153 parcels. The Project identifies 19 sites, totaling approximately 153.56 acres, which have been identified as housing opportunity areas. The County anticipates that this will result in the addition of a maximum number of new dwelling units totaling 20,416. Whereas the county considers that the realistic capacity will not reach 100% of the total allowable units, for the purposes of the NOP and resulting EIR, full development of the properties would be allowable up to, yet not exceeding, these unit numbers.

The CEQA Guidelines (Cal. Code Regs., tit. 14, § 15000 et seq.) require that the EIR incorporate a full Project description, including reasonably foreseeable future phases of the Project, that contains sufficient information to evaluate and review the Project's environmental impact (CEQA Guidelines, §§ 15124 & 15378). Please include a complete description of the following Project components in the Project Description of the EIR:

- Land use changes, including changes in habitat types (e.g., conversion of fallow fields in Byron, California, conversion of alkali and/or salt marshes in Bay Point, California, etc.), resulting from, for example, rezoning certain areas;
- Footprints of permanent Project features and temporarily impacted areas, such as staging areas and access routes;

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- Area and plans for any proposed buildings/structures, ground disturbing activities, fencing, paving, stationary machinery, barriers to wildlife movement, landscaping, and stormwater systems;
- Operational features of the Project, including level of anticipated human presence (e.g., describe seasonal or daily peaks in activity, if relevant), artificial lighting/light reflection, noise, traffic generation, and other features; and
- Allowable construction schedules, permissible activities, limitations of equipment types, and maximum crew sizes.

Additionally, the Project identifies that the NOP's resulting EIR will be a Program EIR. Whereas Program EIRs hold a broad scope, CDFW recommends providing as much information related to anticipated future activities as possible. CDFW recognizes that, pursuant to CEQA Guidelines § 15152, subd. (c), if a Lead Agency is using the tiering process in connection with an EIR or large-scale planning approval, the development of detailed, site-specific information may not be feasible and can be deferred, in many instances, until such time as the Lead Agency prepares a future environmental document. This future environmental document would cover a project of a more limited geographical scale and is appropriate if the deferred information does not prevent adequate identification of significant effects of the planning approval at hand. The CEQA Guidelines § 15168, subd. (c)(4) states, "Where the later activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were within the scope of the program EIR." Based on CEQA Guidelines § 15183.3 and associated *Appendix N Checklist*, and consistent with other program EIRs, CDFW recommends creating a procedure or checklist for evaluating subsequent project impacts on biological resources to determine if they are within the scope of the Program EIR or if an additional environmental document is warranted. This checklist should be included as an attachment to the EIR. Future analysis should include all special-status species and sensitive habitat including but not limited to species considered rare, threatened, or endangered species pursuant to CEQA Guidelines, § 15380.

When used appropriately, the checklist should be accompanied by enough relevant information and reasonable inferences to support a, "Within the scope" of the EIR conclusion. For subsequent Project activities that may affect sensitive biological resources, a site-specific analysis should be prepared by a qualified biologist to provide the necessary supporting information. In addition, the checklist should cite the specific portions of the EIR, including page and section references, containing the analysis of the subsequent Project activities' significant effects and indicate whether it incorporates all applicable mitigation measures from the EIR.

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## **REGULATORY REQUIREMENTS**

### ***California Endangered Species Act and Native Plant Protection Act***

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained if the Project has the potential to result in “take<sup>1</sup>” of plants or animals listed under CESA or NPPA, either during construction or over the life of the Project. Issuance of a CESA ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA-listed species, such as those identified in **Attachment 1**, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA ITP.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened or endangered species (Pub. Resources Code, §§ 21001, subd. (c) & 21083; CEQA Guidelines, §§ 15380, 15064, and 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency’s FOC does not eliminate the Project proponent’s obligation to comply with CESA.

### ***Lake and Streambed Alteration Agreement***

CDFW will require an LSA Notification, pursuant to Fish and Game Code § 1600 et. seq. for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project. CDFW may not execute the final LSA Agreement until it has complied with CEQA as a Responsible Agency.

## **ENVIRONMENTAL SETTING**

The EIR should provide sufficient information regarding the baseline environmental setting to understand the Project’s, and its alternative’s, if applicable, potentially significant impacts on the environment (CEQA Guidelines, §§ 15125 & 15360).

CDFW recommends that the CEQA document prepared for the Project provide baseline habitat assessments for special-status plant, fish and wildlife species located and

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<sup>1</sup> In this context, the term “take” is defined by Fish and Game Code Section 86 as hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

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potentially located within the Project area and surrounding lands, including but not limited to all rare, threatened, or endangered species (CEQA Guidelines, § 15380). The EIR should describe aquatic habitats, such as wetlands or waters of the U.S. or State, and any sensitive natural communities or riparian habitat occurring on or adjacent to the Project site (for sensitive natural communities see: <https://wildlife.ca.gov/Data/VegCAMP/NaturalCommunities#sensitive%20natural%20communities>), and any stream or wetland set back distances the County may require. Fully protected, threatened or endangered, candidate, and other special-status species that are known to occur, or have the potential to occur in or near the Project's identified sites, include but are not limited to those species listed in Attachment 1.

Habitat descriptions and the potential for species occurrence should include information from multiple sources: aerial imagery overlaid on Project area maps regarding housing element sites, historical and recent survey data, field reconnaissance, scientific literature and reports, U.S. Fish and Wildlife Service's (USFWS) Information, Planning, and Consultation System, and findings from "positive occurrence" databases such as, but not limited to, the California Natural Diversity Database (CNDDDB). Based on the data and information from the habitat assessment, the EIR should adequately assess which special-status species are likely to occur on or near the Project's identified sites, and whether they could be impacted by the Project.

CDFW recommends that prior to Project implementation, surveys be conducted for special-status species with potential to occur, following recommended survey protocols if available. Survey and monitoring protocols and guidelines are available at: <https://www.wildlife.ca.gov/Conservation/Survey-Protocol>.

Botanical surveys for special-status plant species, including those with a California Rare Plant Rank from the California Native Plant Society (CNPS) available at: <http://www.cnps.org/cnps/rareplants/inventory/>, and the CNPS East Bay Chapter's Database of Rare, Unusual, and Significant Plants list available at <https://ebcnps.org/ebrare-plant-database/>, must be conducted during the blooming period within the Project area and adjacent habitats that may be indirectly impacted by, for example, changes to hydrological conditions, and require the identification of reference populations. More than one year of surveys per housing element site of the Project may be necessary based on environmental conditions. Please refer to CDFW protocols for surveying and results reporting for evaluating impacts to special status plants available at: <https://www.wildlife.ca.gov/Conservation/Plants>.

## **IMPACT ANALYSIS AND MITIGATION MEASURES**

CEQA Guidelines §15126.2 necessitate that the EIR evaluate and discuss all direct and indirect impacts, including those temporary and permanent, that may occur with implementation of the Project. This includes evaluating and describing impacts such as:



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- Land use changes that would reduce open space, undeveloped areas, areas of vegetation recruitment, agricultural land uses, and increased residential or other land use involving planned development;
- Encroachments into riparian habitats, wetlands, or other sensitive areas;
- Potential for impacts, including take, to special-status species including, but not limited to the species included in Attachment 1;
- Loss or modification of breeding, nesting, dispersal and foraging habitat, including vegetation removal, alternation of soils and hydrology, and removal of habitat structural features (e.g., abandoned or unoccupied structures, snags, roosts, vegetation overhanging banks, etc.);
- Permanent and temporary habitat disturbances (both during construction and later occupation) associated with ground disturbance, noise, lighting, reflection, air pollution, traffic, or human presence; and
- Obstruction of movement corridors, fish passage, or access to water sources and other core habitat features.

CDFW recommends the EIR include a description of acres of habitat types that may be impacted by the Project and maps showing mapped habitat types with an overlay of the Project footprint for open disclosure of where biological resources impacts may occur.

The CEQA document should also identify reasonably foreseeable future projects in the Project vicinity, disclose any cumulative impacts associated with these projects, determine the significance of each cumulative impact, and assess the significance of the Project's contribution to the impact (CEQA Guidelines, §15355). Although a project's impacts may be insignificant individually, its contributions to a cumulative impact may be considerable; a contribution to a significant cumulative impact – e.g., reduction of available habitat for a special-status species – should be considered cumulatively considerable without mitigation to minimize or avoid the impact.

Based on the comprehensive analysis of the direct, indirect, and cumulative impacts of the Project, the CEQA Guidelines direct the lead agency to consider and describe all feasible mitigation measures to avoid potentially significant impacts in the EIR, and/or mitigate significant impacts of the Project on the environment (CEQA Guidelines, §§ 15021, 15063, 15071, 15126.2, 15126.4 & 15370). This includes a discussion of impact avoidance and minimization measures for special-status species, which are recommended to be developed in early consultation with CDFW, USFWS, and the National Marine Fisheries Service. CDFW recommends the following mitigation measures including, but not limited to, mitigation bank credit purchases, conserving

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adjacent lands in perpetuity under conservation easements, and/or enhancing and preserving existing habitat areas adjacent to the Project's sites. These measures can then be incorporated as enforceable Project conditions to the housing element sites to reduce potential impacts to biological resources to less-than-significant levels.

Fully protected species, including but not limited to the California black rail (*Laterallus jamaicensis coturniculus*) and the salt-marsh harvest mouse (*Reithrodontomys raviventris*), which both have CNDDDB positive occurrence records adjacent to portions of the Project's housing elements sites, may not be taken or possessed at any time (Fish and Game Code § 3511). CDFW recommends that the EIR include measures to ensure complete take avoidance of these fully protected species.

## ENVIRONMENTAL DATA


CEQA requires that the information developed in EIRs or negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to CNDDDB. The types of information reported to CNDDDB, the online field survey form and other methods for submitting data can be found at the following link: <https://wildlife.ca.gov/Data/CNDDDB>.

## FILING FEES

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish & G. Code, § 711.4; Pub. Resources Code, § 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

If you have any questions, please contact Andrew Chambers, Environmental Scientist, at (707) 266-2878 or [Andrew.Chambers@wildlife.ca.gov](mailto:Andrew.Chambers@wildlife.ca.gov); or Michelle Battaglia, Senior Environmental Scientist (Supervisory), at [Michelle.Battaglia@wildlife.ca.gov](mailto:Michelle.Battaglia@wildlife.ca.gov).

Sincerely,

DocuSigned by:  
  
Erin Chappell  
Regional Manager  
Bay Delta Region

Attachment 1: Special-Status Species and Sensitive Plant Communities Table

ec: State Clearinghouse # 2022070481

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 Contra Costa County Department of Conservation and Development  
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### ATTACHMENT 1: Special-Status Species and Sensitive Plant Communities

Species or Plant Community Name	Common Name	Status
<i>Accipiter cooperii</i>	Cooper's hawk	
<i>Acipenser medirostris</i> pop. 1	green sturgeon - southern DPS	FT
<i>Agelaius tricolor</i>	tricolored blackbird	ST, SSC
Alkali Meadow		S2.1
Alkali Seep		S2.1
<i>Ambystoma californiense</i> pop. 1	California tiger salamander - central California DPS	FT, ST
<i>Amsinckia douglasiana</i>	Douglas' fiddleneck	4.2
<i>Amsinckia grandiflora</i>	large-flowered fiddleneck	FE, SE, 1B.1
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	1B.2
<i>Andrena blennospermatis</i>	Blennosperma vernal pool andrenid bee	
<i>Androsace elongate</i>	California androsace	4.2
<i>Anniella pulchra</i>	Northern California legless lizard	SSC
<i>Anomobryum julaceum</i>	Slender silver moss	4.2
<i>Anthicus antiochensis</i>	Antioch Dunes anthicid beetle	
<i>Antrozous pallidus</i>	pallid bat	SSC
<i>Apodemia mormo langei</i>	Lange's metalmark butterfly	FE
<i>Aquila chrysaetos</i>	golden eagle	FP
<i>Arabis blepharophylla</i>	coast rock cress	
<i>Ardea alba</i>	great egret	
<i>Ardea herodias</i>	great blue heron	
<i>Archoplites interruptus</i>	Sacramento perch	SSC

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<i>Arctostaphylos auriculata</i>	Mt. Diablo manzanita	1B.3
<i>Arctostaphylos manzanita</i> ssp. <i>laevigata</i>	Contra Costa manzanita	1B.2
<i>Arctostaphylos pallida</i>	pallid manzanita	FT, SE
<i>Arizona elegans occidentalis</i>	California glossy snake	SSC
<i>Asio flammeus</i>	short-eared owl	SSC
<i>Asio otus</i>	long-eared owl	SSC
<i>Astragalus tenar</i> var. <i>tenar</i>	alkali milk vetch	1B.2
<i>Athene cunicularia</i>	burrowing owl	SSC
<i>Atriplex cordulata</i> var. <i>cordulata</i>	heartscale	1B.2
<i>Atriplex depressa</i>	brittlescale	1B.2
<i>Atriplex minuscula</i>	lesser saltscale	1B.1
<i>Azolla microphylla</i>	Mexican mosquito fern	4.2
<i>Blepharizonia plumosa</i>	big tarplant	1B.1
<i>Bombus caliginosus</i>	obscure bumble bee	
<i>Bombus crotchii</i>	Crotch's bumble bee	SCE
<i>Bombus occidentalis</i>	western bumble bee	SCE
<i>Branchinecta longiantenna</i>	longhorn fairy shrimp	FE
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT
<i>Branchinecta mesovallensis</i>	midvalley fairy shrimp	
<i>Branta hutchinsii leucopareia</i>	cackling (=Aleutian Canada) goose	
<i>Buteo regalis</i>	ferruginous hawk	
<i>Buteo swainsoni</i>	Swainson's hawk	ST
<i>Calandrinia breweri</i>	Brewer's calandrinia	4.2
<i>Calochortus pulchellus</i>	Mt. Diablo fairy-lantern	1B.2

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<i>Calochortus umbellatus</i>	Oakland star-tulip	4.2
<i>Calypte costae</i>	Costa's hummingbird	
<i>Calystegia purpurata</i> ssp. <i>saxicola</i>	coastal bluff morning-glory	1B.2
<i>Campanula exigua</i>	chaparral harebell	1B.2
<i>Carex comosa</i>	bristly sedge	2B.1
<i>Centromadia parryi</i> ssp. <i>congdonii</i>	Congdon's tarplant	1B.1
<i>Centromadia parryi</i> ssp. <i>parryi</i>	pappose tarplant	1B.2
<i>Charadrius nivosus nivosus</i>	western snowy plover	FT, SSC
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes bird's-beak	1B.2
<i>Chloropyron molle</i> ssp. <i>molle</i>	soft salty bird's-beak	FE, SR, 1B.2
<i>Cicuta maculata</i> var. <i>bolanderi</i>	Bolander's water-hemlock	2B.1
<i>Circus hudsonius</i>	northern harrier	SSC
<i>Cirsium andrewsii</i>	Franciscan thistle	1B.2
Cismontane Alkali Marsh		S1.1
Coastal and Valley Freshwater Marsh		S2.1
Coastal Brackish Marsh		S2.1
<i>Collomia diversifolia</i>	serpentine collomia	4.3
<i>Cordylanthus nidularius</i>	Mt. Diablo bird's-beak	SR, 1B.1
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	SSC
<i>Coturnicops noveboracensis</i>	yellow rail	SSC
<i>Danaus plexippus plexippus</i> pop. 1	monarch - California overwintering population	FC
<i>Delphinium californicum</i> ssp. <i>interius</i>	Hospital Canyon larkspur	1B.2
<i>Delphinium recurvatum</i>	recurved larkspur	1B.2
<i>Dipodomys heermanni berkeleyensis</i>	Berkeley kangaroo rat	

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<i>Dirca occidentalis</i>	western leatherwood	1B.2
<i>Efferia antiochi</i>	Antioch efferian robberfly	
<i>Egretta thula</i>	snowy egret	
<i>Elanus leucurus</i>	white-tailed kite	FP
<i>Emys marmorata</i>	western pond turtle	SSC
<i>Eremophila alpestris actia</i>	California horned lark	
<i>Eriastrum ertterae</i>	Lime Ridge eriastrum	SCE, 1B.1
<i>Eriogonum nudum</i> var. <i>psychicola</i>	Antioch Dunes buckwheat	1B.1
<i>Eriogonum truncatum</i>	Mt. Diablo buckwheat	1B.1
<i>Eryngium jepsonii</i>	Jepson's coyote thistle	1B.2
<i>Eryngium racemosum</i>	Delta button-celery	SE, 1B.1
<i>Eryngium spinosepalum</i>	spiny-sepaled button-celery	1B.2
<i>Erysimum capitatum</i> var. <i>angustatum</i>	Contra Costa wallflower	FE, SE, 1B.1
<i>Eschscholzia rhombipetala</i>	diamond-petaled California poppy	1B.1
<i>Eucerceris ruficeps</i>	redheaded sphecid wasp	
<i>Eucyclogobius newberryi</i>	Tidewater goby	FE
<i>Extriplex joaquinana</i>	San Joaquin spearscale	1B.2
<i>Falco mexicanus</i>	prairie falcon	
<i>Falco peregrinus anatum</i>	American peregrine falcon	FP
<i>Fritillaria agrestis</i>	stinkbells	4.2
<i>Fritillaria liliacea</i>	fragrant fritillary	1B.2
<i>Geothlypis trichas sinuosa</i>	saltmarsh common yellowthroat	SSC
<i>Gonidea angulate</i>	western ridged mussel	
<i>Grimmia torenii</i>	Toren's grimmia	1B.3

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<i>Haliaeetus leucocephalus</i>	bald eagle	SE, FP
<i>Helianthella castanea</i>	Diablo helianthella	1B.2
<i>Helminthoglypta nickliniana bridgesi</i>	Bridges' coast range shoulderband	
<i>Hesperoleucus venustus subditus</i>	southern coastal roach	SSC
<i>Hesperolinon breweri</i>	Brewer's western flax	1B.2
<i>Hibiscus lasiocarpus var. occidentalis</i>	wooly rose-mallow	1B.2
<i>Hoita strobilina</i>	Loma Prieta hoita	1B.1
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	SE, FT, 1B.1
<i>Hydroprogne caspia</i>	Caspian tern	
<i>Hygrotus curvipes</i>	curved-foot hygrotus diving beetle	
<i>Hypomesus transpacificus</i>	Delta smelt	FT, SE
<i>Idiostatus middlekauffi</i>	Middlekauff's shieldback katydid	
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC
<i>Lasionycteris noctivagans</i>	silver-haired bat	
<i>Lasiurus cinereus</i>	hoary bat	
<i>Lasiurus frantzii</i>	red bat	SSC
<i>Lasthenia conjugens</i>	Contra Costa goldfields	FE, 1B.1
<i>Laterallus jamaicensis coturniculus</i>	California black rail	ST, FP
<i>Lathyrus jepsonii var. jepsonii</i>	Delta tule pea	1B.2
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	FE
<i>Lilaeopsis masonii</i>	Mason's lilaeopsis	SR, 1B.1
<i>Limosella australis</i>	Delta mudwort	2B.1
<i>Linderiella occidentalis</i>	California linderiella	
<i>Lytta molesta</i>	molestan blister beetle	

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<i>Madia radiata</i>	showy golden madia	1B.1
<i>Malacothamnus hallii</i>	Hall's bush-mallow	1B.2
<i>Masticophis flagellum ruddocki</i>	San Joaquin coachwhip	SSC
<i>Masticophis lateralis euryxanthus</i>	Alameda whipsnake	FT, ST
<i>Meconella oregana</i>	Oregon meconella	1B.1
<i>Melanerpes lewis</i>	Lewis' woodpecker	
<i>Melospiza melodia maxillaris</i>	Suisun song sparrow	SSC
<i>Melospiza melodia</i> pop. 1	song sparrow ("Modesto" population)	SSC
<i>Melospiza melodia pusillula</i>	Alameda song sparrow	SSC
<i>Melospiza melodia samuelis</i>	San Pablo song sparrow	SSC
<i>Metapogon hurdi</i>	Hurd's metapogon robberfly	
<i>Microtus californicus sanpabloensis</i>	San Pablo vole	SSC
<i>Monardella antonina</i> ssp. <i>antonina</i>	San Antonio Hills monardella	3
<i>Monolopia gracilens</i>	woodland woollythreads	1B.2
<i>Myrmosula pacifica</i>	Antioch mutilid wasp	
<i>Nannopterum auritum</i>	double-crested cormorant	
<i>Navarretia cotulifolia</i>	broad leaved navarretia	4.2
<i>Navarretia gowenii</i>	Lime Ridge navarretia	1B.1
<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	shining navarretia	1B.2
<i>Neotoma fuscipes annectens</i>	San Francisco dusky-footed woodrat	SSC
Northern Claypan Vernal Pool		S1.1
Northern Coastal Salt Marsh		S3.2
Northern Maritime Chaparral		S1.2
<i>Nycticorax nycticorax</i>	black-crowned night heron	



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<i>Nyctinomops macrotis</i>	big free-tailed bat	SSC
<i>Oenothera deltooides</i> ssp. <i>Howellii</i>	Antioch Dunes evening-primrose	FE, SE, 1B.1
<i>Oncorhynchus mykiss irideus</i> pop. 11	steelhead - Central Valley DPS	FT
<i>Oncorhynchus mykiss irideus</i> pop. 8	steelhead – central California coast DPS	FT
<i>Pandion haliaetus</i>	osprey	
<i>Perdita scitula antiochensis</i>	Antioch andrenid bee	
<i>Perognathus inornatus</i>	San Joaquin pocket mouse	
<i>Phacelia phacelioides</i>	Mt. Diablo phacelia	1B.2
<i>Phrynosoma blainvillii</i>	coast horned lizard	SSC
<i>Philanthus nasalis</i>	Antioch specid wasp	
<i>Phrynosoma blainvillii</i>	coast horned lizard	SSC
<i>Potamogeton zosteriformis</i>	eel-grass pondweed	2B.2
<i>Pogonichthys macrolepidotus</i>	Sacramento splittail	SSC
<i>Puccinellia simplex</i>	California alkali grass	1B.2
<i>Progne subis</i>	purple martin	SSC
<i>Rallus obsoletus obsoletus</i>	California Ridgway's rail	FE, SE, FP
<i>Rana boylei</i> pop. 4	foothill yellow-legged frog - central coast DPS	FPT, SE
<i>Rana draytonii</i>	California red-legged frog	FT, SSC
<i>Reithrodontomys raviventris</i>	salt-marsh harvest mouse	FE, SE, FP
<i>Sanicula saxatilis</i>	rock sanicle	SR, 1B.2
<i>Senecio aphanactis</i>	chaparral ragwort	2B.2
Serpentine Bunchgrass		S2.2
<i>Sorex vagrans halicoetes</i>	salt-marsh wandering shrew	SSC
<i>Spea hammondii</i>	western spadefoot	SSC

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<i>Spergularia macrotheca</i> var. <i>longistyla</i>	long-styled sand-spurrey	1B.2
<i>Sphecodogastra antiochensis</i>	Antioch Dunes halictid bee	
<i>Spirinchus thaleichthys</i>	longfin smelt	FC, ST
Stabilized Interior Dunes		S1.1
<i>Sternula antillarum browni</i>	California least tern	FE, SE, FP
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	most beautiful jewel flower	1B.2
<i>Streptanthus hispidus</i>	Mt. Diablo jewel flower	1B.3
<i>Stuckenia filiformis</i> ssp. <i>alpina</i>	northern slender pondweed	2B.2
<i>Symphyotrichum lentum</i>	Suisun Marsh aster	1B.2
<i>Taxidea taxus</i>	American badger	SSC
<i>Thaleichthys pacificus</i>	eulachon	FT
<i>Thamnophis gigas</i>	giant gartersnake	FT, ST
<i>Trifolium hydrophilum</i>	saline clover	1B.2
<i>Tropidocarpum capparideum</i>	caper-fruited tropidocarpum	1B.1
Valley Needlegrass Grassland		S3.1
Valley Sink Scrub		S1.1
<i>Viburnum ellipticum</i>	oval-leaved viburnum	2B.3
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE, ST
<i>Xanthocephalus xanthocephalus</i>	yellow-headed blackbird	SSC

Notes: FC = federal candidate species under the Endangered Species Act (ESA); FE = federally endangered under ESA; FP = State fully protected species; FPT = Federally proposed for listing as threatened; FT = federally threatened under ESA; SE = State endangered under CESA; SCE = State candidate for listing as endangered under CESA; SCT = State candidate for listing as threatened under CESA; SR = State rare plant; SSC = State species of special concern; ST = State threatened under CESA. CNPS ranking system: 1B = plants rare, threatened, or endangered in California and elsewhere; 2B = plants rare, threatened or endangered in California, but common elsewhere; 3 = plants currently lack information regarding distribution, endangerment, ecology, and taxonomic validity; 4 = plants of limited distribution or infrequent throughout the broader area of California. CNPS Threat ranks: 0.1 = seriously threatened in California; 0.2 = moderately threatened in California; 0.3 = not very threatened in California. S 1-3 = Sensitive Natural Communities under the State and global rarity ranking.

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## Central Valley Regional Water Quality Control Board

18 January 2023

Daniel Barrios  
Contra Costa County  
Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94553  
[daniel.barrios@dcd.cccounty.us](mailto:daniel.barrios@dcd.cccounty.us)

### **COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, CONTRA COSTA COUNTY HOUSING ELEMENT UPDATE, SCH#2022070481, CONTRA COSTA COUNTY**

Pursuant to the State Clearinghouse's 19 December 2022 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Contra Costa County Housing Element Update, located in Contra Costa County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore, our comments will address concerns surrounding those issues.

#### **I. Regulatory Setting**

##### **Basin Plan**

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has

adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:

[http://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/](http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/)

### **Antidegradation Considerations**

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:

[https://www.waterboards.ca.gov/centralvalley/water\\_issues/basin\\_plans/sacsjr\\_2018\\_05.pdf](https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_2018_05.pdf)

In part it states:

*Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.*

*This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.*

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

## **II. Permitting Requirements**

### **Construction Storm Water General Permit**

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the

State Water Resources Control Board website at:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml)

#### **Clean Water Act Section 404 Permit**

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACE). If a Section 404 permit is required by the USACE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements. If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACE at (916) 557-5250.

#### **Clean Water Act Section 401 Permit – Water Quality Certification**

If an USACE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications. For more information on the Water Quality Certification, visit the Central Valley Water Board website at:  
[https://www.waterboards.ca.gov/centralvalley/water\\_issues/water\\_quality\\_certification/](https://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_certification/)

#### **Waste Discharge Requirements – Discharges to Waters of the State**

If USACE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation. For more information on the Waste Discharges to Surface Water NPDES Program and WDR processes, visit the Central Valley Water Board website at:  
[https://www.waterboards.ca.gov/centralvalley/water\\_issues/waste\\_to\\_surface\\_water/](https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/)

Projects involving excavation or fill activities impacting less than 0.2 acre or 400 linear feet of non-jurisdictional waters of the state and projects involving dredging activities impacting less than 50 cubic yards of non-jurisdictional waters of the state may be eligible for coverage under the State Water Resources Control Board Water Quality Order No. 2004-0004-DWQ (General Order 2004-0004). For more information on the General Order 2004-0004, visit the State Water Resources

Control Board website at:

[https://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2004/wqo/wqo2004-0004.pdf](https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2004/wqo/wqo2004-0004.pdf)

### **Dewatering Permit**

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

[http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/water\\_quality/2003/wqo/wqo2003-0003.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf)

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at:

[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/waivers/r5-2018-0085.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf)

### **Limited Threat General NPDES Permit**

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

[https://www.waterboards.ca.gov/centralvalley/board\\_decisions/adopted\\_orders/general\\_orders/r5-2016-0076-01.pdf](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf)

### **NPDES Permit**

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: <https://www.waterboards.ca.gov/centralvalley/help/permit/>

If you have questions regarding these comments, please contact me at (916) 464-4684 or [Peter.Minkel2@waterboards.ca.gov](mailto:Peter.Minkel2@waterboards.ca.gov).

*Peter Minkel*

Peter Minkel  
Engineering Geologist

cc: State Clearinghouse unit, Governor's Office of Planning and Research,  
Sacramento



January 18, 2023

Daniel Barrios, Senior Planner  
Department of Conservation and Development  
Contra Costa County

RE: County Housing Element Update – EIR Scope

Dear Daniel,

When looking at the air pollution, transportation and noise impacts of accommodating more housing - especially in higher density developments located adjacent to public transportation, commercial and cultural resources - the EIR needs to also consider the air pollution, transportation and noise impacts that would be expected to occur should the needed housing instead be built further away from existing urban resources, in more diffuse "sprawl" development patterns.

Please feel free to contact me should you need any additional information.

Gary Farber [garyf8642@gmail.com](mailto:garyf8642@gmail.com)

for 350 Contra Costa Action



**From:** [REDACTED]

**Sent:** Wednesday, January 18, 2023 12:24 PM

**To:** DCD Housing Element <[Housing.Element@dcd.cccounty.us](mailto:Housing.Element@dcd.cccounty.us)>

[REDACTED]

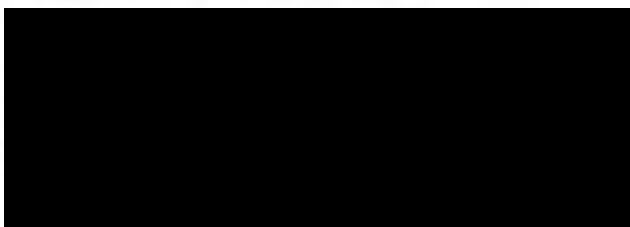
**Subject:** Comments Regarding the Housing Element NOP

Good afternoon Daniel, my name is Andy Byde and I am the property owner representative for two properties within unincorporated Pleasant Hill (APN 166-0300-01 and- 02). These properties were designated in Table 1 of the revised NOP as “Increasing Allowable Density.” Table 1 correctly identifies the existing General Plan designation as Single Family, Low Density 1.0-2.99 du/ac), however the Table identifies these properties to “change” land use designations to allow an increase of density to the same Single Family, Low Density designation? The table is not identifying either an increase in density or a change in land use designation. I don’t understand why the Housing Element is identifying these sites if there is no change proposed. While we support the County efforts to increase density throughout the County, unfortunately Table 1 does not propose an increase on these two specific properties, contrary to the Table title.

Thank you

**ANDY BYDE**

Partner





SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT  
2150 Webster Street, P.O. Box 12688  
Oakland, CA 94604-2688  
(510) 464-6000

January 23, 2023

2023

Janice Li  
PRESIDENT

Daniel Barrios  
Senior Planner, Advance Planning  
Community Development Division  
Contra Costa County Department of Conservation and Development  
30 Muir Road  
Martinez, CA 94553

Mark Foley  
VICE PRESIDENT

Robert Powers  
GENERAL MANAGER

DIRECTORS

Sent by email to: [daniel.barrios@dcd.cccounty.us](mailto:daniel.barrios@dcd.cccounty.us), [housing.element@dcd.cccounty.us](mailto:housing.element@dcd.cccounty.us)

Debora Allen  
1ST DISTRICT

RE: Re-issued Notice of Preparation (NOP) for the Contra Costa County Housing Element Update Environmental Impact Report (EIR)

Mark Foley  
2ND DISTRICT

Dear Mr. Barrios:

Rebecca Saltzman  
3RD DISTRICT

Thank you for providing the December 19, 2022, NOP and Notice of Public Scoping Meeting to us. BART is generally supportive of the County's effort to allow more density on parcels within its jurisdiction, as proposed in the Housing Element Update EIR. We were especially appreciative of the maps showing which parcels will be included in your Housing Element inventory and the clarity of the existing and proposed zoning changes.

Robert Raburn, Ph.D.  
4TH DISTRICT

John McPartland  
5TH DISTRICT

Elizabeth Ames  
6TH DISTRICT

You may be aware of BART's [Transit-Oriented Development \(TOD\) Guidelines](#) (2017), which were created to provide guidance to local jurisdictions and BART itself about transit-supportive developments within **a half-mile of our stations**. Figure 1 and Table 1 of the *TOD Guidelines* identify **a minimum residential density of 75 dwelling units per acre**, along with allowed building heights, vehicle parking regulations, and bike parking minimums. These elements of the *TOD Guidelines* are based on best practices and research that identify the symbiotic relationship between zoning and regional transit.

Lateefah Simon  
7TH DISTRICT

Janice Li  
8TH DISTRICT

Bevan Dufty  
9TH DISTRICT

There are two BART stations with parcels included in the Housing Element inventory that are within a half-mile: Pleasant Hill/Contra Costa Centre and Pittsburg/Bay Point. In reviewing the densities, some parcels are proposed for zoning less than 75 dwelling units per acre. We have listed these parcels in the table on the following page.

We ask that you rezone these parcels to meet or exceed 75 dwelling units per acre. These densities are needed to support transit ridership as well as current and/or improved levels of transit service. Appropriate zoning will provide future residents with more housing options near transit to help reduce vehicle miles traveled and greenhouse gas emissions.

Additionally, APN 709-501-024, which is in the Housing Element Inventory map and within a half-mile of the Pittsburg/Bay Point BART station, is not identified in your tables. So, its proposed density is unknown. BART's recommended density for this parcel would be at least 75 units per acre.

<b>APN</b>	<b>BART Station</b>	<b>Proposed Density (units per net acre)</b>	<b>BART Recommended Density (units per acre)</b>
148350009	Pleasant Hill/Contra Costa Centre	60	At least 75
148350010	Pleasant Hill/Contra Costa Centre	60	At least 75
148350011	Pleasant Hill/Contra Costa Centre	60	At least 75
148350020	Pleasant Hill/Contra Costa Centre	60	At least 75
093121001	Pittsburg/Bay Point	30	At least 75
093081027	Pittsburg/Bay Point	29.9	At least 75
093081028	Pittsburg/Bay Point	29.9	At least 75
093081029	Pittsburg/Bay Point	29.9	At least 75
093170056	Pittsburg/Bay Point	70	At least 75
093160005	Pittsburg/Bay Point	29.9	At least 75
093160006	Pittsburg/Bay Point	29.9	At least 75
095075025	Pittsburg/Bay Point	17	At least 75
094016002	Pittsburg/Bay Point	29.9	At least 75
Various*	Pittsburg/Bay Point	29.9	At least 75

\* Bay Point Residential Mixed Use area bounded by Bailey Rd, Delta de Anza Trl, W Leland Rd, & Wollam Ave

Thank you again for the opportunity to review. If you have questions, please feel free to reach out to Kamala Parks, Principal Station Planner for BART, at [kparks2@bart.gov](mailto:kparks2@bart.gov).

Sincerely,



Tim Chan  
 Group Manager  
 Planning and Development, Stations Planning

cc:  
 Val Menotti, Chief, Planning and Development, BART  
 Kara Vuicich, Principal Planner, Regional Planning Program, MTC  
 Kamala Parks, Principal Station Planner, BART

**Appendix 3-1**

**Draft Housing Element**





Contra Costa County Housing Element Update

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# 2023-2031 HOUSING ELEMENT

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Public Draft • **November 2022**







Contra Costa County Housing Element Update

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# 2023-2031 HOUSING ELEMENT

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Public Draft • **November 2022**



**Prepared By: PlaceWorks**

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# 6

## HOUSING ELEMENT

### 6.1 Introduction

The development and preservation of housing is important to all the people within Contra Costa County. To plan for the development of adequate housing for all income segments, that includes recognition of the impacts of climate change, a housing element is prepared as a part of the General Plan. This document constitutes the Housing Element, which specifically addresses housing needs and resources in the county's unincorporated areas. Section 6.1, Introduction, of this Element reviews the geographic areas covered by the Contra Costa County Housing Element, the purpose and content of the Element, the public participation process undertaken to assist in the development of the Element, and its relationship with the rest of the General Plan.

#### A. COMMUNITY CONTEXT

##### 1. County Geography

Established in 1850, the County of Contra Costa is one of nine counties in the San Francisco Bay Area. The county covers 733 square miles and extends from the northeastern shore of San Francisco Bay easterly to San Joaquin County. The county is bordered on the south and west by Alameda County and on the north by Suisun and San Pablo Bays. The western and northern communities are highly industrialized, while the inland areas

contain a variety of urban, suburban/residential, commercial, light industrial, and agricultural uses.

Contra Costa County is made up of large unincorporated areas and the cities and towns of Antioch, Brentwood, Clayton, Concord, Danville, El Cerrito, Hercules, Lafayette, Martinez, Moraga, Oakley, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek. The unincorporated areas include the following communities: Acalanes Ridge, Alamo, Alhambra Valley, Bay Point, Bayview, Bethel Island, Blackhawk, Briones, Byron, Camino Tassajara, Canyon, Castle Hill, Clyde, Contra Costa Centre, Crockett, Diablo, Discovery Bay, East Richmond Heights, El Sobrante, Kensington, Knightsen, Montalvin Manor, Mountain View, Norris Canyon, North Gate, North Richmond, Pacheco, Port Costa, Rodeo, Rollingwood, San Miguel, Saranap, Tara Hills, and Vine Hill. The incorporated cities and towns are separate political entities; the unincorporated areas are within the land use jurisdiction of the County government.

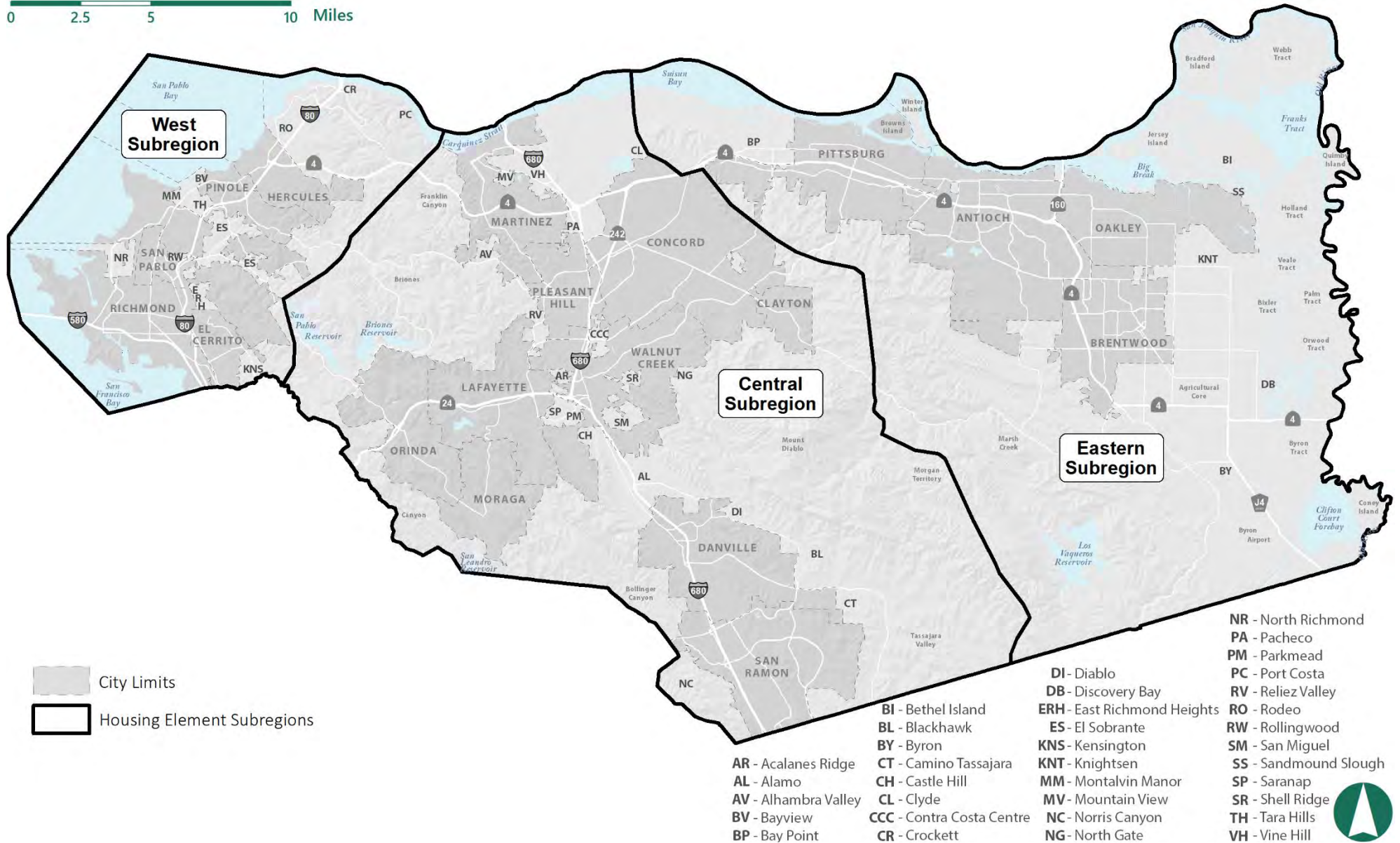
The county is large and diverse. It encompasses several housing sub-markets, which are determined by a combination of topography, historical development patterns, and social and economic phenomena. In general, the county can be divided into three primary subregions -- West, Central, and East (see Figure 6-1, Housing Element Sub Areas). West County is urbanized with a developed industrial base. Central County is a developed urbanized area with extensive office and light industrial development. East County has historically been primarily agricultural but is now experiencing considerable residential development. Figure 6-1 illustrates the geographic relationship



between the cities and towns and the unincorporated areas. This Housing Element is concerned with the housing needs, constraints, resources, and solutions for the unincorporated areas.

FIGURE 6-1 HOUSING ELEMENT SUB AREAS

0 2.5 5 10 Miles







## 2. County Residents

The 2020 population estimate by the California Department of Finance (DOF) indicates that Contra Costa County is home to approximately 1,153,561 residents, making it the ninth-most populous county in California. Several cities experienced significant population growth, welcoming 104,536 new residents in the last decade. The DOF projects that the county's population will increase to 1,224,400 residents by 2030 and 1,338,400 residents by 2040.

According to DOF, the county's unincorporated areas had a population of 174,257, representing a 10 percent increase since 2010. The DOF projects the county's unincorporated population to grow to 182,500 by 2040, resulting in a 14.2 percent increase since 2010. Countywide growth was 9 percent in the last decade. Residents have been attracted to Contra Costa County primarily due to the availability of rapid transit; close proximity to major employment centers in Oakland, San Francisco, and the Silicon Valley; as well as employment growth within the county along the Interstate 680 corridor and Tri-Valley area. The relatively affordable housing prices in the county compared to other Bay Area counties also contribute to the population growth.

Examining how the county's unincorporated areas reflect the larger county, however, the demographics of the county's unincorporated population tend to be whiter and older. Between 2000 to 2019, unincorporated communities have experienced increases in the Latino (58.8 percent), Asian (40 percent), and "Other" populations, while simultaneously experiencing decreases in the White (26.2 percent) and Black (14.3 percent) populations. Between 2010 and 2019, the largest percentage increase in age groups in unincorporated

Contra Costa County was for the 65 to 74 age group and the second-largest percentage increase was in the 75 to 84 age group, highlighting an aging population. The U.S. Department of Housing and Urban Development (HUD) and the Comprehensive Housing Affordability Strategy (CHAS) show that senior residents (age 62 and older) in unincorporated Contra Costa County are mostly homeowners, with 86 percent owning homes and 14 percent renting.

Contra Costa County has a fairly fast-growing workforce, with growth in its employment base driven primarily by the need to provide health, education, and professional services to an increasing local population. Between 2010 and 2020, there was a 13.7 percent increase in employment and a projected 16 percent increase in employment between 2010 and 2040 in unincorporated Contra Costa County. The county is expected to gain an estimated 65,530 more employed residents than jobs between 2020 and 2040. The Association of Bay Area Governments (ABAG) estimates that unincorporated Contra Costa County will add approximately 2,850 new jobs between 2020 and 2040. ABAG expects that Contra Costa County will continue to provide "bedroom communities" for the workforce of other Bay Area counties.

The Census defines a "household" as any group of people occupying a housing unit, which may include single persons living alone, families related through marriage or blood, or unrelated persons that share living quarters. In unincorporated Contra Costa County, 20.1 percent of the households are single persons living alone, 58 percent are families, and 21.9 percent are unrelated persons sharing living quarters. Persons living in retirement or convalescent homes, dormitories, or other group living situations are not considered households. Household characteristics are important indicators of the type and size of housing needed in a community.



The median income for a Contra Costa household of four in 2021 was \$125,600. In 2019, the countywide median income was approximately \$99,700. There are differences in income by tenure; homeowners earn a median income of \$122,227, which is 86 percent higher than the renter median income of \$65,583. As is the case for many communities, renter households are most predominant in income levels below \$75,000; homeowners are most predominant in the higher-income groups. In the unincorporated county, approximately 13.2 percent of the households are extremely low income, as defined by HUD (households earning 30 percent or less of median family income [MFI]). ABAG projects an increase in population of 9.8 percent between 2020 and 2040. Presuming extremely low-income households continue to be 13.2 percent of the population, then by 2040, there will be 25,256 extremely low-income households in the unincorporated area. Income is the most important factor affecting the housing opportunities available to a household and determining the ability to balance housing costs with other basic necessities of life, factors that are income-dependent.

Because of the high cost of housing in the Bay Area, many households overpay for housing. A significant number of households spend more than one-third of their incomes on housing.<sup>1</sup> This level of housing payment is typically considered burdensome and suggests that income growth has not kept pace with the increase in housing costs. An estimated 19.8 percent of the households in Contra Costa County have a cost burden of more than 30

percent. Approximately 15.1 percent have a cost burden of 50 percent or more.

### 3. County Housing Market

Single-family homes are the predominant housing type in the county. This is especially true in the unincorporated areas, where single-family dwellings comprise 79.7 percent of the housing stock. Multi-family units account for 15.9 percent of the housing units, while the remaining 4.4 percent are mobile homes. Although home prices are more affordable in Contra Costa County than in most areas in the Bay Area, housing affordability is still an important issue affecting many residents in the county.

Neighborhood and housing quality is another issue in unincorporated county areas. Approximately 60 percent of the housing stock in unincorporated areas was built before 1980 and another 28 percent was built between 1980 and 1999. This indicates that a large portion of the housing stock is more than 30 years old, the age when most homes begin to have major repair or updating needs. The 2011 American Housing Survey found that in the Oakland/Fremont Metropolitan Statistical Area (MSA), an estimated 15,200 residential units had severe physical problems and 30,200 had moderate physical problems. Unincorporated Contra Costa County has an estimated 6.4 percent of the total housing units in the Oakland/Fremont MSA. Therefore, an estimated 2,906 units have severe or moderate physical

---

<sup>1</sup> The State Department of Housing and Community Development (HCD) has established five income categories based on county median family income (MFI). Extremely low-income households are those earning income up to 30 percent of the county MFI. Very low-income households are those earning income up to 50 percent of the county MFI. Low-income households are those earning 51 to 80 percent of the county MFI. Combined, the very low- and low-income households are referred to as lower-income households. Moderate-income households are those earning 81 to 120 percent of the county MFI. Above-moderate households are those earning more than 120 percent of the county MFI.



problems. The American Housing Survey estimates that an additional 22,000 occupied housing units may have other rehabilitation needs, such as missing roofing material, holes in roof, cracks in foundation, or broken/boarded windows. More recent American Community Survey (ACS) and American Housing Survey data is not available at the MSA or more specific scale. In December 2021, the County Building Department shared that approximately 20 residential units per year in the unincorporated county are not habitable and are in imminent need of replacement.

Vacancy rates are a useful indicator of the housing market's overall health and ability to accommodate new residents within the existing housing stock. The ACS 5-year estimates for 2015 to 2019 indicate the countywide vacancy rate is an estimated 4.6 percent. The unincorporated county had a slightly higher vacancy rate (5.8 percent). The increase can be attributed to a higher percentage of recreational/occasional use units in unincorporated areas of the county, such as Bethel Island and Discovery Bay.

Contra Costa County is faced with various important housing issues: preserving and enhancing the affordability of housing for all segments of the population; addressing disparities in access to housing and resources; providing new types of housing in response to changing demographic trends; addressing the reality of the impacts of climate change from extreme heat to air quality and from sea level rise to availability of potable water as well as maintaining and improving the quality of the housing stock; and achieving a balance between employment and housing opportunities. This Housing Element provides policies and actions to address these and other related issues.

## B. ROLE AND CONTENT OF HOUSING ELEMENT

The Housing Element of the General Plan has three purposes:

1. To provide an assessment of both current and future housing needs and constraints in meeting these needs.
2. To provide a strategy that establishes housing goals, policies, and actions.
3. To intentionally align housing development with both transportation and jobs/economic development such to decrease exposure to environmental toxins such as air pollution in order to create lived environments that enhance health and assist in preventing disease.

The availability of housing is of vital statewide importance, and the early attainment of decent housing and a suitable living environment for every Californian is a priority of the highest order.

-- California Government Code, Section 65580

This Housing Element represents Contra Costa County's long-term commitment to the development and improvement of housing with specific goals for the short term, 2023 to 2031. This Element identifies the following goals:

1. Maintain and improve the quality of the existing housing stock and residential neighborhoods in Contra Costa County.

- 
2. Preserve the existing affordable housing stock in Contra Costa County.
  3. Increase the supply of housing with a priority on the development of affordable housing, including housing affordable to extremely low-income households.
  4. Increase the supply of appropriate and supportive housing for special-needs populations.
  5. Improve housing affordability for both renters and homeowners.
  6. Provide adequate sites through appropriate land use and zoning designations to accommodate the County's share of regional housing needs.
  7. Mitigate potential governmental constraints to housing development and affordability.
  8. Promote equal opportunity for all residents to reside in the housing of their choice.
  9. Promote energy-efficient retrofits of existing dwellings and exceeding building code requirements in new construction.

The Housing Element consists of the following major components:

- An introduction reviewing the purpose and scope of the Element (Section 6.1).
- An analysis of the county's demographic profile, housing characteristics, and existing and future housing needs and fair housing assessment (Section 6.2).

- A review of potential market, governmental, and environmental constraints to meeting the county's identified housing needs (Section 6.3).
- An evaluation of the land, financial, and organizational resources available to address the county's identified housing needs and goals (Section 6.4).
- An evaluation of accomplishments under the adopted Housing Element (Section 6.5).
- A statement of the Housing Plan to address the county's identified housing needs, including housing goals, policies, and actions (Section 6.6).

## C. DATA SOURCES

Various sources of information contribute to the Housing Element. ABAG provides a data package that has been pre-approved by the State Department of Housing and Community Development (HCD) and serves as the primary data source for population and household characteristics. Dates for data included in the ABAG data package may vary depending on the selection of data that was made to provide the best data on the topic. The main data source for the Assessment of Fair Housing was the HCD Affirmatively Furthering Fair Housing (AFFH) Data Viewer mapping tool. Several additional data sources were used to supplement the 2021 ABAG Data Package:

- Population and demographic estimates and projections by ABAG and the DOF.



- Housing market information, such as home sales, construction costs, and rents, updated via online surveys.
- Data on special-needs groups, the services available, and gaps in the service delivery system provided via service provider stakeholder interviews.
- Lending patterns for home purchase and home improvement loans through the Home Mortgage Disclosure Act (HMDA) database.

## D. PUBLIC PARTICIPATION

The County encourages the participation of residents and local agencies in the process of identifying housing needs and formulating housing policies and actions. During the development of the Housing Needs Assessment (Section 6.2), the County consulted with and/or obtained information from a variety of organizations serving low- and moderate-income persons and those with special needs. These agencies are referenced throughout the document.

In preparation of the Housing Element, opportunities are provided for the public to help shape the County's housing goals, policies, and strategies. Opportunities for input on the County's 2023–2031 Housing Element have been provided so far through various forums. One significant method was via outreach for the General Plan Update currently underway through the Envision Contra Costa 2040 process. The <https://envisioncontracosta2040.org/> website is one of the main channels for sharing information with the public about the Housing Element Update and General Plan Update.


The County sought participation and input from people who represent the full range of demographics, perspectives, and experiences in Contra Costa County, including existing residents, local workers, the residential development community, nonprofit housing developers, housing advocates, historically underrepresented community members, and community organizations representing special needs groups such as older adults, youth and students, immigrants, people experiencing homelessness and people with disabilities. Details of the outreach efforts follow.

### 1. Consultations

In August through October 2021, five consultations were conducted with stakeholders to offer opportunities to each of them to provide one-on-one input and receive targeted input from those who work on providing services for those most in need of housing or with special housing needs. All stakeholders called upon were available for an interview. Representatives from the following organizations were interviewed:

- Hope Solutions on September 8, 2021.
- Choice in Aging on September 9, 2021.
- East Bay Housing Organizations (EBHO) on September 16, 2021.
- Contra Costa County Health Services Continuum of Care (COC)/Contra Costa County Health, Housing, and Homeless Services (H3) on September 14, 2021.
- Eden Council for Hope and Opportunity (ECHO) on October 4, 2021.

In each of the consultations, the stakeholders were asked some or all of the following questions, depending on the type of organization interviewed:

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- **Opportunities and concerns:** What three top opportunities do you see for the future of housing in Contra Costa County? What are your three top concerns for the future of housing in Contra Costa County?
  - **Housing Preferences:** What types of housing do your clients prefer? Is there adequate rental housing in the county? Are there opportunities for home ownership? Are there accessible rental units for seniors and persons with disabilities?
  - **Housing barriers/needs:** What are the biggest barriers to finding affordable, decent housing? Are there specific unmet housing needs in the community?
  - **Housing conditions:** How do you feel about the physical condition of housing in Contra Costa County? What opportunities do you see to improve housing in the future?
  - **Unhoused persons:** How many unhoused persons are in Contra Costa County?
  - What factors limit or deny civil rights, fair housing choice, or equitable access to opportunity? What actions can be taken to transform racially and ethnically concentrated areas of poverty into areas of opportunity (without displacement)? What actions can be taken to make living patterns more integrated and balanced?
  - How has COVID-19 affected the housing situation?

Through these interviews, the stakeholders expressed several concerns over current challenges and barriers to housing in the county. These included the need for more coordination at the decision-making/regional level to address housing issues. There is a need for a housing champion to lead a unified

effort to address housing issues in the area by capturing state and federal resources, bringing community organizations and jurisdictions together to strategically address housing shortages across the county, and develop a regional plan to address housing together as a collective county.

Additionally, with the onset of the COVID-19 pandemic, many unhoused individuals found roofs over their heads due to federal assistance and intervention. This infusion of money should be seen as a short-term solution or “bandaid” solution to the ongoing housing shortage problems occurring across the county. These federal dollars provided housing vouchers through a rapid rehousing program to immediately address the need to house those on the street, one of the populations most vulnerable to the effects of the pandemic. This quick-fix solution will sunset in the near future and is not a long-term solution. To continue to keep individuals and families housed in Contra Costa County, several stakeholders mentioned the county requires more housing with built-in services in-place (e.g., on-site case management, on-site services behavior, and medical services). Current housing voucher programs allow unhoused residents to have a roof over their head for a short period but does not provide for them in the long term – vulnerable groups such as those living with developmental, intellectual, and physical disabilities are not currently given the resources and services to be successful and stay housed.

As part of access to fair housing, several stakeholders have stated that there is discrimination in Contra Costa County, specifically by landlords to tenants. Other stakeholders have echoed that landlords and the application process discriminates against households with certain characteristics, including pregnant individuals, those with prior justice system involvement, and people of color. A stakeholder suggested changing application processes like background check requirements, which can deter certain groups from



accessing housing. A countywide solution could be to collectively attract landlords for all housing programs, providing them training and education on what actions are creating issues and how to avoid them, etc. For example, in one existing program, the county offers landlords a larger rental deposit for County-screened individuals who are a part of a vulnerable population. Moreover, a few stakeholders suggest the Board of Supervisors routinely receive some type of equity training on housing so that these decision makers better understand the power that they hold and the influence they have on housing in the county, especially for vulnerable groups.

## 2. Focus Groups

The County held virtual focus groups on October 18, and November 3, 2021, to elicit targeted feedback from housing developers and service providers. County staff identified representatives to invite to the developer focus group based on developers who have built projects in the unincorporated county in recent years in addition to those who have participated in the General Plan update process so far. Invitations to the service provider focus group were coordinated with the staff at the County Health, Housing & Homeless Services department and an announcement was made about the upcoming focus group at the October Contra Costa County Continuum of Care (CoC) meeting to invite members to participate. The October 18<sup>th</sup> focus group included for-profit and nonprofit developers. The November 3<sup>rd</sup> focus group included representatives from service provider organizations that are members of the County CoC. To allow time for input and a conversation that could include give and take between participants, the goal was to have the

focus groups include a maximum of 15 to 20 participants (in addition to County staff and consultant team representatives).


### October 18, 2021, Developer Focus Group

The developer focus group took place on October 18, 2021. There were 10 participants representing 10 organizations/companies that attended. The following discussion questions were posed to the focus group participants:

1. Have you or your firm considered, or already constructed, housing in unincorporated Contra Costa County?
2. If yes, have you constructed housing for lower<sup>2</sup> income or other special needs groups?
3. If you considered developing housing in Contra Costa County but ultimately chose not to, what were the reasons?
4. What is the biggest challenge to building homes that are affordable to lower- and moderate-income households in communities in unincorporated Contra Costa County?
5. Do you or your firm have examples of successful projects where housing for lower- and moderate-income households have been built? In what communities did that happen? What makes projects successful in those communities?
6. What types of policies or programs could the Housing Element include that would help your firm's development of affordable or workforce housing in Contra Costa County?

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<sup>2</sup> Lower income includes the very low and low income categories as defined by the state.

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7. Is your firm interested in building non-traditional housing, such as ADUs, JADUs, tiny homes, or other (note: some of these typologies may meet RHNA standards and some may not)?
  8. In your opinion, how can the County's RHNA of over 7,000 housing units best be met?
  9. Do you have any additional comments to share?

Questions and input received at the focus group included:

- How will the County be able to implement this feedback, ideas, concerns, suggestions, primarily around funding? Will the County have capacity to do the things that are said in the meeting?
- There is no such thing as affordable housing because it costs many hundreds of thousands of dollars to construct a single unit. Affordable housing unit production will not increase until the State steps in. The State needs to take away the local control because California Environmental Quality Act (CEQA) fees, local requirements, state requirements, construction costs, etc. are very difficult and getting more difficult.
- Land costs are so high because the supply is limited, like in places such as Marin County. Is hopeful that new state legislation chipping away at single-family zoning will be a start, but we know that these things take a while to get going. Once it does though, it may put a dent in the millions of housing units we are short in the state.
- For Question #7, interested in how they can support ADU construction in the county, which they are doing in Oakland. Agrees that we as a state


need to address building costs before building affordable housing can happen more quickly.

- For Question #2, have identified that the model of buildup to ownership is nearly impossible (mentioned West Oakland experience), so being able to acquire and remodel units is the most feasible for them to create affordable home ownership situations.
- For Question #3, for the smaller infill developers, there is such limited capacity to stay on top of everything, larger agencies are way more equipped. Maybe the larger agencies can help the smaller companies, in terms of providing technical assistance or talent staffing.
- There is an obstacle related to the lack of pre-development dollars to get you to the point of development. Most jurisdictions don't have pots of money available for pre-development. Most money comes in at the construction phase. They are always trying to get financing together for the pre-development phase of the project. Multiple attendees agreed with this input.
- Would like to have zoning to allow for micro-cottages. Some zoning will need to match affordable by design dwelling units.
- There needs to be a way to make sure there is a way to go about building non-commodified housing to ensure that people aren't displaced. There are no policies that support developers doing preservation or rehabilitation of existing units. This will be key for developers being able to preserve existing communities and housing units.





- The Housing Element can also look at how public land can help ensure equitable housing is being developed. There are a lot of scattered non-contiguous sites out there and it would be nice for the County to acquire or consolidate that land so that it is easier for developers to acquire and develop on them.
- In some areas, market rent is affordable so in those cases they are having a difficult time meeting requirements for having rents 10 percent below market for even below 70 percent AMI units. They are trying to maximize points to get tax credits, but the rents are not hitting the 10 percent delta to hit maximum points, so their rent surveys are imposing further rent reductions on those units.
- Feasibility is also called into question if you're building market-rate units with affordable units. This came up on a site in Oakley. They are looking at other potential sites and some jurisdictions have reached out asking how to get more housing but they are not in a high resource area for tax credit scoring. If they don't reach 120 points, then they don't get state tax credits and the funds from other Bay Area cities require you to be near transit to get funds (from Google, Apple, Facebook, etc.). The areas where you can get enough funding are few and far between.
- Have had conversations with planning staff at a site for about 150 affordable units and the County came back asking if they could make it more dense but the tax credit scoring is based on cost and their firm can't go more than three or four stories before the project would not allow for funding based on density. They look at how to get projects funded within the arena of complicated tax credits. While the Housing Element might allow for density at 40-50 units per acre, in reality they can only build maybe 35 units per acre to get a tax credit award.
- When the County is identifying Housing Element sites or prioritizing sites, it would be great to keep the California Tax Credit Allocation Committee (TCAC) scoring system in mind so they are close to transportation, shopping, health amenities, and schools, because if they don't secure the amenity funds, they will not get funded or get a tax credit authorization.
- Richmond LAND is anticipating the request for qualifications (RFQ) for the Las Deltas project, and they will pursue those projects that will not pursue any tax credits.
- The TCAC scoring comment is really important. Also, should look at underlying zoning in those areas to try and pair up higher-density and Multi-family zoning in areas close to amenities.
- Another thing that is challenging (for extremely low-income housing development) is the lack of rental subsidies and funding in general. Have done a number of projects in Walnut Creek because they have an impact fee that generates funds for affordable housing. Concord has a small program like this too. If there is an impact fee at the County level, it would be incredibly helpful for developers to have funding to develop more affordable housing, specifically the lowest-income affordable housing.
- Richmond LAND had a meeting with Community Land Trust (CLT) Irvine, which partnered with the County and did a below-market rate sale of a housing site so they got that at a lower cost, and they are turning that into a townhouse project that will be sold with a condo structure for 80 percent of AMI and will stay under the land trust. Travis Bank will be doing the financing. Richmond LAND is having an issue with getting



lenders because they are trying to show them how their model works and how it can be a safe investment for them.

- The affordable housing overlay or the streamlined General Plan and zoning process would be really helpful.
- In unincorporated county, land is often not zoned correctly, and the process for community outreach and changing zoning takes 17 months, then 6 months for entitlement, then 9 to 12 months of permits. The developer needs to carry the cost of an environmental impact report (EIR) during this time, so you are looking at half a million dollars before you can even guarantee you can do a project. Maybe there can be an overlay in some areas where developers can get streamlined review, so it is a lot faster? Oakley has this, they just do the design review, and it has reduced the time and cost. This helps ensure that the landowners will sell to them, and they don't have to take out a high-interest land loan. The overlay zone could make certain areas "by-right" development areas.
- With the increase Regional Housing Needs Allocation (RHNA) to accommodate throughout the unincorporated county, racial equity should be prioritized, especially in terms of displacement. Is the project team thinking about how to frame the element around displacement, or thinking about zombie properties, how can housing policy be leveraged to prevent that?
- Has the County already submitted its Surplus Lands Act Inventory?

## November 3, 2021, Service Provider Focus Group

The service provider focus group took place on November 3, 2021. There were 10 participants representing 14 organizations that attended. The following discussion questions were posed to the focus group participants:

1. Who has the greatest need for housing in Contra Costa County in lower-income and other vulnerable communities?
2. What services have been most successful in serving vulnerable communities in Contra Costa County? What are those service providers doing right?
3. What gaps in services for the homeless or other vulnerable lower-income groups exist in Contra Costa County?
4. What are the biggest barriers to housing lower-income or vulnerable communities?
5. What resources do housing service providers need to further help lower-income and vulnerable populations in Contra Costa County?
6. Do you have any suggestions on policies or programs that the Housing Element could have that would help service providers in Contra Costa County?
7. Do you have any additional comments to share?

Questions and input received at the focus group included:

- Veterans are in a gray area because they have income coming in and therefore don't qualify for much assistance.



- For one provider's homeless programming, they have a HUD Section 8 program for veterans that also comes with case management. They have shelter beds, transitional housing, subsidies, mental health programs, among others.
- The most vulnerable population they serve beyond veterans are veteran seniors. Especially those who have poor credit or no credit who have no other assistance. They have vouchers available, but they have experienced issues with getting people to stay in homes.
- The main issue is more housing supply is needed.
- There is no low-barrier housing available out there. Low-barrier housing is housing that does not need to consider credit or legal history (some veterans aren't eligible for housing because of low credit or because of legal history or because they need housing references). Note that housing references cannot include shelters, etc.
- A provider of services in permanent supportive housing in west county reiterates the importance of prior comments. They serve people who are chronically homeless and have challenging physical and/or behavioral health issues or mental illness or substance abuse. They find that when there are a lot of issues going on that are problems in terms of housing stability, it is very difficult to get the level of care needed in the system. There isn't a continuum of services and housing that can help people stabilize and get them back into housing.
- There are also not enough options for housing near services and not enough housing that allows people to age in place.
- Doing housing first isn't feasible, they have to focus on doing everything they can to keep people in housing if it isn't working out because they have no available housing otherwise.
- A provider who oversees several shelters in the county sees a huge gap in meeting housing needs for clients who are aging (and specifically have cognitive decline). Something that is out of their scope of services at the shelter is cognitive decline because they need long-term housing with intensive care, and they don't have resources to provide that care.
- Another population that has a very hard time getting housed are 290s (registered sex offender) they often end up on the streets because of the limited opportunities they have for housing.
- Single men often fall through the cracks because even with a job, they cannot afford housing in the Bay Area because they are costed out, but they also cannot find enough help to be able to get good housing.
- The 18- to 24-year-olds are often left out. They can't be in shelters and cannot get vouchers. Some people think that foster care money will handle it, but they are often left out from a systemic standpoint.
- Agree, there definitely needs to be a coordinated effort to address the needs of young people. How do we get everyone to the table to speak with one another and work together?
- Wants to echo that there are these gaps in services for the youngest and oldest. Younger people don't qualify for much, if anything, and the older ones need extensive help. He works with a rescue mission and part of the work is to learn about other organizations so they can reach



out to other providers and see how to bridge gaps between different agencies.


- People with mental illness don't do well in big buildings where there are a lot of people. Love the tiny home models where people have their own places. Has had to try hard to get a place for veterans to have their own small home and not be in a big building, for example placed on a single family lot.
- When administering the rapid rehousing program keep getting referrals for people who are needing housing, but they aren't actually eligible. They're getting referrals for people who have really high needs that their program cannot serve. They're seeing families who need more than just housing. The housing first model is sometimes designed as housing last like all you need is housing. But so much more is needed to maintain housing. We need to help people increase their income and their organization doesn't help with that as they are only able to help with housing.
- Agrees that the housing first model is super difficult. We certainly need to house people but if it's not possible to get people an income due to addiction, mental health, family issues, etc., if you can't address the root of the problem then it's a revolving door.
- Works most with veterans. Rapid rehousing is different for veterans. While the name is the same, there are so many subsidies available to them, they don't need to have employment or good credit (it helps of course) but veterans also get social security, veterans' compensation, and some other income sources and so they have more income help. Housing first is a great idea, but it doesn't work if it's not sustainable.
- Wants to echo all the feedback so far. The Bay Area Rescue Mission has been providing services and shelter and support through their mandate from the gospel through working with people's relationship to themselves and god since 1965. They are committed to this mission and agree with the points made that you can give anyone a home but if you cannot provide them support, they will lose the housing again. The past couple of years have seen a significant increase in dual diagnosis, people with drug/alcohol addiction. There is so much that goes into supportive services and providing context and community. Rapid housing is not a long-term answer for these systematic problems.
- Has seen that there are so many barriers for families who do not have access to any voucher programs. They tend to have some income, but it isn't enough for permanent housing, so they live in their cars. But because they have "too much" income, they aren't able to get enough help to live in a home. They see families who have few barriers to getting real housing (no mental illness or addiction). There needs to be a place to identify who needs long-term housing, short-term housing, etc. so that we can define what groups exist and how to place them. One reason is that there is a dual-diagnosis requirement for some services. Some people need things like assistance with security deposits, first and last month's rent, etc., but don't need more deep services. How can we help families whose barriers are "less" than others?
- One of the communities in greatest need is the aging homeless community in the county. Seniors are losing their homes because their income is flat.



- They are seeing people come to their shelters where they need lots of help, they cannot supply through their services, and they have to turn people away.
- There is also a huge lack of affordability in terms of housing options and there is a lack of aftercare for people after they are housed.
- Also, people/families that are in a slightly higher-income bracket don't qualify for services due to income limits, but in reality, they still can't afford housing prices/costs in our area.
- Eviction history is also a big barrier to finding housing. An eviction on the record is almost impossible to overcome.
- Seniors are rapidly becoming part of the unhoused.
- White supremacy is a huge issue, such as with redlining, types of housing built, etc.
- As a provider, needs more from the system, still doesn't feel like he is part of a system that can get up stream and learn from each other to see what works, what others are doing to work. They're all a bunch of islands in the ocean that aren't connecting. Wishes that there was an in-house team at the County that could help them grow as a system together that is sustainable for the county and for them as providers. This "systems" refers to everyone who services vulnerable populations. It should have system measures like HUD does.
- All of the people at the focus group are service providers. What do we do with this information? How do they change how they are currently trying to serve all these different segments of the county population?
- Agree with all of the discussion so far. One solution is to increase In-Home Case Management support to follow clients once housed (in the right and sustainable housing placement).
- The Supportive Services for Veteran Families (SSVF) program is a great model to follow but for it to work we need to reduce the restrictions on accessing the funds and also need more funding to provide more long term case management and of course housing stock.
- Housing development should occur near public transportation.
- Echoes everything said so far. Their approach to homelessness prevention is more of a band-aid on an open wound where people come for emergency rental assistance. We need to start addressing homelessness, homeless prevention, and people who are couch surfing. We need to address this on a holistic level and not just focus on immediate solutions. Also, this isn't one size fits all. Each person has their own limitation. Her program offers assistance where they can help people with first and last month rent or giving some furniture. All organizations appear to do some of the things needed to solve these issues but they're all working on specific things. How do we bring everyone together? How do they approach the issue as a group and as a team so they can more thoroughly serve the community? Everyone can take a part. Instead, they are leaving the vulnerable as vulnerable.

### 3. Community Meetings

The County held a community workshop for the Housing Element update on Wednesday, February 9, 2022, from 5:30 p.m. to 7:00 p.m. via Zoom. County staff and consultants facilitated the workshop and 35 residents and



interested persons attended and participated. The format for the workshops was a presentation with an overview of the 6<sup>th</sup>-cycle Housing Element update and the County's approach and process, breakout sessions, and questions and answers.

The breakout sessions were based on five different topics (1) Sites Inventory, (2) Affordable Housing Funding, (3) Local Inclusionary Housing Ordinance and State Density Bonus Law, (4) Other Housing Element strategies, and (5) Fair Housing. There was a sixth breakout room reserved for Spanish-speaking participants; however, no one in need of translation attended. Participants were able to select their breakout room based on their topic of interest. Facilitators engaged participants in the breakout sessions with structured questions to share their knowledge, perspectives, and ideas.

In the Sites Inventory breakout session, participants were asked the following questions:

1. What they think makes a site good for housing as opposed to other types of land use? What do you think makes a good housing site suitable for affordable housing, as opposed to market rate housing?
2. Do you have ideas for specific sites and suggestion for areas or communities?
3. What are the challenges with including properties in a sites inventory?

Participants expressed that a good housing site is in proximity to resources in an attractive and compatible environment. They proposed repurposing a shopping center plaza, publicly-owned sites, and vacant school sites as potential housing sites. Participants believed expected challenges for sites include existing structures, hazards, environmental justice principles, and differences in ideas and wants.

The Affordable Housing Funding breakout session participants were first informed of the amount the County typically receives from state and federal funding. From this, participants were asked the following questions:

1. Given this ongoing annual amount of \$20 million, where should the County prioritize funding of projects in unincorporated areas of the county?
2. Should there be a mandatory city match?
3. How should the County leverage our funding to maximize housing production?

Most of the discussion in this breakout room was questions for the County facilitator from participants. The participants had the following questions:

1. Why are we unincorporated, what is incorporated versus unincorporated?
  - a. The facilitator responded and there was a discussion.
2. Why is only the unincorporated county responsible for all this housing? Why aren't cities responsible?
  - a. The facilitator responded that each jurisdiction in the state, including all of the cities in Contra Costa County, also have a number of housing units to plan for.
3. In regard to the \$20 million, can it be used for preservation, acquisition, and rehabilitation?
  - a. The facilitator responded that the best funding would be CDBG, not sure if these funds can be used for those types of work. A certain percentage might count toward the number.



4. Is the County Housing Authority involved in these projects to combine more funds and resources?
  - a. A discussion followed about possibilities of working together.
5. Where do these funds come from? We have a problem with mass vacancies. Who holds the developer accountable, so the units are rented and not vacant?
  - a. The facilitator noted that the County and the developer enter into a regulatory agreement that determines who they rent to. Projects are monitored to ensure units are leased to tenants who meet income requirements.
6. Are all these funds to be used only in unincorporated Contra Costa?
  - a. The facilitator replied that no, these funds can be used in any part of the county except for the inclusionary housing fund, which is just for the unincorporated area of the county.

The Local Inclusionary Housing Ordinance and State Density Bonus Law breakout session was structured around the following question:

1. What changes to the local Inclusionary Housing Ordinance would help meet Housing Element goals?

Participants suggested both removing the in-lieu fees and considering raising the fees. Participants recognized that higher-density multi-family housing can not be built just anywhere; however, the County must look at sites where this type of housing makes most sense given that lower-income housing is lacking while there is a surplus of moderate and market-rate housing.

The Other Housing Element Strategies breakout session asked participants the following questions:


1. What Housing Element strategies do you think we should keep?
2. What new strategies do you think the County should support?
3. What about implementing new state laws (e.g., Senate Bill 9)?

Participants shared that there is a great need to maintain a variety of existing programs, including the anti-discrimination program, the residential displacement program, and emergency rental assistance. Participants proposed new strategies to increase the income spectrum for housing, including developing a housing community land trust program, providing financial assistance, repurposing underutilized commercial sites, and providing public education to vulnerable populations.

The Fair Housing breakout session was initiated with the following questions:

1. Have you or a relative experienced any barriers to obtaining housing in unincorporated Contra Costa County?
2. Have you or a family member or friend ever had to live in an overcrowded unit to afford housing in unincorporated Contra Costa County?
3. Can you easily change your housing situation if needed? If not, what prevents that change? What would make relocating easier?

At least one participant in this breakout session explicitly shared that they have faced barriers to obtaining housing and/or lived in an overcrowded unit in unincorporated Contra Costa County. Participants shared that the County's current fair housing issues include gaps in access to services, challenges in securing housing for those with negative rental records due to



evictions, and inequitable geographical distribution of affordable housing. To make housing more accessible, participants suggested improving community outreach and participation, acknowledging and remedying historic policies and practices that uphold housing inequities, like segregation, developing tenant protections, and being accountable for the progress of local fair housing policies in the county.

After the breakout sessions, participants rejoined the larger group and were directed to share their questions and comments through Zoom's chat feature. The City staff received and answered questions during the meeting as time allowed. Participants were provided the County's contact information in the case they had additional questions or comments.

## 4. Public Hearings

The County presented about the Housing Element update at the December 7, 2021, Board of Supervisors meeting. Staff and the consultant provided an overview of the Housing Element, updates on state housing law, and the RHNA allocation. The presentation of the item was to initiate the discussion of the Housing Element with the Board and the community and to answer any questions about the process.

Written comments were received ahead of the meeting from East Bay for Everyone. They commented on challenges and opportunities related to housing in the unincorporated county; the draft General Plan land use maps related to patterns of inequality; they suggested including a substantially greater number of units/sites than called for in the RHNA; described issues they saw with the consultant, PlaceWorks', work in southern California; noted State law regarding small and large sites suitable for meeting the lower-income RHNA; the suitability of Alamo Shopping Plaza as a Housing Element

site; provided suggestions related to Alamo, Castle Hill, Diablo, Blackhawk, and Unincorporated Walnut Creek, specifically density decontrol, equal upzoning in low and high income areas, SB 9 compliance, rezoning of properties where horse stables are located to allow high-density multi-family housing, gas stations, upzoning neighborhoods with racial covenants still existing in CC & Rs, upzoning on church properties; also provided suggestions related to specific sites for additional housing; and suggested some potential Housing Element policies.

During the meeting, which was held on Zoom, eight attendees provided comments on the Housing Element item. Comments and questions were also received from the supervisors. Comments are summarized below.

## Board of Supervisors Comments

- What is the General Plan update schedule?
- Could the County amend the Housing Element again with the rest of the General Plan?
- Policies and actions throughout the General Plan are interrelated.
- More density in lower-income communities than higher-income communities.
- What are other communities in the County saying about the Draft General Plan Land Use maps?
- Would like to see buildout broken out by community.
- The RHNA number seems impossible.
- There are lots of competing factors.






- Interested in SB 9. Is it beneficial to meet the RHNA on sites where units could actually be built?
- More infrastructure is needed in east county, including roads and water. Highway 4 is so congested. These are quality of life issues. Jobs are also needed in this area in addition to transportation improvements.
- Every community should have a complete mix of housing. Should house everyone from those who work at a doctor's office to janitors.
- San Ramon has a good jobs-housing balance.
- Be careful in the very high fire severity zone.
- Doesn't agree that historic communities can't accommodate more density.
- Would like to look at projects that have received in-lieu funding over the last decade – which projects paid the in-lieu fee rather than build on-site inclusionary units.
- Alamo, Parkmead (unincorporated Walnut Creek), and other areas have a lot of potential for housing due to their larger parcel size.
- North Richmond is one of the most polluted places in California.
- Alamo has good environmental quality.
- The County historically has been very segregated. The draft General Plan land use maps perpetuate bad patterns.
- Mentioned Mauzy School.
- Is the vision document going for abundance or shortage?
- What qualifies as good planning? Making it possible to live in as many places as they want?
- Don't put housing in fire zones.
- Facilitate transit so there are more places for housing.
- Grew up in Walnut Creek. Has seen almost entire high school class priced out of the area.
- Should allow more dense housing in single-family areas.
- Appreciates a comment from County staff that Diablo is small and unique with limited access.
- Diablo historic district should be preserved. Multiple commenters had this comment.
- Doesn't want more density on East Diablo Road corridor.

## Public Comments

- Referenced letter submitted by East Bay for Everyone. Current proposed General Plan Land Use maps are a failure.
- Affirmatively furthering fair housing is not just for the Housing Element it is for the whole General Plan and other land use activities.
- The current proposed General Plan Land Use maps focus housing in polluted areas.

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- Diablo is a more dangerous evacuation situation than Paradise, California.
  - Thinks there is no more single-family residential proposed in Diablo.
  - County should analyze development potential under SB 9.

## 5. Input Received Through General Plan Update Outreach

Through the larger Envision Contra Costa 2040 General Plan Update process that is underway, the County obtained additional input on housing-related needs in the county. This process has included over 100 public and semi-public meetings with community members, stakeholders, and public officials, most of which covered the topic of housing to varying degrees, as described below:

- Since March 2019, the County has held over 40 meetings focused on unincorporated communities to discuss community-specific issues. At these meetings, many community members expressed the need for more affordable housing in a variety of densities/housing types that is not concentrated in specific communities and neighborhoods. They also called for housing that is accessible to transit and other important services, like grocery stores. Residents would like the County to support non-traditional forms of housing that can increase affordability, like tiny homes and ADUs, and suggested that the County inventory vacant and/or public land that is available for affordable housing development. They would like the County to increase availability of housing-related programs, like first-time homebuyer programs. They also consistently

called for more action to shelter and provide needed services to unhoused people, while also avoiding gentrification and displacement.

- In May 2019, the County held three open houses, one each in the west, east, and central parts of the county. The purpose was to hear from residents about key issues that will be addressed through the Envision Contra Costa 2040 project, including mobility, housing, environmental justice, community health, economic development, and safety and resiliency. The two-hour meetings were organized in an open house format to allow residents to participate at their own pace. At the sign-in table, attendees were provided with an informational handout about Envision Contra Costa 2040, a worksheet, and a comment card. The worksheet corresponded with six stations placed around the room with boards presenting key background information on each topic. Each station was staffed by a facilitator who recorded comments from the participants, answered questions, and sought feedback to gauge community perspective on these issues.

Open house participants at the housing station reported that housing challenges generally stem from high rental costs, housing inequity, and strict permitting requirements that increase new construction costs. Residents felt that supportive housing for people with mental illnesses, accessible housing for disabled people and seniors, and low-income housing were in especially short supply. They recommended that the County promote ADUs, tiny homes, smaller lot sizes, “age-in-place” housing, and multi-family housing to address these issues. Participants also indicated that the County should encourage rent control, fair housing law practices, and a balanced jobs to housing ratio. Residents also suggested that the County address homelessness by focusing on



mental health services and supporting a variety of housing types, including transitional, supportive, and affordable mobile units.

- Between November 2019 and February 2021, the County conducted five meetings focused on the topic of environmental justice, which included the subtopic of access to safe and sanitary housing. During these meetings, participants expressed that preserving and expanding affordable housing in disadvantaged communities is important. Furthermore, participants would like to see tenants' rights be protected and avoid future displacements or rent hikes for residents living in these communities. Participants requested that policies call out a diverse set of options for alternative forms of affordable housing. Participants also recommended that the County partner with a range of agencies on housing-related policies and actions. Residents think that there needs to be zero-interest financing for low-income and disadvantaged community residents who need air conditioners, solar panels, and other equipment. Residents advised the County to prioritize infill residential development to help preserve the character of their neighborhoods. Participants also suggested there be robust policy guidance about meeting the housing needs of homeless individuals.

Through the Envision Contra Costa 2040 process, the County has also held nine meetings with the Sustainability Commission, eight meetings with the Planning Commission, five meetings with the Board of Supervisors Sustainability Committee, and meetings with all 13 Municipal Advisory Councils, during which housing issues were discussed in the context of the General Plan. Further, County staff met with over 20 community-based organizations reflecting a range of community interests in the county, including housing.

## 6. Relationship to the General Plan

The 2023-2031 Housing Element is a key component of the County's General Plan. The County of Contra Costa adopted its General Plan in 1991 (and made some updates in 2005) which includes the following elements: Land Use; Growth Management; Transportation and Circulation; Housing; Public Facilities/Services; Conservation; Open Space; Safety; and Noise. The County is currently partway through a comprehensive General Plan update. All of the other elements of the General Plan are currently being updated for consistency with recent updates to State law, including those related to environmental justice, wildfires, and hazards. Internal consistency between the Housing Element and other elements will be confirmed through the comprehensive update.

After adoption of the comprehensive General Plan update, the County will ensure consistency between General Plan elements so that goals and policies introduced in one element are consistent with other elements. If it becomes apparent that over time, changes to any element are needed for internal consistency, such changes will be proposed for consideration by the Planning Commission and County Board of Supervisors.

# 6.2 Housing Needs Assessment

This section analyzes the demographic, socioeconomic, housing characteristics, and market data of Contra Costa County and the unincorporated county to determine the nature and extent of housing needs for current and future residents.

The data sources used to compile the Housing Needs Assessment include the 2020 Census, the 2015-2019 American Community Survey (ACS) 5-year estimate conducted by the U.S. Census Bureau, the California State Department of Finance (DOF), and supplemented with current market data and secondary sources of information. The Association of Bay Area Governments (ABAG) prepared a data package that was approved by the California Department of Housing and Community Development (HCD) for use in ABAG Housing Elements. It is noted in the data source at the bottom of tables in this section where this data package was used.

## A. POPULATION AND EMPLOYMENT TRENDS

### 1. Population Trends

Contra Costa County is the ninth-most populous county in California, with approximately 1,153,561 residents per the 2020 DOF population estimates. 104,536 new residents have arrived in the county (a 9-percent increase) since 2010. Contra Costa County projects that the county will have 1,224,400 residents by 2030 and 1,338,400 by 2040 (see Table 6-1).

The DOF estimated the 2020 population of the unincorporated area of Contra Costa County was 174,257, representing an increase of 10 percent since 2010, tracking with the increase in the county as a whole. In Table 6-1, the 2010 and 2020 population and population projections for 2030 and 2040 for unincorporated Contra Costa and the entire county are shown.

**TABLE 6-1 POPULATION GROWTH TRENDS AND PROJECTIONS**

Geography	2010	2020	Projected 2030	Projected 2040	Percentage Change between 2010 and 2040
Total Unincorporated	159,785	174,257	173,500	182,500	+14.2%
Total County	1,049,025	1,153,561	1,224,400	1,338,400	+27.6%

Data Source: California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State — January 1, 2011-2021. Sacramento, California, May 2021. (ABAG Housing Element Data Package 2021).

When looking at the demographic profile of the unincorporated area as a whole, it is fairly similar to the entirety of Contra Costa County, but trending a little older and whiter than the county as a whole. However, the unincorporated communities vary significantly in terms of key demographic characteristic, such as racial/ethnic composition, age, and sex. Table 6-2 shows housing tenure by household type (owners versus renters) and Table 6-3 shows race and ethnicity in the unincorporated county.

Between 2000 and 2019, the White population decreased by 26.2 percent, and the Black or African American population decreased by 14.3 percent. The Hispanic or Latino population increased by 58.8 percent, the Asian population increased by 40 percent, and the “other” population category increased by 400 percent.



A community's current and future housing needs are partly determined by the age characteristics of residents. Typically, each age group has distinct lifestyles, family type and size, incomes, and housing preferences. As people move through each stage of life, their housing needs and preferences also change. As a result, evaluating the age characteristics of a community is important in determining the housing needs of residents.

Table 6-4 provides the age characteristics of residents in the unincorporated portion of the county. Between 2010 and 2019, the largest percentage increase in age groups was for the 65 to 74 age group. The second-largest percentage increase was in the 75 to 84 age group, highlighting a greying population.

A high proportion of young adults generally indicates a need for rental units and first-time homebuyers or first move-up opportunities, including condominiums, town homes, or single-family homes. Middle-age residents typically occupy larger homes and are usually at the peak of their earning power. The U.S. Department of Housing and Urban Development (HUD) and the Comprehensive Housing Affordability Strategy (CHAS) show that senior residents (age 62 and older) in unincorporated Contra Costa County are mostly homeowners, with 86 percent owning homes and 14 percent renting (see Table 6-2).

**TABLE 6-2 HOUSING TENURE BY HOUSEHOLD TYPE IN UNINCORPORATED CONTRA COSTA COUNTY**

	Married-Couple	House-holders Living Alone	Female-Headed House-holds	Male-Headed House-holds	Other non-Family House-holds	Seniors	Total
Owner Occupied	28,251	7,625	3,809	1,912	1,958	14,687	58,242
	48.5%	13.1%	6.5%	3.3%	3.4%	25.2%	100.0%
Renter Occupied	7,318	4,747	2,939	1,113	1,870	2,456	20,443
	35.8%	23.2%	14.4%	5.4%	9.1%	12.0%	100.0%

For data from the Census Bureau, a “family household” is a household where two or more people are related by birth, marriage, or adoption. “Non-family households” are households of one person living alone, as well as households where none of the people are related to each other. For the purposes of this table, senior households are those with a householder who is aged 62 or older.

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25011 and U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) ACS tabulation, 2013-2017 release. (ABAG Housing Element Data Package 2021).

Nationwide trends, however, indicate that as the baby boom generation ages, the demand for move-down housing or specialized residential developments, such as assisted-living facilities or active adult communities, will continue to grow. Input from service providers who work with seniors in the unincorporated county confirms this assumption.



**TABLE 6-3 RACE AND ETHNICITY IN UNINCORPORATED CONTRA COSTA COUNTY**

Year	Percentage White	Percentage Hispanic or Latino	Percentage Asian	Percentage Black or African American	Percentage Other*
2000	65%	17%	10%	7%	1%
2010	55%	23%	12%	6%	4%
2019	48%	27%	14%	6%	4%
% Change between 2000 and 2019	-26.2%	+58.8%	+40.0%	-14.3%	+400.0%

\* Includes American Indian, Native Alaska, Native Hawaiian, other Pacific Islanders, 'other' race, and persons of two or more races.

Data Source: U.S. Census Bureau, Census 2000, Table P004; U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B03002 (ABAG Housing Element Data Package 2021).

**TABLE 6-4 POPULATION BY AGE IN UNINCORPORATED CONTRA COSTA COUNTY**

Age Group	2010	2019	Percentage Change between 2010 and 2019
Age 0-4	9,394	9,355	- <1%
Age 5-14	21,864	22,907	+4.7%
Age 15-24	19,451	21,393	+9.9%
Age 25-34	18,019	20,937	+16.1%
Age 35-44	21,313	23,860	+11.9%
Age 45-54	26,881	25,750	-4.2%
Age 55-64	22,132	25,447	+14.9%
Age 65-74	12,279	16,975	+38.2%
Age 75-84	6,073	7,887	+29.8%
Age 85+	2,379	2,983	+25.3%
<b>Total</b>	<b>159,785</b>	<b>177,494</b>	<b>+11.0%</b>

Data Source: U.S. Census Bureau, Census 2010 SF1, Table P12; U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B01001 (ABAG Housing Element Data Package 2021).



## 2. Employment Trends

Employment has an important impact on housing needs. Different jobs and income levels determine the type and size of housing a household can afford. Employment growth in the region also typically results in an increase in housing demand, particularly in areas that function as a “bedroom community.”

Contra Costa County has a fairly fast-growing workforce, with growth in its employment base driven primarily by the need to provide health, education, and professional services to an increasing local population. Between 2010 and 2020, there was a 13.7-percent increase in employment in unincorporated Contra Costa County, and there is a projected 16-percent increase in employment between 2010 and 2040 in unincorporated Contra Costa County. ABAG expects that Contra Costa County will continue to provide “bedroom communities” for the workforce of other Bay Area counties. The county is expected to gain an estimated 65,530 more employed residents than jobs between 2020 and 2040. ABAG estimates that unincorporated Contra Costa County will add approximately 2,850 new jobs between 2020 and 2040. Table 6-5 shows employment trends in Contra Costa County between 2010 and 2040 projections.

**TABLE 6-5 EMPLOYMENT GROWTH TRENDS AND PROJECTIONS**

Geography	2010	2020	Projected 2030	Projected 2040	Percentage Change between 2010 and 2040
Total Unincorporated*	69,890	78,370	78,800	81,220	+16%
Total County	455,540	526,530	552,720	592,060	+30%

Data Source: ABAG’s Plan Bay Area 2040 (ABAG Housing Element Data Package 2021).

Table 6-6 shows the types of occupations held by residents in unincorporated areas and the county as a whole. According to the ACS, the two largest occupational categories for both the county and unincorporated areas were “Health & Educational Services” and “Financial & Professional Services.” These categories accounted for 28.1 and 25.8 percent of employed residents in the county’s unincorporated areas, respectively. Relatively higher-paying jobs are in both categories, except for certain sales positions, translating into higher incomes for the residents engaged in these activities.

**TABLE 6-6 EMPLOYMENT PROFILE**

Occupations of Residents	Unincorporated County		Total County	
	Persons	Percentage	Persons	Percentage
Agriculture & Natural Resources	735	0.8%	3,720	0.7%
Construction	7,481	8.6%	39,996	7.2%
Financial & Professional Services	22,521	25.8%	138,321	24.7%
Health & Educational Services	24,643	28.1%	174,990	31.3%
Information	2,243	2.6%	14,048	2.5%
Manufacturing, Wholesale & Transportation	13,112	15.0%	79,885	14.3%
Retail	8,957	10.2%	56,651	10.1%
Other	7,771	8.9%	51,755	9.3%
<b>Total</b>	<b>87,463</b>	<b>100%</b>	<b>559,366</b>	<b>100%</b>

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table C24030. (ABAG Housing Element Data Package 2021).

Table 6-7 details the 2021 Occupational Employment and Wage Statistics for jobs in Alameda and Contra Costa Counties. Wages range from the low end in food service (average \$38,872 annually) to the high wages of management



occupations (average \$158,446).<sup>1</sup> Contra Costa County's major employers include finance, government, medical, and heavy industry, as shown in Table 6-9. There are also significant service sector jobs.

**TABLE 6-7 WAGE STATISTICS FOR ALAMEDA AND CONTRA COSTA COUNTIES**

Occupational Title	Mean Annual Wage
Food Preparation and Serving	\$38,872
Healthcare Support	\$40,799
Farming, Fishing, and Forestry	\$42,154
Personal Care and Service	\$42,532
Building and Grounds Maintenance	\$48,311
Transportation and Material Moving	\$48,835
Production Occupations	\$51,926
Office and Administrative Support	\$55,056
Sales	\$59,555
Community and Social Service Occupations	\$68,136
Educational Instruction and Library	\$70,691
Protective Services	\$71,366
Arts, Design, Entertainment, Sports, and Media Occupations	\$77,908
Construction	\$79,163
Business and Financial Operations	\$97,088
Life, Physical, and Social Science	\$103,059
Architecture and Engineering	\$109,102
Healthcare Practitioners and Technical Occupations	\$121,183
Computer and Mathematical Occupations	\$124,151
Legal Occupations	\$146,544
Management	\$158,446

Data Source: These survey data are from the 2020 Occupational Employment and Wage Statistics (OEWS) survey. The wages have all been updated to the first quarter of 2021 by applying the US Department of Labor's Employment Cost Index to the 2020 wages.

**TABLE 6-8 MAJOR EMPLOYERS**

Employer Name	Location	Employee Size Class	Industry
Broadspectrum America	Richmond	500-999	Oil Refiners (manufacturers)
C&H Sugar Co	Crockett	500-999	Sugar Refiners (manufacturers)
Longs Drug Store	Walnut Creek	500-999	Drug Millers (manufacturers)
Los Medanos College	Pittsburg	500-999	Junior-Community College-Tech Institutes
Martinez Arts Outpatient Clinic	Martinez	500-999	Surgical Centers
Nordstrom	Walnut Creek	500-999	Department Stores
Oakley Union School District	Oakley	500-999	School Districts
Robert Half Intl	San Ramon	500-999	Employment Agencies & Opportunities
San Ramon Regional Medical Center	San Ramon	500-999	Hospitals
Santa Fe Pacific Pipe Lines	Richmond	500-999	Pipe Line Companies
Shell Oil Prod US Martinez	Martinez	500-999	Oil & Gas Producers
Sutter Delta Medical Center	Antioch	500-999	Hospitals
US Veterans Medical Center	Martinez	500-999	Outpatient Services
Chevron Research & Technology	San Ramon	5,000-9,999	Service Stations-Gasoline & Oil
Chevron	San Ramon	10,000+	Oil Refiners (manufacturers)

<sup>1</sup> <https://www.labormarketinfo.edd.ca.gov/data/oes-employment-and-wages.html>





Employer Name	Location	Employee Size Class	Industry
BART	Richmond	1,000–4,999	Transit Lines
Bio-Rad Laboratories	Hercules	1,000–4,999	Physicians & Surgeons Equip & Supplies-manufacturers
Chevron Richmond Refinery	Richmond	1,000–4,999	Oil Refiners (manufacturers)
Contra Costa Regional Med Center	Martinez	1,000-4,999	Hospitals
John Muir Health Concord	Concord	1,000-4,999	Hospitals
Kaiser Permanente Antioch	Antioch	1,000-4,999	Hospitals
Kaiser Permanente Martinez	Martinez	1,000-4,999	Clinics
Kaiser Permanente Walnut Creek	Walnut Creek	1,000-4,999	Hospitals
La Raza Market	Richmond	1,000-4,999	Grocers-Retail
USS Posco Industries	Pittsburg	1,000-4,999	Steel Mills (manufacturers)

Data Source: California Employment Development Department (2021)

Contra Costa County, WCCUSD, MDUSD???Based on 2020 data from Contra Costa County, a total of 526,530 Contra Costa County residents were in the labor force, with the unemployment rate estimated at 7.7 percent. Given this estimate is based on a five-year average and recent employment growth, the actual unemployment rate is anticipated to be lower than 7.7 percent. According to the State Employment Development Department, the unemployment rate in the county was 6.7 percent in July 2021. Table 6-9 shows the employment trends and projections by countywide, unincorporated county, and individual cities.

**TABLE 6-9 EMPLOYMENT TRENDS AND PROJECTIONS – CONTRA COSTA COUNTY**

Area Name	2010	2020	2030	2040
Unincorporated County	69,890	78,370	78,800	81,220
Antioch	40,900	47,110	48,550	51,190
Brentwood	19,360	21,910	22,210	23,050
Clayton	4,960	5,470	5,420	5,400
Concord	57,230	64,960	74,460	85,510
Danville	18,240	20,410	20,450	20,970
El Cerrito	11,360	12,870	13,070	13,590
Hercules	11,740	15,080	17,000	19,330
Lafayette	10,330	11,770	12,010	12,540
Martinez	17,110	19,080	19,090	19,570
Moraga	6,470	7,330	7,440	7,730
Oakley	14,180	17,930	19,960	22,470
Orinda	6,970	7,840	7,910	8,170
Pinole	8,280	9,490	9,750	10,240
Pittsburg	26,090	31,860	34,500	37,940
Pleasant Hill	16,000	17,900	17,950	18,460
Richmond	42,490	50,680	53,830	58,280
San Pablo	11,460	13,430	14,050	15,010
San Ramon	32,820	38,060	39,470	41,870
Walnut Creek	29,660	34,980	36,800	39,520
<b>Contra Costa County - Total</b>	<b>455,540</b>	<b>526,530</b>	<b>552,720</b>	<b>592,060</b>

Data Source: ABAG Housing Element Data Package 2021



## B. HOUSEHOLD CHARACTERISTICS

Income level and cost burden are key factors in determining the type of housing needed by the residents of unincorporated Contra Costa County. This section details the various household characteristics affecting housing needs. The Census defines a “household” as any group of people occupying a housing unit, including single persons living alone, families related through

marriage or blood, or unrelated persons that share living quarters. Table 6-10 shows that in unincorporated Contra Costa County, 20.1 percent of the households are single persons living alone, 58 percent are families, and 21.9 percent are unrelated persons sharing living quarters. Persons living in retirement or convalescent homes, dormitories, or other group living situations are not considered households. Household characteristics are important indicators of the type and size of housing needed in a community.

**TABLE 6-10 HOUSEHOLD TYPE**

Geography	Female -Headed Family Households	Male – Headed Households	Married – Couple Family Households	Other Non-Family Households	Single – Person Households	Total
Unincorporated Contra Costa County	6,748	3,025	35,569	3,828	12,372	61,542
	11.0%	4.9%	57.8%	6.2%	20.1%	100.0%
Contra Costa County	48,256	19,180	217,370	23,731	86,232	394,769
	12.2%	4.9%	55.1%	6.0%	21.8%	100.0%
Bay Area	283,770	131,105	1,399,714	242,258	674,587	2,731,434
	10.4%	4.8%	51.2%	8.9%	24.7%	100.0%

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B11001. (ABAG Housing Element Data Package 2021).

HCD publishes area median incomes on an annual basis, based on HUD data. The goal of the Housing Element is to accommodate the needs of all households across all income groups. The median income for a Contra Costa household of four in 2021 is \$125,600. Table 6-11 shows income levels for extremely low, very low, low, and moderate incomes in the county. Table 6-12 shows housing tenure (owner- versus renter-occupied households) by geographic area and Table 6-14 shows workers by earnings for unincorporated Contra Costa.

**TABLE 6-11 2021 INCOME LEVELS – CONTRA COSTA COUNTY**

Household size	Extremely low	Very low	Low	Moderate
1	\$28,800	\$47,950	\$76,750	\$105,500
2	\$32,900	\$54,800	\$87,700	\$120,550
3	\$37,000	\$61,650	\$98,650	\$135,650
4	\$41,100	\$68,500	\$109,600	\$150,700
5	\$44,400	\$74,000	\$118,400	\$162,750

Data Source: U.S. Department of Housing and Urban Development, 2021. (ABAG Housing Element Data Package 2021).



**TABLE 6-12 HOUSING TENURE**

Geography	Owner Occupied	Renter Occupied	Total
Unincorporated Contra Costa	43,555	17,987	61,542
	70.8%	29.2%	100.0%
Contra Costa County	260,244	134,525	394,769
	65.9%	34.1%	100.0%
Bay Area	1,531,955	1,199,479	2,731,434
	56.09%	43.91%	100.0%

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25003. (ABAG Housing Element Data Package 2021).

**TABLE 6-13 WORKERS BY EARNINGS, BY JURISDICTION AS PLACE OF WORK AND PLACE OF RESIDENCE - UNINCORPORATED CONTRA COSTA**

Earnings Group	Place of Residence	Place of Work
Less than \$9,999	8,667	4,877
\$10,000 to \$24,999	12,650	6,348
\$25,000 to \$49,999	19,356	10,169
\$50,000 to \$74,999	12,656	7,339
\$75,000 or more	31,832	15,587
<b>Totals</b>	<b>85,161</b>	<b>44,320</b>

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data 2015-2019, B08119, B08519. (ABAG Housing Element Data Package 2021).

## 1. Existing Households by Income and Tenure

In 2019, the countywide median income was approximately \$99,700. However, homeowners earn a median income of \$122,227 – or about 86 percent higher than the renter median income of \$65,583 (Table 6-11). As is the case for many communities, renter households are most predominant in income levels below \$75,000; homeowners are most predominant in the higher-income groups. Income is the most important factor affecting the housing opportunities available to a household, determining the ability to balance housing costs with other basic necessities of life. Housing choices, such as tenure (owning versus renting), and location of residence are very much income-dependent.

In the unincorporated county, approximately 13.2 percent of the households are extremely low income, as defined by HUD (households earning 30 percent or less of median family income (MFI). ABAG projects an increase in the population of 9.8 percent between 2020 and 2040. Presuming extremely low-income households continue to be 13.2 percent of the population, then by 2040, there will be 25,256 extremely low-income households in the unincorporated area.

Table 6-14 shows the breakdown of households in the unincorporated county by income and tenure. Table 6-15 shows household size by tenure.



**TABLE 6-14 HOUSING BY TENURE AND INCOME - UNINCORPORATED COUNTY**

Housing Type	Extremely Low-Income Households	Very Low-Income Households
Rental	4,601	3,031
Ownership	3,591	3,993
<b>Total</b>	<b>8,192 (13.2%)</b>	<b>7,024 (11.3%)</b>

Data Source: U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) ACS tabulation, 2013-2017 release

**TABLE 6-15 HOUSEHOLD SIZE BY TENURE - UNINCORPORATED COUNTY**

Group	Owner Occupied	Renter Occupied	Total
1-Person Household	7,625	4,747	12,372
2-Person Household	16,175	4,649	20,824
3-Person Household	7,429	3,187	10,616
4-Person Household	6,967	2,982	9,949
5 or More Person Household	5,359	2,422	7,781
<b>Totals</b>	<b>43,555</b>	<b>17,987</b>	<b>61,542</b>

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25009. (ABAG Housing Element Data Package 2021).

## 2. Overpaying for Housing

Because of the high cost of housing in the Bay Area, many households overpay for housing. According to HUD, households should spend less than 30 percent of their income on housing, including utilities, taxes, and insurance. However, an estimated 19.8 percent of the households in Contra Costa County have a cost burden of more than 30 percent. Approximately

15.1 percent have a cost burden of 50 percent or more. Table 6-16 outlines the cost burden by income level in the unincorporated county.

**TABLE 6-16 COST BURDEN BY INCOME LEVEL - UNINCORPORATED COUNTY**

Income Group	0%-30% of Income Used for Housing	30%-50% of Income Used for Housing	50%+ of Income Used for Housing
0%-30% of AMI	1,441	1,367	4,633
31%-50% of AMI	2,368	2,372	2,261
51%-80% of AMI	3,518	2,393	1,203
81%-100% of AMI	3,157	1,595	486
Greater than 100% of AMI	28,376	4,466	731
<b>Totals</b>	<b>38,860</b>	<b>12,193</b>	<b>9,314</b>

Data source: U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) ACS tabulation, 2013-2017 release

## C. HOUSING STOCK CHARACTERISTICS

This section of the Housing Element addresses various housing characteristics and conditions that affect the living environment of residents. Housing factors evaluated include housing stock and vacancy rates, tenure, age and condition, housing costs and affordability, and overcrowded households.

### 1. Housing Type and Tenure

In 2020, single-family homes and multi-family dwelling units made up approximately 79.7 percent and 15.9 percent of the housing stock of the unincorporated county, respectively. According to the U.S Census Bureau's ACS 5-year estimates (2015-2019), the homeownership rate in unincorporated Contra Costa was 71 percent; 29 percent of homes were



renter-occupied (Table 6-17). Table 6-18 summarizes various characteristics of the housing stock in unincorporated areas of the county.

**TABLE 6-17 HOUSING TENURE**

Geography	Owner Occupied	Renter Occupied
Unincorporated Contra Costa County	43,555	17,987
Contra Costa County	260,244	134,525
Bay Area	1,531,955	1,199,479

Data source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25003. (ABAG Housing Element Data Package 2021).

**TABLE 6-18 HOUSING STOCK IN 2021 IN UNINCORPORATED CONTRA COSTA COUNTY**

Housing Type	Number of Units	% of Total
<b>Single-Family</b>	<b>51,696</b>	<b>79.7%</b>
Detached	48,669	75.1%
Attached	3,027	4.7%
<b>Multi-family</b>	<b>10,319</b>	<b>15.9%</b>
2-4 Units	2,711	4.2%
5+ Units	7,608	11.7%
<b>Mobile Homes/Other</b>	<b>2,816</b>	<b>4.3%</b>
<b>Total Units</b>	<b>64,831</b>	<b>100%</b>

Data Sources: California Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2021. Sacramento, California, May 2021.

## 2. Vacancy Rates

Vacancy rates are a useful indicator of the housing market's overall health and ability to accommodate new residents within the existing housing stock. Table 6-19 outlines vacancy rates by tenure according to the 2015-2019 ACS.

The ACS 5-year estimates for 2015-2019 indicate the countywide vacancy rate is an estimated 4.6 percent. The unincorporated county had a slightly higher vacancy rate (5.8 percent). The increase can be attributed to a higher percentage of recreational/occasional use units in unincorporated areas of the county, such as Bethel Island and Discovery Bay. As shown in Table 6-20, the vacancy rate was higher in the unincorporated county (26.1 percent) for homes in the seasonal or occasional use category compared to the countywide rate (11.5 percent) and the Bay Area rate (21.6 percent).

**TABLE 6-19 OCCUPANCY STATUS**

Geography	Occupied Housing Units	Vacant Housing Units	Vacancy Rate
Unincorporated Contra Costa	61,542	3,806	5.8%
Contra Costa County	394,769	18,950	4.6%
Bay Area	2,731,434	172,660	5.9%

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25002. (ABAG Housing Element Data Package 2021).

Of the 3,806 vacant housing units in unincorporated Contra Costa, 357 units are for rent, 563 units are for sale, 130 units are rented but not occupied, and 166 units are sold but not occupied. There are also 992 units that are for seasonal or occasional use. See Table 6-20 for a breakdown of vacant units by type in unincorporated Contra Costa County, Contra Costa County, and the greater Bay Area.

**TABLE 6-20 VACANT UNITS BY TYPE**

Geography	For Rent	For Sale	For Seasonal or Occasional Use	Other Vacant	Rented, Not Occupied	Sold, Not Occupied	Total
Unincorporated Contra Costa	357	563	992	1,598	130	166	3,806
	9.4%	14.8%	26.1%	42.0%	3.4%	4.4%	100.0%
Contra Costa County	4,321	2,012	2,188	8,469	741	1,219	18,950
	22.8%	10.6%	11.5%	44.7%	3.9%	6.4%	100.0%
Bay Area	41,117	10,057	37,301	61,722	10,647	11,816	172,660
	23.8%	5.8%	21.6%	35.7%	6.2%	6.8%	100.0%

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25004. (ABAG Housing Element Data Package 2021).

### 3. Housing Age and Condition

Housing age is an important indicator of housing condition within a community because, like any other tangible asset, housing is subject to gradual physical or technological deterioration over time. If not properly and regularly maintained, housing can deteriorate and discourage reinvestment, depress neighboring property values, and eventually impact the quality of life in a neighborhood. Thus maintaining and improving housing quality is an important goal for the County.

A general rule in the housing industry is that structures older than 30 years begin to show signs of deterioration and require reinvestment to maintain their quality. Unless properly maintained, homes older than 50 years require major renovations to remain in good working order.



The 2011 American Housing Survey found that in the Oakland/Fremont Metropolitan Statistical Area (MSA), an estimated 15,200 residential units had severe<sup>2</sup> physical problems, and 30,200 had moderate<sup>3</sup> physical problems. Unincorporated Contra Costa County has an estimated 6.4 percent of the total housing units in the Oakland/Fremont MSA. Therefore, an estimated 2,906 units have severe or moderate physical problems. The American Housing Survey estimates that an additional 22,000 occupied housing units may have other rehabilitation needs such as missing roofing material, holes in the roof, cracks in the foundation, or broken/boarded windows. More recent ACS and American Housing Survey data are unavailable at the MSA or more specific scale. Per an interview with the county Building Department in December 2021, approximately 20 residential units per year in the unincorporated county are not inhabitable and are in imminent need of replacement.

Table 6-21 provides a breakdown of the housing stock in unincorporated areas of the county by the year built.

**TABLE 6-21 HOUSING AGE-YEAR BUILT BY TENURE IN UNINCORPORATED CONTRA COSTA COUNTY**

Year Built	Number of Units	% of Total Occupied Units
Built 1939 or earlier	4,684	7.2%
Built between 1940 - 1959	15,654	24.0%
Built between 1960 - 1979	17,788	27.2%
Built between 1980 - 1999	18,229	27.9%
Built between 2000 - 2009	6,809	10.4%
Built 2010 or later	2,184	3.3%
<b>Total Units</b>	<b>65,348</b>	<b>100.0%</b>

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25034. (ABAG Housing Element Data Package 2021).

Based on the data on housing age, there is a strong likelihood that many homes will require reinvestment or renovations to ensure the housing stock is maintained in good working order. That is because roughly 60 percent of

<sup>2</sup> A unit has severe physical problems if it has any of the following five problems: Plumbing. Lacking hot or cold piped water or a flush toilet, or lacking both bathtub and shower, all inside the structure (and for the exclusive use of the unit, unless there are two or more full bathrooms). Heating. Having been uncomfortably cold last winter for 24 hours or more because the heating equipment broke down, and it broke down at least three times last winter for at least 6 hours each time. Electric. Having no electricity, or all of the following three electric problems: exposed wiring, a room with no working wall outlet, and three blown fuses or tripped circuit breakers in the last 90 days. Hallways. Having all of the following four problems in public areas: no working light fixtures, loose or missing steps, loose or missing railings, and no working elevator. Upkeep. Having any five of the following six maintenance problems: (1) water leaks from the outside, such as from the roof, basement, windows, or doors; (2) leaks from inside structure such as pipes or plumbing fixtures; (3) holes in the floors; (4) holes or open cracks in the walls or ceilings; (5) more than 8 inches by 11 inches of peeling paint or broken plaster; or (6) signs of rats in the last 90 days.

<sup>3</sup> A unit has moderate physical problems if it has any of the following five problems, but none of the severe problems: Plumbing. On at least three occasions during the last 3 months, all the flush toilets were broken down at the same time for 6 hours or more (see “Flush toilet and flush toilet breakdowns”). Heating. Having unvented gas, oil, or kerosene heaters as the primary heating equipment. Kitchen. Lacking a kitchen sink, refrigerator, or cooking equipment (stove, burners, or microwave oven) inside the structure for the exclusive use of the unit. Hallways. Having any three of the four problems listed above. Upkeep. Having any three or four of the six problems listed above in “upkeep.” See also “Bars on windows of buildings,” “Common stairways,” “Equipment,” “External building conditions,” “Flush toilet and flush toilet breakdowns,” “Heating equipment and heating equipment breakdowns,” “Overall opinion of structure,” “Primary source of water and water supply stoppage,” “Water leakage during last 12 months,” “Selected deficiencies.

the housing stock was built before 1980 and another 28 percent was built between 1980 and 1999.

The Department of Conservation and Development currently offers the Neighborhood Preservation Program, which provides zero and low-interest loans for the rehabilitation of housing owned and occupied by lower-income households in the unincorporated areas.

## 4. Housing Costs and Affordability

The cost of housing is directly related to the extent of housing problems in a community. If housing costs are relatively high in comparison to household income, there will be a correspondingly higher prevalence of housing cost burden and overcrowding. This section summarizes the cost and affordability of the housing stock to county residents.

### Sales and Rental Data

Home sales prices vary significantly by location in Contra Costa County. Tables 6-22 and 6-23 show the results of a point-in-time sales and rental survey from October 2021. Home prices are generally higher in the central sub-region than in the east and west sub-regions. Condominiums or townhomes are typically more affordable than single-family homes and represent alternative homeownership opportunities, especially for low- and moderate-income households.

Like home sales prices, rental rates also vary by size and location of the units. The vacancy rate in unincorporated Contra Costa County was 5.8 percent, as compared to 4.6 percent in the county, and 5.9 percent for the

Bay Area (see Table 6-20). This trend indicates a tightening of the rental market. As long as vacancy rates remain below 5.0 percent, rents are likely to continue increasing.

**TABLE 6-22 2021 MEDIAN SALES PRICES IN UNINCORPORATED CONTRA COSTA COUNTY**

Housing Type	Number of Bedrooms	East	West	Central
		Median Price	Median Price	Median Price
Condos	1	\$238,000	\$269,500	N/A
	2	\$515,000	\$385,000	\$425,000
	3	\$467,500	N/A	\$510,000
	4	N/A	N/A	N/A
	5+	N/A	N/A	N/A
Single-Family Residential	1	\$502,500	\$385,112	N/A
	2	\$532,500	\$700,000	\$242,5000
	3	\$639,999	\$750,000	\$2,322,500
	4	\$750,000	\$7,480,00	\$2,400,000
	5+	\$799,000	\$780,000	\$2,525,000
Townhomes	1	N/A	N/A	N/A
	2	\$775,000	\$415,000	\$661,500
	3	\$775,000	\$520,000	\$2,200,000
	4	N/A	N/A	N/A
	5+	N/A	N/A	N/A

Source: Redfin, October 2021.

East includes Bay Point, Bethel Island, and Discovery Bay. West includes Montalvin Manor, Crockett, East Richmond Heights, El Sobrante, Kensington, North Richmond, Rodeo, and Tara Hills. Central includes Vine Hill, Pacheco, Diablo, Blackhawk, and Alamo.

N/A: Not Available. There were no listings that matched the number of bedrooms for that housing type.

Source: Codebook for the American Housing Survey, Public Use File: 1997-2011, March 2013





**TABLE 6-23 MEDIAN RENTS IN UNINCORPORATED CONTRA COSTA COUNTY\***

Number of Bedrooms	1 Bedroom	2 Bedrooms	3 Bedrooms
Monthly Rent	\$1,691	\$2,280	\$4,200

\*This represents the range of median rents across Unincorporated County.  
Data Source: RealPage.com and Zillow.com from October 2021

Table 6-24 shows rental costs in the Unincorporated County, Contra Costa County and the Bay Area based on a survey of listings that ranged in size from two to four bedrooms. As shown in Table 6-12, about 29.2 percent of Unincorporated County's households are renters. Typically, renters tend to live in multifamily units, the overall housing stock for the Unincorporated County is 14.9 percent multifamily and about 79.7 percent single family. Based on the stock, single family units may be used for renting. According to Real Page and Zillow in October 2021, the median rent for a 2 bedroom was \$2,280 while a 3 bedroom was \$4,200. According to Table X, in 2019, about 44.0 percent of households paid between \$1,500 – \$2,500 for rent. Additionally, according to the 2015-2019 ACS, between 2009 and 2019, the rent increased annually by 3.6 percent in the Unincorporated County, 4.5 percent in Contra Costa County and 5.5 percent in the Bay Area. Overall, rental trends in the Unincorporated Contra Costa County show a steady increase in price with the majority of households paying rents for 1- 2 bedroom units.

**TABLE 6-24 RENTAL PRICE RANGES**

Geography	Rent less than \$500	Rent \$500-\$1000	Rent \$1000-\$1500	Rent \$1500-\$2000	Rent \$2000-\$2500	Rent \$2500-\$3000	Rent \$3000 or more
Unincorporated Contra Costa	4.1%	11.3%	26.6%	25.9%	18.8%	7.0%	6.2%
Contra Costa County	5.4%	10.1%	23.9%	29.8%	17.5%	7.5%	5.8%
Bay Area	6.1%	10.2%	18.9%	22.8%	17.3%	11.7%	13.0%

Data Source: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B25056. (ABAG Housing Element Data Package 2021).

## 5. Housing Affordability by Household Income

Housing affordability can be inferred by comparing the cost of renting or owning a home in the county with the maximum affordable housing costs to households at different income levels. Taken together, this information can generally show who can afford what size and type of housing and indicate the type of households most likely to experience overcrowding or a housing cost burden.

In evaluating affordability, the maximum affordable price refers to the maximum amount that a household in the upper range of their respective income category can reasonably pay based on state income limits for the county. Households in the lower end of each category can afford less in comparison. Table 6-25 shows the annual income for extremely low-, very low-, low-, and moderate-income households by household size and the maximum affordable housing payment based on the state and federal



standards of 30 percent of household income. Cost assumptions for utilities, taxes, and property insurance are also shown.

The income and housing cost figures in Table 6-25 determine the maximum affordable home price and rent. The affordable housing prices and rents can be compared to current market prices for single-family homes, condominiums, and apartments to determine what types of housing opportunities a household can afford.

**Extremely Low-Income Households:** Extremely low-income households earn 30.0 percent or less of the county median family income. Given housing costs in Contra Costa County, extremely low-income households cannot afford any homes or apartments at market rates. Affordable housing for such households is generally limited to housing offered by the Housing Authority of Contra Costa County and non-profit housing providers. The County Board of Supervisors adopted a policy requiring housing developed with County subsidy to target some units to be affordable to extremely low-income households. The County HOME and Community Development Block Grant (CDBG) subsidized projects generally have 10.0 percent of the units at this level. However, some extremely low-income households are people experiencing homelessness or at risk of experiencing homelessness. These households may be under-employed or living on social security income. The Housing Authority provides additional housing opportunities through public housing, housing choice vouchers, and HUD Shelter + Care. Mental Health Services Act (MHSA) funds a rental subsidy program.

**Very Low-Income Households:** Very low-income households earn 50.0 percent or less of the county median family income. Given the relatively high costs of single-family homes and condominiums in the county, the housing choice of very low-income households is generally limited to the rental housing market.

As shown in Table 6-23, average apartment rents in the county are \$1,691 for a one-bedroom unit, \$2,280 for a two-bedroom unit, and \$4,200 for a three-bedroom apartment (RealPage.com and Zillow.com, October 2021). Rents are higher in Central County than in East or West County. After deductions for utilities, a very low-income household can only afford to pay between \$1,250 and \$1,929 in rent per month, depending on the household size. In practical terms, this means that a one-person household cannot afford an average-priced one bedroom without overpaying. A very small number of one-bedroom units may be affordable to very low-income households in some areas of the county.

**Low-Income Households:** Low-income households earn 80.0 percent or less of the county's median family income. The maximum affordable home purchase price for a low-income household ranges from \$360,686 for one person to \$556,420 for a five-person family.

A low-income household can afford to pay between \$1,919 and \$2,960 in rent each month, depending on household size. A low-income person and small low-income family households can theoretically afford a one-bedroom condo in selected communities. A low-income single person can afford the rent of a one-bedroom apartment. A small low-income family household can theoretically buy a low-end one-bedroom single-family house in West or East County. Central County remains largely unaffordable to low-income households.

**Moderate-Income Households:** Moderate-income households earn 81.0 to 120.0 percent of the county's median family income. The maximum affordable home price for a moderate-income household ranges from \$563,704 for a one-person household to \$869,641 for a five-person family. With a maximum affordable rent payment of between \$2,999 and \$4,626 per month, moderate-income households can afford many of the units listed for rent.



**TABLE 6-25 HOUSING AFFORDABILITY MATRIX (2022)**

Income Group	Income Levels		Monthly Housing Costs		Maximum Affordable Price	
	Annual Income	Affordable Payment <sup>2</sup>	Utilities Own/Rent	Taxes & Insurance <sup>3</sup>	Ownership <sup>4</sup>	Rental <sup>5</sup>
<b>Extremely Low</b>						
One Person	\$30,000	\$750	\$150	\$1,998	\$133,935	\$600
Small Family <sup>1</sup>	\$38,600	\$965	\$225	\$2,342	\$	\$740
Large Family	\$46,300	\$1,158	\$300	\$2,649	\$188,743	\$858
<b>Very Low</b>						
One Person	\$50,000	\$1,250	\$150	\$2,797	\$234,974	\$1,100
Small Family	\$64,300	\$1,608	\$225	\$3,369	\$302,177	\$1,383
Large Family	\$77,150	\$1,929	\$300	\$3,882	\$362,566	\$1,629
<b>Low</b>						
One Person	\$76,750	\$1,919	\$150	\$3,866	\$360,686	\$1,769
Small Family	\$98,650	\$2,466	\$225	\$4,741	\$463,605	\$2,241
Large Family	\$118,400	\$2,960	\$300	\$5,530	\$556,420	\$2,660
<b>Moderate</b>						
One Person	\$119,950	\$2,999	\$150	\$5,591	\$563,704	\$2,849
Small Family	\$154,200	\$3,855	\$225	\$6,960	\$724,661	\$3,630
Large Family	\$185,050	\$4,626	\$300	\$8,192	\$869,641	\$4,326

Data Source: Comprehensive Housing Affordability Strategy (CHAS) ACS tabulation, 2013-2017 release; HCD 2022 Income Limits.

Notes:

1. Small Family = three persons; Large Family = five or more persons
2. Monthly affordable payment based on payments of no more than 30% of household income
3. Property taxes are based on the average rate for Contra Costa County of 0.85%, and insurance is based on Zillow Affordability Calculator assumptions.
4. Affordable home price is based on down payment of 20% of annual household income, annual interest of 5.375%, a 30-year mortgage, and monthly payment of 30% of gross household income.
5. "Maximum Affordable Price, Rental" assumes tenant pays utilities. For a rental that includes the cost of utilities, maximum affordable price is shown in the column, "Affordable Payment."

Maximum affordable home prices are for illustrative purposes only and are not to be used for determining specific program eligibility.

## 6. Overcrowded Households

To avoid extraordinary housing costs, many lower-income households rent smaller apartments or live with friends or relatives to economize on housing costs. For the purposes of this report, overcrowding is defined as households with more than one occupant per room. Overcrowding can be either moderate or severe. Moderate overcrowding is 1.01 to 1.5 persons per room, and severe overcrowding refers to more than 1.5 persons per room. Housing overcrowding is a regional issue due to the lack of housing production versus demand, though local housing market factors and local socioeconomic issues influence the rate of overcrowding.

Table 6-26 shows that 3.2 percent of unincorporated county households are considered moderately overcrowded, and 1.4 percent of households are considered severely overcrowded. These percentages are similar to the county as a whole, where 3.5 percent of households are considered moderately overcrowded, and 1.5 percent of households are severely overcrowded.

**TABLE 6-26 OVERCROWDING SEVERITY**

Geography	1.00 occupants per room or less	1.01 to 1.50 occupants per room	1.50 occupants per room or more	Total
Unincorporated Contra Costa	58,724	1,978	840	61,542
	95.4%	3.2%	1.4%	100.0%
Contra Costa County	374,726	13,950	6,093	394,769
	94.9%	3.5%	1.5%	100.0%
Bay Area	2,543,056	115,696	72,682	2,731,434
	93.1%	4.2%	2.7%	100.0%

Data Source: U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) ACS tabulation, 2013-2017 release

## D. SPECIAL HOUSING NEEDS ANALYSIS

Certain groups have greater difficulty in finding decent, affordable housing due to their special needs or circumstances. Special circumstances may be related to one’s employment and income, family characteristics, disability, and household characteristics, among others. As a result, certain segments of residents in Contra Costa County may experience a higher prevalence of lower incomes, housing cost burden, overcrowding, or other housing problems.

“Special needs” groups include the following: senior households, mentally (including developmentally disabled) and physically disabled persons, large households, single-parent households (female-headed households with children in particular), unhoused persons, and agricultural workers. This section provides a detailed discussion of the housing needs facing each particular group and programs and services available to address their housing needs.

Determining the housing issues of special-needs groups is easier than defining the magnitude. The US Census Bureau’s ACS 5-year estimates (2014-2018 ) is the most current data available and the primary source used to estimate the size of a particular group. Recent information from service providers and government agencies is used to supplement the ACS data. Table 6-27 summarizes the special-needs groups residing in unincorporated areas of the county.



**TABLE 6-27 SPECIAL-NEEDS GROUPS IN UNINCORPORATED CONTRA COSTA COUNTY**

Special-Needs Group	Persons	Households	Percentage of Unincorporated County
Seniors (65 years and older)	---	17,143	27.8%
Owners	---	14,687	33.7%
Renters	---	2,456	13.6%
Disabled	19,743	---	11.3%
Developmentally Disabled	1,430	---	0.8%
Single-Parent Households		9,773	15.8%
Large Households	---	7,781	12.6%
Owners	---	5,359	8.7%
Renters	---	2,422	3.9%
Agricultural Workers	1,310	---	0.7%
Unhoused Persons	2,277	---	N/A

Data Sources:

Seniors: U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) ACS tabulation, 2013-2017 release

Disabled: Table S1810

Developmentally Disabled: U.S. Census Bureau, American Community Survey 5-Year Data (2015-2019), Table B18102, Table B18103, Table B18104, Table B18105, Table B18106, Table B18107.

Single Parent Households: Table B11001

Large Households: Table B25009

Agricultural Workers: U.S. Department of Agriculture, Census of Farmworkers (2002, 2007, 2012, 2017), Table 7: Hired Farm Labor

Unhoused Persons: ABAG and Contra Costa County Homeless Count have differing estimates. Unhoused number is for the entire County, and not just the unincorporated area. This may represent an undercount—please refer to discussion on the unhoused in Section 7 below.


(ABAG Housing Element Data Package 2021).

## 1. Senior Households

Senior households have special housing needs primarily due to three major concerns – physical disabilities/limitations, income, and health care costs. According to the CHAS data (2013-2017), 27.8 percent (17,143) of households in the unincorporated areas of Contra Costa County were headed by seniors, defined as persons 65 years and older. Some of the special needs of seniors are as follows:

- **Limited Income** - Many seniors have limited income available for health and other expenses. According to CHAS 2013-2017, because of their retired status, 30.0 percent of elderly households in unincorporated Contra Costa County are extremely (30 percent of AMI) or very low (30 to 50 percent of AMI).
- **Disabilities** - Of the senior population, 32.4 percent have a disability limitation. Because of physical and/or other limitations, senior homeowners may have difficulty carrying out regular home maintenance or repair activities.
- **Cost Burden** - Because of an increasing supply of affordable rental housing and low to no mortgage payments, 14.5 percent of senior households in the county experience housing cost burden.

Various programs can address the special needs of seniors, including, but not limited to, congregate care, supportive services, rental subsidies, and housing rehabilitation assistance. For the frail elderly, or those with disabilities, housing with architectural design features that accommodate disabilities can help ensure continued independent living. Elderly with mobility/self-care limitations also benefit from transportation alternatives. The Contra Costa County Advisory Council on Aging has adopted Best



Practice Development Guidelines for Multi-Family Senior Housing projects. These guidelines provide a framework to help guide the planning, design, and review of new senior housing developments in the county. The guidelines are an information tool for local community groups, architects, planners, and developers. Senior housing with supportive services can be provided for those who require assistance with daily living.

Social and supportive services are available in Contra Costa County through various agencies and organizations, including the County Area Agency on Aging and John Muir Senior Services Program. Multiple service providers offer an array of assistance, including Alzheimer's service programs, respite care, day programs, addiction services, financial assistance, and Meals on Wheels. The County Area Agency on Aging, in particular, offers information services for seniors on a variety of topics, including health, housing, nutrition, activities, help in home, employment, legal matters, transportation, financial or personal problems, paralegal advice, day activities for the disabled, and health screening.

## 2. Disabled Persons

Physical, mental, and/or developmental disabilities may prevent a person from working, restrict one's mobility, or make it difficult to care for oneself. Thus, disabled persons often have special housing needs related to potentially limited earning capacity, the lack of accessible and affordable housing, and higher health costs associated with a disability. Some residents suffer from disabilities that require living in a supportive or institutional setting.

The U.S. Census Bureau defines six types of disabilities: hearing, vision, cognitive, ambulatory, self-care, and independent living difficulties. According to the ACS, a total of 5,000 persons with disabilities resided in the unincorporated county areas, representing approximately 2.8 percent of the population. Countywide, persons with disabilities are more likely to live below the poverty line. The median wage for a disabled worker is \$31,327 versus \$48,691 for a non-disabled person.

Persons with developmental disabilities may have communication and learning disorders and may have a harder time learning basic life skills. A more in-depth analysis is provided in Section 3.

The living arrangement of disabled persons depends on the severity of the disability. Many live at home independently or with other family members. To maintain independent living, disabled persons may need assistance. This can include special housing design features for the disabled, income support for those who are unable to work, and in-home supportive services for persons with medical conditions among others. Services are typically provided by both public and private agencies.

Independent Living Resources (ILR), an area non-profit organization, is dedicated to helping people with any disability live everyday, independent lives. Services include accessibility services, assistive technology, information and referral, attendant referral, advocacy, housing assistance, and peer counseling services for persons with disabilities. ILR also offers advocacy services, which aim to maintain or increase access to services, benefits, and other social services. ILR advises clients regarding their rights under Section 504 of the federal Rehabilitation Act of 1972 for disabled individuals. ILR's housing referral services assist clients by maintaining a registry of accessible, adaptable, affordable apartments and houses, information on how to adapt



a living environment to a disabled individual's needs, and assistance obtaining a low-income housing subsidy.

However, there is a scarcity of appropriate housing for persons with disabilities. There is a need for more accessible, adaptable, and affordable housing. The County requires that all newly constructed housing using federal funds include 5 percent of the units to be accessible to the physically impaired and an additional 2 percent accessible to hearing and vision impaired. Federally funded rehabilitation projects must include accessibility improvements to the extent practicable. Due to the non-standard design and construction requirements, accessible units are more expensive to construct. In addition, the disabled tenants generally have incomes well below the extremely low-income limits. Therefore, they need extremely low rents or rent subsidies. The combination of higher construction costs and lower rent revenues require greater subsidies to provide these units. Housing choice is further limited because to mitigate the higher construction costs and lower rents, developers typically want to provide only one-bedroom units. This makes it difficult for a disabled individual with a live-in caregiver, or a family unit, to find suitable housing.


ILR of Contra Costa County and Solano County assists disabled residents in getting past housing barriers such as accessibility issues, high costs, and discriminatory practices. ILR provides information and education to help disabled residents navigate homeownership and renting. Even with these efforts, there is still a shortage of housing affordable to those whose income is limited to state and federal assistance programs. The County's Neighborhood Preservation Program makes accessibility improvements to owner-occupied homes.

The County has provided HOME funds to several projects in the county for disabled populations. The most recent projects include Heritage Point (North Richmond), Aspen Court (Pacheco), and Rodeo Gateway (Rodeo). The County Health Services Department, in cooperation with the Department of Conservation and Development (DCD), uses MSHA funds to support permanent supportive housing.

Transportation service for persons with disabilities is available through the regional transportation agencies, including County Connection LINK, East Bay Paratransit Consortium, Tri-Delta Transit Dial-A-Ride, and WestCAT Dial-A-Ride. Under these programs, door-to-door and dial-a-ride paratransit services are offered to individuals with disabilities.

### 3. Developmental Disabilities

Senate Bill 812, which took effect in January 2011, amended the State housing element law to require an evaluation of the unique housing needs of persons with developmental disabilities. A "developmental disability" is defined as a disability that originates before an individual becomes 18 years old, continues or can be expected to continue indefinitely, and constitutes a substantial disability for that individual. Developmental disabilities include mental retardation, cerebral palsy, epilepsy, and autism. This term does not include solely physical disabilities. There are a significant number of persons with developmental disabilities who also require adaptations in their housing to address physical disabilities. Most developmentally disabled persons can live and work independently within a conventional housing environment. More severely disabled individuals may require a supervised group living environment. Historically, the most severely affected individuals lived in an institutional environment where on-site medical attention and physical



therapy were provided. Many adults living in institutional settings have recently transitioned to community-based housing and services. Because developmental disabilities exist before adulthood, the first housing issue for the developmentally disabled is the transition from living at home with a parent/guardian as a child to an appropriate level of independence as an adult. As of January 2019, The State Department of Developmental Services (DDS) provides community-based services to approximately 346,000 persons with developmental disabilities and their families through a statewide system of 21 regional centers, four developmental centers, and two community-based facilities. The Regional Center of the East Bay (RCEB) serves Alameda and Contra Costa Counties. RCEB works in partnership with many individuals and other agencies to plan and coordinate services and support for people with developmental disabilities. A community-based Board of Directors, which includes individuals with developmental disabilities, family members, and community leaders, provides guidance and leadership.

In addition, the Housing Consortium of the East Bay (HCEB) provides housing outreach and support services; develops affordable housing, partners with other nonprofit and for-profit companies to secure set-asides within larger rental communities, and owns and operates special-needs affordable housing. HCEB staff, in partnership with the Regional Center of the East Bay, provided housing need support for individuals with developmental disabilities in Contra Costa County. By age, the estimated unincorporated developmentally disabled individuals are as follows: from 0 to 18 years, 727 individuals, and over age 18, there are 703 individuals. This total of 1,430 represents less than one percent of the unincorporated population.

There are a number of housing types appropriate for people living with a development disability: licensed and unlicensed single-family homes, Housing Choice vouchers (Section 8), and affordable housing with rent

restrictions may all be appropriate options. Unless an individual is able to receive significant subsidies, homeownership is not a viable option in Contra Costa County. Considerations for housing siting and development include proximity to transit and services, and physical accessibility to the unit. The County will continue to support housing developments and opportunities such as these:

- Magnolia House in Lafayette for older adults – owned by Las Trampas, Inc.
- ABC Apartments in El Sobrante – owned by California Autism Foundation
- Arboleda Apartments in Walnut Creek – owned by Satellite Affordable Housing Associates

## 4. Single-Parent Households

Because of their relatively lower incomes and higher living expenses, single-parent households are more likely to have difficulty finding affordable, decent, and safe housing. These households often require special consideration and assistance as a result of their greater need for affordable housing, accessible day care/childcare, health care, and other supportive services necessary to balance the needs of their children with work responsibilities.

An estimated 9,773 single-parent families lived in the unincorporated areas of the county according to the 2015-2019 ACS, representing 15.8 percent of all households (Table 6-10). Countywide, there were a total of 67,436 single-parent families, comprising 12.2 percent of all households in the county. Single-mother families still represent the majority (71.5 percent) of all single-





parent families countywide, with an increasing number of single fathers struggling to balance work and childcare. Supportive services for single- and low-income mothers are available through various non-profit organizations in the county, including Brighter Beginnings, Contra Costa Crisis Center (211database.org), and others. In addition, the County's Health Services Department offers many programs through its Family, Maternal & Child Health, and Community Wellness sections.

Battered women with children comprise a sub-group of single-parent households that are especially in need. In Contra Costa County, the largest agency serving victims of domestic violence is STAND! For Families Free of Violence. STAND! provides 24 emergency beds to battered women and their children in Contra Costa. STAND! also provides a variety of services to victims of domestic violence, including a crisis line, legal advocacy, employment assistance, and a batterer's treatment program.

The County's Alliance to End Abuse is a public/private partnership designed to reduce domestic violence, family violence, sexual assault, elder abuse, and human trafficking in Contra Costa County. The Alliance's objectives are implemented through a comprehensive, coordinated, and community-wide approach that interrupts the progressive cycle of violence. The Alliance develops and delivers direct services through its partners and advances policy change.

## 5. Large Households

Large households are defined as those consisting of five or more members. These households comprise a special-need group because of the often limited supply of adequately sized, affordable housing units in a community. To save for other basic necessities, such as food, clothing, and medical care,

it is common for lower-income large households to reside in smaller units, which frequently results in overcrowding. An estimated 7,781 large households lived in the unincorporated area, 31.1 percent (2,422) of which were renter households.

The housing needs of large households are ideally met through larger units. According to the ACS 5-year estimates, the unincorporated areas in the county had 43,555 owner-occupied and 17,987 renter-occupied units. However, many of these units are single-family homes and are expensive; they are not likely to be occupied by lower-income renter households. Therefore, overcrowding is more prevalent among large renter households.

To address overcrowding, communities can provide incentives to facilitate the development of affordable apartments with three or more bedrooms to meet the needs of large households. Oftentimes, the shortage of large rental units can be alleviated through the provision of affordable ownership housing opportunities, such as condominiums coupled with homeownership assistance and self-help housing (through Habitat for Humanity and other similar organizations). Also, Section 8 rental assistance provided by the Housing Authority of Contra Costa County (HACCC) can enable large families to rent units they otherwise cannot afford.

The HACCC currently manages 1,168 public housing units for families in the county. With a total of 248 units for families, Bayo Vista in Rodeo is the largest public housing development in the unincorporated areas.

## 6. Agricultural Workers

In 2019, the total gross value of agricultural products and crops in Contra Costa County was \$106 million, a significant increase since 2012 when the gross value was estimated at \$90 million (in 2012 dollars). According to the 2017 Census of Agriculture, 602 farms were operating in Contra Costa County, the majority (73.2 percent) of which were less than 50 acres in size (see Table 6-28).

Agricultural workers are traditionally defined as persons whose primary incomes are earned through permanent or seasonal agricultural labor. Permanent farm laborers work in the fields, processing plants, or support activities generally year-round. When the workload increases during harvest periods, the labor force is supplemented by seasonal labor, often supplied by a labor contractor. For some crops, farms may employ migrant workers, defined as those whose travel distance to work prevents them from returning to their primary residence every evening. Determining the actual size of the agricultural labor force is problematic because the government agencies that track farm labor do not consistently define farmworkers (e.g., field laborers versus workers in processing plants), length of employment (e.g., permanent or seasonal), or place of work (e.g., the location of the business or field).

**TABLE 6-28 FARM LABOR IN CONTRA COSTA COUNTY**

Length of Employment	2002	2007	2012	2017
Permanent	730	578	509	450
Seasonal*	1,874	1,295	1,540	860
<b>Total</b>	<b>2,604</b>	<b>1,873</b>	<b>2,049</b>	<b>1,310</b>

Data Sources: U.S. Department of Agriculture, Census of Farmworkers (2002, 2007, 2012, 2017), Table 7: Hired Farm Labor.

\* Farm workers are considered seasonal if they work on a farm less than 150 days in a year, while farm workers who work on a farm more than 150 days are considered to be permanent workers for that farm.

(ABAG Housing Element Data Package 2021).

According to the 2017 Agricultural Census, 1,310 workers were employed on farms in Contra Costa County, which is less than the 2,049 workers employed on farms in Contra Costa County in 2012. Based on discussions with various agencies, the County understands that the majority of the farmworker population in the unincorporated areas consists of resident-households requiring permanent affordable housing rather than migratory workers with seasonal housing needs. Contra Costa County's agricultural land is predominately located in far east Contra Costa County.

Farmworkers are generally considered to have special housing needs because of their limited income and the seasonal nature of their employment. While no local survey is available that documents the specific housing needs of farm labor in Contra Costa County, the Bureau of Labor Statistics states the median hourly wage for agricultural workers in 2020 was \$13.98 per hour (\$28,900 per year).



Under the County's Zoning Code, farmworker housing is permitted in the agricultural zoning districts (A-2, A-3, A-4, A-20, A-40, and A-80). Action HE-A7.6 is included in the Housing Plan to address full compliance with the Employee Housing Act for households of six or fewer.

To meet the housing needs of farmworkers, the County has provided CDBG and/or HOME funding for various developments in East County that provide affordable homeownership and rental opportunities for extremely low- and very low-income households, including many farmworker families. The County recognizes the importance of providing affordable housing to the farmworker population.

## 7. Unhoused Persons

The County Health Services Department (HSD) develops plans and programs to assist people experiencing homelessness throughout Contra Costa County. In 2014, the County published an update to the "Ending Homelessness in Ten Years: A County-Wide Plan for the Communities of Contra Costa County" (Ten Year Plan). The 2014 "Forging Ahead Towards Preventing and Ending Homelessness" plan aims to provide permanent housing and prioritize prevention through coordinated assessments, performance standards, and communication.

The Contra Costa Council on Homelessness, appointed by the Board of Supervisors, provides advice and input on services, program operations, and program development efforts in Contra Costa County for unhoused people. The Council on Homelessness establishes the local process for applying, reviewing, and prioritizing project applications for funding in HUD Homeless Assistance Grant Competitions, including the Continuum of Care (CoC) Program and the Emergency Solutions Grant (ESG) Program. The Contra

Costa Council on Homelessness provides a forum for the CoC to communicate about implementing strategies to prevent and end homelessness.

In January 2020, the County Homeless program staff, coordinating with Contra Costa Interfaith Housing (CCICH), conducted a count of people and families experiencing homelessness. This count identified 2,277 unhoused people throughout the county. Of those, 707 were sheltered, and 1,570 individuals were without shelter. Of the 2,277 unhoused, 217 were counted in unincorporated areas of the county. Due to the transient nature of unhoused people and the sometimes difficult to determine borders between the cities and county, it is difficult to precisely determine how many of the unhoused people are from, or sleeping in, the unincorporated county.

Additionally, based on 2021 data from Contra Costa County Health, Housing & Homeless Services about persons living in the unincorporated county accessing services through the CoC for calendar year 2020, patterns of service are shown. Out of the 7,102 households served, 27 lived in the unincorporated county.

Under the County's Zoning Code, emergency shelters and transitional housing designed to meet the needs of those experiencing homelessness or formerly unhoused people are permitted in all residential zones subject to a land use permit. In addition, these facilities are allowed in most commercial and industrial districts with a land use permit. Emergency shelters are permitted without a conditional (land) use permit or other discretionary action within the "C," General-Commercial Zoning District. See Table 6-29 for an inventory of facilities with available beds in the county.



**TABLE 6-29 CONTRA COSTA HOMELESS FACILITY INVENTORY**

Facility Name	Region	Target Population	Total Year-Round Beds
<b>Interim Housing (Emergency Shelters)</b>			
Bay Area Crisis Nursery	Concord	Young children, 0 to 5 years	20
Bay Area Rescue Mission	Richmond	Families with children	63
Calli House Youth Shelter	Richmond	Transition-age youth	15
Concord & Brookside Adult Interim Housing, including Special Needs, Veteran, and Respite	Concord and Richmond	Single men & women (152) veterans, and medically fragile (31 beds)	160
East County Shelter	Antioch	Single men & women	20
GRIP Emergency Shelter	Richmond	Families with children	75
Mountain View House	Martinez	Families with children	25
Rollie Mullen Center	Confidential	Domestic Violence	24
Winter Nights Shelter	Various	Mixed	0
<b>Transitional Housing</b>			
Bissell Cottages	Richmond	Transition Aged Youth	8
Contra Costa Trans Housing	N/A	N/A	73
Discovery House	Martinez	Substance Abuse Recovery	40
Maple House	N/A	Single Women	4
MOVE	Confidential	Domestic Violence	22
Pittsburg Family Center	Pittsburg	Families with children	20
Project Independence	Richmond	Transition Aged Youth	25
REACH Plus	Scattered Site	Mixed	86
Shepherd's Gate	Brentwood	Women with Children	25
Transitional Housing	Richmond	Mixed	19
Veteran Transitional Housing	N/A	Veterans	12



Facility Name	Region	Target Population	Total Year-Round Beds
<b>Permanent Housing</b>			
ACCESS	Scattered Site	Single men and women	88
Garden Parks Apartments	Pleasant Hill	HIV/AIDs, Small families	29
Giant Road Apartments	San Pablo	Single men and women	86
Hope Solutions	Richmond	Single men and women	152
HUD VASH	Scattered Site	Veterans	180
Idaho Apartments	Richmond	Single men and women	4
Lakeside Apartments	Concord	Single men and women	122
Mary McGovern House	Concord	Single men and women	13
Permanent Connections	Scattered Site	Single men and women	24
Project Coming Home	Scattered Site	Single men and women	42
Shelter Plus Care	Scattered Site	Mixed	413
Transitional Housing Partnership	Scattered Site	Mixed	34
Transitional Living Apartments	West Contra Costa County	Homeless Youth	13
Villa Vasconcellos	Walnut Creek	Senior men and women	70
West Richmond Apartments	Richmond	Single men and women	4

Data Source: Contra Costa County Homeless Program, 2014; updated 2021



As a means to help meet the special needs of the unhoused, the Contra Costa Crisis Center operates a 24-hour hotline (211 Contra Costa) that connects unhoused individuals and families to resources available in the county, including housing, job training, substance abuse treatment, mental health counseling, emergency food, healthcare, and other services.

HSD provides emergency and transitional shelter and supportive services designed to enable unhoused persons to achieve greater economic independence and a stable living environment. HSD coordinates the activities of and provides staff support to CCICH, which consists of representatives from local jurisdictions, homeless service providers, advocacy and volunteer groups, the business and faith communities, residents at large, and previously or currently unhoused persons.

## E. LOSS OF ASSISTED HOUSING

Affordability covenants and deed restrictions are typically used to maintain the affordability of publicly assisted housing, ensuring that these units are available to lower- and moderate-income households in the long term. Periodically, the county faces the risk of losing some of its affordable units due to expiration of covenants and deed restrictions. As the tight housing market continues to put upward pressure on market rents, property owners are more inclined to discontinue public subsidies and convert the assisted units to market-rate housing.

El Sobrante Silvercrest is a 179-unit senior complex in El Sobrante, and Park Regency is an 892-unit family complex in unincorporated Walnut Creek. They are at risk of converting to market rate within ten years of the beginning of the Housing Element planning period, or 2033. El Sobrante Silvercrest receives HUD funding to allocate 134 units for lower-income families. The

Park Regency development allocates 49 affordable units for lower-income seniors in exchange for assistance through the County tax-exempt bond program. The affordability restriction on El Sobrante Silvercrest is set to expire in 2032 and for Park Regency in 2022. The analysis below provides the options for preserving and/or replacing the affordable units in the two complexes. Table 6-30 lists all assisted projects with terms with expiration dates for the government subsidies in the unincorporated County.

**Preservation and Replacement Options:** To maintain the existing affordable housing stock, the County must either preserve the existing assisted units or replenish the affordable housing inventory with new units. Depending on the circumstances of at-risk projects, different options may be used to preserve or replace the units. Preservation options typically include: (1) transfer of project to non-profit ownership; (2) providing rental assistance to tenants using non-federal funding sources; (3) issuing tax-exempt bonds for refinancing; and (4) facilitating the purchase of affordability covenants. With regard to replacement, the most direct option is the development of new assisted multi-family housing units. These options are described herein, specifically in relation to the preservation/replacement of at-risk units in El Sobrante Silvercrest and Park Regency.

1. **Transfer of Ownership:** Transferring ownership of an at-risk project to a non-profit housing provider is generally one of the least costly ways to ensure that the at-risk units remain affordable for the long term. By transferring property ownership to a non-profit organization, low-income restrictions can be secured for 55 years, and the project would become potentially eligible for a greater range of governmental assistance. There are a number of non-profit housing providers in Contra Costa that would be suitable candidates to receive the transfer ownership of the affordable units in El Sobrante Silvercrest and Park



Regency. Examples of qualified entities are well-established non-profit housing providers active in Contra Costa County, including BRIDGE Housing Corporation (San Francisco), Resources for Community Development (Berkeley), Eden Housing, Inc. (Hayward), and Satellite Affordable Housing Associates (Berkeley), which could be suitable candidates for the transfer of ownership.

Two-bedroom multi-family units (condos) in Contra Costa County have been selling for an average of \$441,666 across areas of the county in 2021 (see Table 6-22). Assuming an average sales price, acquisition of 121 units would equate to \$80,825,000.

2. **Rental Assistance:** Rental subsidies using non-federal (state, local, or other) funding sources can be used to maintain affordability of the 183 at-risk units. These rent subsidies can be structured to mirror the federal Section 8 program. Under Section 8, HUD pays the difference between what tenants can pay (defined as 30 percent of household income) and what HUD estimates as the fair market rent on the unit.

The feasibility of this alternative is highly dependent on the availability of non-federal funding sources necessary to make rent subsidies available and the willingness of property owners to accept rental vouchers if they can be provided. Table 6-30 shows the rental subsidies required to preserve at-risk units. The calculations assume that extremely low-income households would be the likeliest recipients of rental subsidies. They also are based on the fact that El Sobrante Silvercrest has studio and one-bedroom units, and Park Regency has units ranging from studios to two bedrooms. The distribution of unit sizes within each project is an estimate. The total cost for rental subsidies would range


from \$339 to \$733 per unit per month, which equates to \$1,079,004 annually.

**TABLE 6-30 POTENTIAL RENT SUBSIDIES**

Per Unit Affordable Rent	Studio <sup>1</sup>	1 Bedroom <sup>2</sup>	2 Bedroom <sup>3</sup>
Very Low Income (50% AMI) (A)	\$1,199	\$1,370	\$1,541
Per-Unit Fair-Market Rent (B)	\$1,538	\$1,854	\$2,274
Monthly Per-Unit Subsidy (C=B-A)	\$339	\$484	\$733
Annual Subsidy/Unit (C*12)	\$4,068	\$5,808	\$8,796
<b>Total "At Risk" Units</b>	<b>68</b>	<b>70</b>	<b>45</b>
<b>Total Annual Subsidy</b>	<b>\$276,624</b>	<b>\$406,560</b>	<b>\$395,820</b>

Source Data: HCD 2022 Income Limits; HUD 2022 Fair Market Rents for Contra Costa County

1. Assumes 1-person household paying 30 percent of household income on rent and utilities.
  2. Assumes 2-person household paying 30 percent of household income on rent and utilities.
  3. Assumes 3-person household paying 30 percent of household income on rent and utilities.
3. **Tax-Exempt Bond Refinancing:** An effective way to preserve the affordability of the 49 low-income restricted units in El Sobrante Silvercrest under the bond program is to refinance the remaining mortgage on the project. When refinanced, the project would be required by the 1986 Tax Reform Act to commit its 20-percent low-income units for the greater of 15 years or as long as the mortgages are outstanding. The costs to refinance the project would include the difference in interest rates on the remaining debt between the previous and renegotiated loan packages, an issuance cost to be paid up front by the County, and administrative costs. To provide the property owner with an incentive to refinance, the County may be able to refinance the project with a new tax-exempt bond issue at an interest rate lower than



the rate on the initial bond. Other assistance, such as rehabilitation loans or grants, may also be available.

4. ***Purchase of Affordability Covenants:*** Another option to preserve the affordability of the at-risk project is to provide an incentive package to the owner to maintain the project as affordable housing. Incentives could include writing down the interest rate on the remaining loan balance, and/or supplementing with a Section 8 subsidy received to market levels. By providing lump sum financial incentives or ongoing subsidies in rents or reduced mortgage interest rates to the owner, the County can ensure that some or all of the units remain affordable.
5. ***Construction of Replacement Units:*** The construction of new low-income housing units is a means of replacing the at-risk units should they be converted to market-rate units. The cost of developing housing depends on various factors, including density, size of the units (i.e., number of bedrooms), location, land costs, and type of construction. The average construction cost for a residential rental unit is approximately \$427,000 (including land costs), based on assessments from recent multi-family developments in the county. Based on this estimate, it would cost approximately \$78 million to develop 49 new assisted units should El Sobrante Silvercrest convert to market rate.

**Cost Comparisons:** The transfer of ownership of El Sobrante Silvercrest or Park Regency to non-profit housing providers is a means of preserving the at-risk units. However, the high costs of acquiring the properties (approximately \$78 million) may prevent such transfers. While there is not currently a need for rental subsidies required to preserve the 183 assisted units, the long-term affordability of the units cannot be ensured. Other financial incentives may also be necessary to convince property owners to

maintain the affordable units. However, the option of constructing 183 replacement units is as costly and potentially constrained by various factors, including growing scarcity of multi-family residential land, rising land costs, and community opposition.

The County should continue to monitor the rents at El Sobrante Silvercrest and Park Regency and implement Action HE-A2.2 in the Housing Plan in compliance with state law and be prepared to work with the El Sobrante Silvercrest owners to refinance the project with a new tax-exempt bond issued at a lower interest rate in exchange for extended affordability terms if market rents increase above the affordable rents. This is likely the best option to preserve the at-risk units in El Sobrante Silvercrest. The County has past experience with this approach and considers it to be an effective means to preserve affordable housing units. Per requirements of Action HE-A2.2, the County will also work with the owners of Park Regency and pursue all options to maintain affordability of the units at Park Regency.





**TABLE 6-31 INVENTORY OF ASSISTED RENTAL HOUSING**

Project Name	Total Units	Assisted Units	Household Type	Funding Source(s)	Expiration of Affordability
(ABC) A Better Chance Apartments 462 Corte Arango, El Sobrante	14	4	Disabled	HCD, HUD Section 811; HOPWA	2062
Aspen Court Apartments 121 Aspen Drive, Pacheco	12	5	Disabled with HIV/AIDS	HUD Sections 8 and 811; HOPWA; HOME	2065
Avalon Bay Apartments Contra Costa Centre 101 Harvey Drive, Walnut Creek	447	111	Family	Tax-exempt bonds	2065
Bay Point Family Apartments 2471 Willow Pass Road, Bay Point	193	191	Family	LIHTC	2073
Bella Monte Apartments 2420 Willow Pass, Bay Point	52	51	Family	LIHTC, HCD, tax-exempt bonds, HOPWA, HOME; CDBG	2060
Crockett Senior Housing/Carquinez Vista Manor 1212 Wanda Street, Crockett	37	35	Senior	HUD Section 202; CDBG; HOME	2056
Coggins Square Apartments Contra Costa Centre 1316 Las Juntas Way, Walnut Creek	87	86	Family	HOME; bonds; LIHTC, HUD	2077
Community Heritage Senior Apts. 1555 3rd St., North Richmond	52	52	Senior	HUD Section 202	2060
Creekside Terrace 5038 San Pablo Dam Road El Sobrante	57	56	Family	HUD Sections 8, 236, & 241	2044
De Anza Gardens 205 Pueblo Avenue, Bay Point	179	81	Family	LIHTC	2058
El Sobrante Silvercrest 4630 Appian Way, El Sobrante	50	49	Senior	HUD Sections 8 & 202	2032
Elaine Null Court 112 Alves Lane, Bay Point	14	14	Disabled	Bonds; HOME; LIHTC	2074



Project Name	Total Units	Assisted Units	Household Type	Funding Source(s)	Expiration of Affordability
Heritage Point 1500 Fred Jackson Way, North Richmond	42	41	Family	LIHTC; CDBG; bonds	2074
Hidden Cove Apartments 2901 Mary Anne Lane, Bay Point	88	87	Family	LIHTC; bonds	2074
Hilltop Commons 15690 Crestwood Dr., San Pablo	322	169	Family	LIHTC; bonds	2074
Meadow Wood at Alamo Creek 3000 Damani Ct., Danville	120	118	Senior	DVAHP	2043
Mission Bay (Willow Pass) Apts. 1056 Weldon Lane, Bay Point	120	119	Family	LIHTC	2053
Montevista Senior Apartments 13728 San Pablo Avenue, San Pablo	82	67	Senior	LIHTC	2070
Park Regency 3128 Oak Road, Walnut Creek	892	134	Family	bonds	2033
Rodeo Senior Apartments 710 Willow Avenue, Rodeo	50	49	Seniors	HUD, Section 202; HOME	2062
Villas at Monterosso 1000 Casablanca Terrace, Danville	96	96	Family	bonds	2037
Willowbrook Apartments 110 Bailey Road, Bay Point	72	71	Disabled/ Senior (62+)	LIHTC, HUD Sections 8 & 221	2071
<b>Totals</b>	<b>3,078</b>	<b>1,686</b>			

Sources: California Housing Partnership Preservation Database, 2021; Contra Costa County, 2021.

HOME: Home Investment Partnership Act funds

HOPWA: Housing Opportunities for Persons with AIDS

LIHTC: Low-Income Housing Tax Credit

CDBG: Community Development Block Grant

DVAHP: Dougherty Valley Affordable Housing Program

Domestic Violence Assistance Housing Program



## F. FUTURE HOUSING NEED

Future housing need refers to the share of the region’s housing growth that has been allocated to a community. In brief, ABAG calculates future housing need based on projected household growth, plus a certain amount of units needed to account for normal and appropriate level of vacancies and the replacement of units lost to conversion or demolition.

In December 2021, ABAG adopted its final regional housing needs allocation (RHNA) based on both existing need and projected need for housing. ABAG published the Regional Housing Needs Plan San Francisco Bay Area, which explains in detail the process to allocate the Bay Area regional housing needs. This document provides detailed information on the RHNA process.

Table 6-32 provides a breakdown of the County’s share of future regional housing needs by four income categories: very low, low, moderate, and above moderate. As indicated, the share of regional housing needs allocated to the unincorporated areas is 7,610 new units over the 2023-2031 RHNA period. Through this Housing Element, the County must demonstrate the availability of adequate sites to accommodate these projected new units.

In January 2007, Assembly Bill (AB) 2634 took effect, which requires Housing Elements to include an analysis of extremely low-income needs and address those needs in proposed programs. According to California Government Code Section 65583(a)(1), Contra Costa County may “presume that 50 percent of the very low-income households qualify as extremely low-income households.” Based on this assumption, 1,036 units should be planned for for extremely low-income households and 1,036 units for very low-income households.

**TABLE 6-32 REGIONAL HOUSING NEED ASSESSMENT**

Geography	Very Low Income (<50% of AMI)	Low Income (50%-80% of AMI)	Moderate Income (80%-120% of AMI)	Above Moderate Income (>120% of AMI)	Total
Unincorporated Contra Costa	2,072	1,194	1,211	3,133	<b>7,610</b>
Contra Costa County	13,346	7,685	7,807	20,205	<b>49,043</b>

The Final RHNA was adopted December 16, 2021.

Data Source: ABAG Housing Element Data Package 2021; and ABAG December 2021.

## G. ASSESSMENT OF FAIR HOUSING

Assembly Bill (AB) 686 requires that all housing elements due on or after January 1, 2021, must contain an Assessment of Fair Housing (AFH) consistent with the core elements of the analysis required by the federal Affirmatively Furthering Fair Housing (AFFH) Final Rule of July 16, 2015.

Under state law, affirmatively further fair housing means “taking meaningful actions, in addition to combatting discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics.”

To comply with AB 686, the County has completed the following outreach and analysis.



## 1. Outreach

As discussed in the “Public Participation” section of the Housing Element in Chapter 1, Introduction, the County took diligent efforts to encourage public and stakeholder participation in the Housing Element update process. These efforts included two stakeholder focus group sessions held in October and November 2021, a Board of Supervisors study session in December 2021, and a virtual community meeting on February 9, 2022. The County is also part of the Contra Costa County Consortium that prepared an Analysis of Impediments to Fair Housing in 2019 that included extensive outreach as part of that effort.

Beginning in 2017, the County participated in stakeholder outreach meetings as part of the Analysis of Impediments community participation process. Meetings were held in September 2017 as well as January, February, March, May, and June 2018. The process included community-based organizations, housing developers, social services organizations, government agencies, legal service providers, and others. The primary concerns raised during these meetings included a lack of affordable housing and the challenges of accessing and securing housing. Stakeholders also identified community opposition as a key barrier to increasing affordable housing supply, thus furthering displacement of target populations. Strategies identified to address fair housing issues included improving coordination between and within governments to reduce barriers to affordable development and improve transit access.

The purpose of the stakeholder focus group meetings was to engage with service providers and developers to gather first-hand experience and knowledge regarding gaps in housing services and barriers to housing to develop policy and program solutions to assist in addressing gaps. The

County emailed each organization to invite them to attend the focus groups and provided a Zoom link upon receipt of an RSVP. Ten developers attended and participated in the developer focus group meeting held on October 18, 2021. Attendees discussed the challenges of constructing affordable housing given labor and material costs, state requirements, and land costs. Participants expressed that the most feasible way to create affordable homeownership opportunities is through acquiring and remodeling units, rather than building new units. Where new affordable units are wanted, developers emphasized a need for RHNA sites to be identified in high-scoring TCAC areas that are eligible for funding to facilitate securing TCAC funding for new projects.

Fourteen service providers attended the service provider focus group meeting on November 3, 2021. The primary fair housing issue that service providers identified is the gaps in housing services and systems that put certain populations at risk of homelessness. For example, young persons are too old for foster care services but are typically not eligible for Section 8 vouchers or other assistance programs, leaving them with few housing options. Additionally, aging in place has become more complex as seniors often have “flat” incomes and are in need of increasingly more supportive care. However, there is insufficient supportive housing to meet the need and affordable housing near services that would allow seniors to age in place. Stabilizing housing across age ranges and severity of need is vital to ensuring ongoing housing opportunities for all populations. The feedback from these meetings supports the findings of this Assessment of Fair Housing that many lower-income households have been pushed into lower-resource communities in the county or out of the county entirely. Several programs have been developed to address these issues based on stakeholder feedback and fair housing findings, as identified in Table 6-38.



On February 9, 2022, the County held a virtual workshop that included a breakout room discussion on fair housing. There were seven participants, including four residents from unincorporated Walnut Creek, unincorporated North Richmond, and other locations within the county. There were several commonly expressed key issues related to fair housing brought up by participants. Frequently mentioned were gaps in access to services that often result from the interrelationship of income, housing affordability, and access to resources and services. Participants emphasized that more affordable housing is typically in areas with low-resource accessibility, such as adjacent to industrial uses or vehicular transportation routes, and conversely areas with high-resource opportunities are associated with housing affordable to moderate- and above moderate-income residents. Several programs have been developed to address these issues based on breakout session feedback and fair housing findings, as identified in Table 6-38.


According to participant input, comparable to other communities in the ABAG area, this pattern of income-related housing segregation in Contra Costa County has historically been influenced by policies of exclusionary zoning and inequitable review processes associated with higher-density, affordable housing proposals, supported by a specific example of a denied project in the Canyon area. Further discussion related to the stigmatism of affordable and/or high-density housing proposals during the entitlement process suggested that affordable housing is viewed as substandard and therefore not acceptable in more resource-strong areas of the county. Combined with racial bias and compounded by persistent NIMBYism<sup>4</sup>, the

inequitable distribution of affordable housing and its potential for housing displacement was a shared sentiment of the breakout group participants. The example of an area in unincorporated Walnut Creek was given, where one side of the block near BART is low density and in an area designated as high resource by TCAC/HCD mapping, while the other side is high density and designated a low resource area. The consensus was that there is a need to make sure state and local policies actually “move the needle” on fair housing discrepancies, including linking density bonuses with long-term affordability and rezoning land for high density, which will be addressed by policies and programs as identified in Table 6-38.

The challenges of lower-income populations in securing housing in the county, particularly for renters, is a fair housing issue identified by participants in the breakout session, specifically considering the need for rental leniency on the rental application and screening process. Rental requirements to engage in 12-month leases, inflexibility by landlords about payment expectations, and the practice of approvals being subject to a stringent background check, especially in cases where applicants may not have an established financial record or have experienced a situation that negatively impacted their background check, often lead to housing displacement, as was the case for one of the participants. Housing quality problems and poor condition of rental properties, as well as potential ownership units affordable to lower-income households, were also mentioned, suggesting the need for stronger maintenance and rehabilitation efforts in the county.

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<sup>4</sup> NIMBYism or “not in my backyard,” is characteristic of opposition to locating something within one’s own neighborhood.



Comparable to feedback from previous outreach efforts during the General Plan/Housing Element process, the necessity to identify ways to implement more widespread outreach efforts with the intent to connect underrepresented and low-income groups into the planning effort was reiterated in this breakout session dialogue.

The collection process for this qualitative data is described in greater detail in the Public Participation section of this Housing Element and the feedback informed this assessment of fair housing and associated programs identified in Table 6-38.

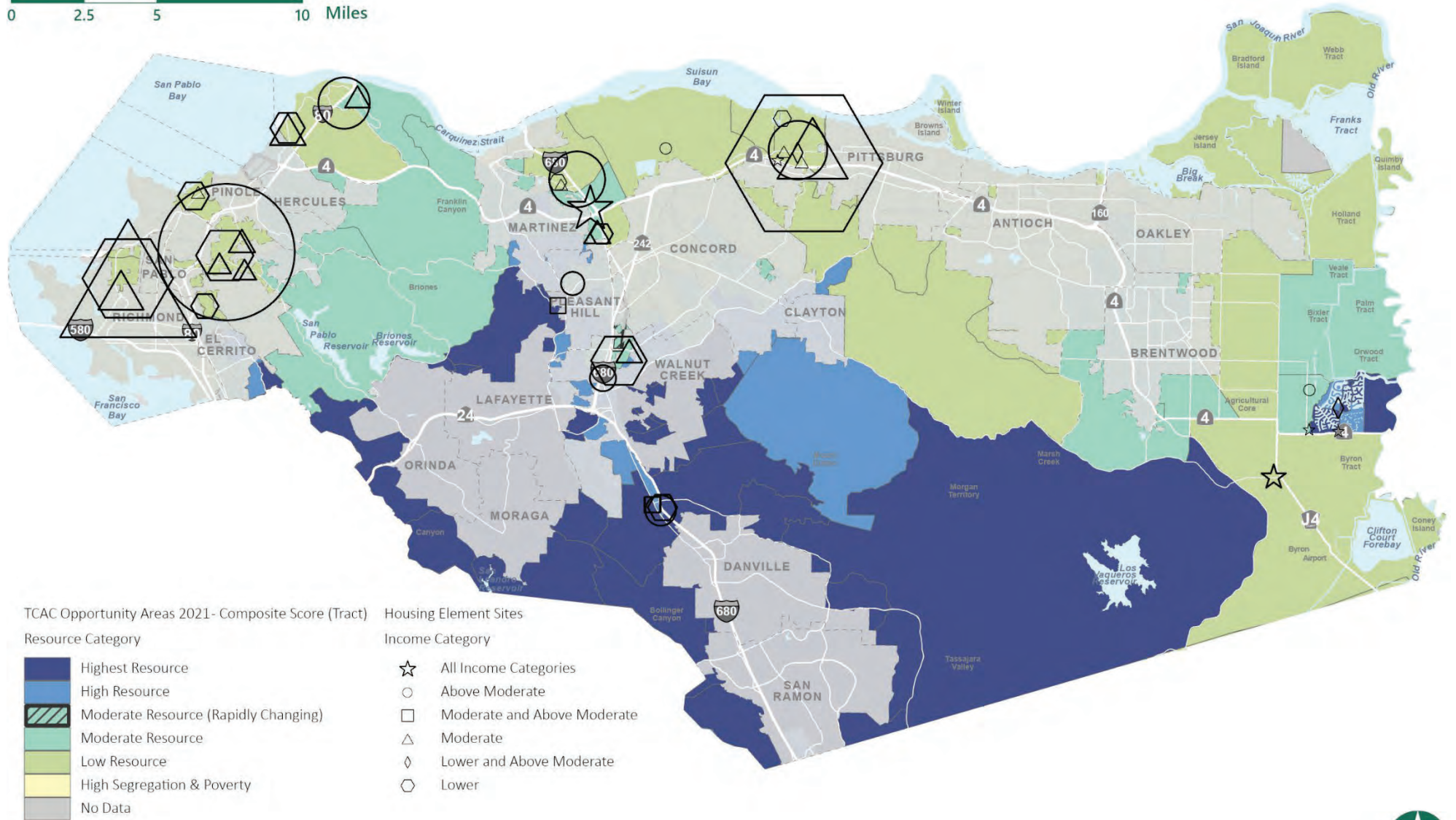
## 2. Fair Housing Issues

State Government Code Section 65583 (10)(A)(ii) requires the County to analyze areas of segregation, racially or ethnically concentrated areas of poverty, disparities in access to opportunity, and disproportionate housing needs, including displacement risk. According to the 2021 TCAC/HCD Opportunity Maps, there are no areas of high segregation in the unincorporated area of Contra Costa County (Figure 6-2). The Opportunity Map identifies the central and southern portions of the county as largely high and highest resource, western and northern portions as low resource, and areas of moderate resource scattered in the northwest and eastern areas. Discovery Bay is the only area with high and highest resource designation outside central Contra Costa County.



FIGURE 6-2 TCAC RESOURCE AREA DESIGNATIONS, 2021

0 2.5 5 10 Miles



Data Source: TCAC/HCD 2021



# Patterns of Integration and Segregation

## Income

As discussed earlier in the Housing Needs Assessment of this Housing Element, a lower-income, four-person household in Contra Costa County is any that earns less than \$109,600 annually (Table 6-11). As shown in Table 6-33, only six unincorporated areas have a median income in the moderate- or above moderate-income range. These areas largely correspond with the areas TCAC and HCD have designated as high and highest resource areas and have the greatest anticipated economic outcomes for residents, reflecting distribution of opportunity in more affluent areas. The communities with the highest median income are those in central Contra Costa County, including; Alhambra Valley/Reliez Valley/Briones; Alamo/CastleHills; and Diablo; the western community of Kensington; and the eastern community of Discovery Bay. As shown in Figure 6-3, these findings correspond with the areas with the lowest rates of poverty and highest median incomes.

In 2014, the highest rates of poverty were concentrated in the North Richmond vicinity and Bay Point. However, there was still a presence of extremely low-income households in the north central communities, including the vicinity of Alhambra Valley, Reliez Valley, Briones, and Contra Costa Centre (see Figure 6-4). However, in 2019, the concentration of poverty in the Bay Point area had decreased slightly, shifting east, while the percentage of the population below the poverty line in central Contra Costa County noticeably dropped (see Figure 6-3). During this time period, poverty continued to persist in the most western portion of the county, including North Richmond. As demonstrated in Table 6-33, however, lower-income

communities continue to be those along the San Francisco and Suisun Bay, where industrial uses are more prevalent, and there is greater density than in central communities.

**TABLE 6-33 MEDIAN INCOME BY UNINCORPORATED AREA**

Geographic Area	Median Income	Income Category
Contra Costa County	\$88,456	Very Low
Alhambra Valley/Reliez Valley/Briones	\$160,395	Moderate
Alamo/Castle Hills	\$187,647	Above Moderate
Bay Point	\$50,752	Extremely Low
Bethel Island	\$66,029	Extremely Low
Byron	\$68,750	Extremely Low
Canyon	\$109,677	Moderate
Clyde	\$85,736	Very Low
Contra Costa Centre	\$96,375	Very Low
Crockett	\$73,638	Very Low
Diablo	\$164,052	Moderate
Discovery Bay	\$109,773	Low
East Richmond Heights	\$75,455	Very Low
El Sobrante	\$82,655	Very Low
Kensington	\$145,665	Moderate
Knightsen	\$90,165	Very Low
Montalvin Manor/Tara Hills/Bayview	\$74,666	Very Low
North Richmond	\$50,313	Extremely Low
Pacheco	\$75,700	Very Low
Port Costa	\$90,833	Very Low
Rodeo	\$70,217	Extremely Low

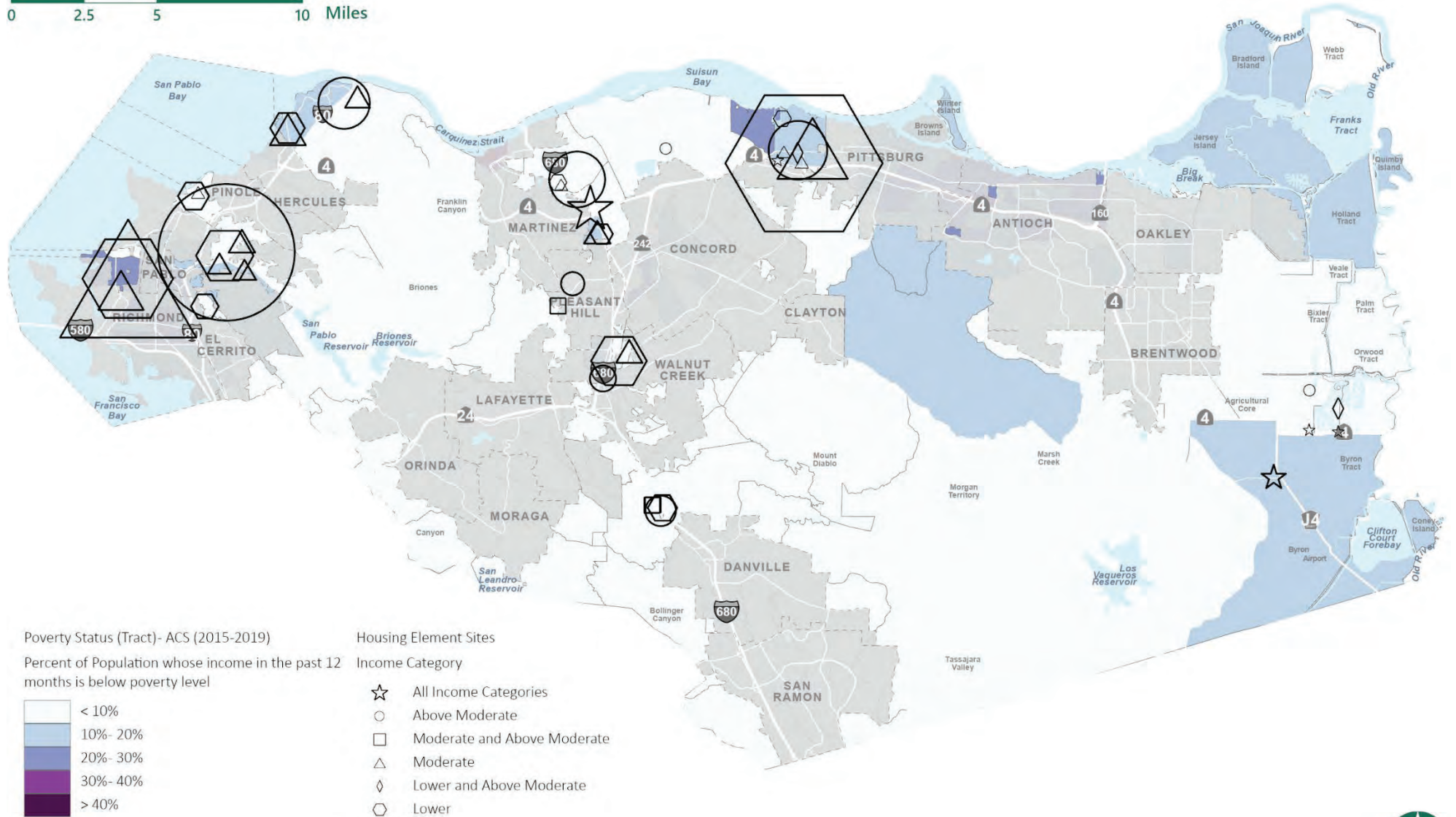
Data Source: 2013-2017 ACS, HCD State Income Limits, 2022  
 \*Income category designation for a 4-person household in Contra Costa County





FIGURE 6-3 RATE OF POVERTY IN CONTRA COSTA COUNTY, 2019

0 2.5 5 10 Miles

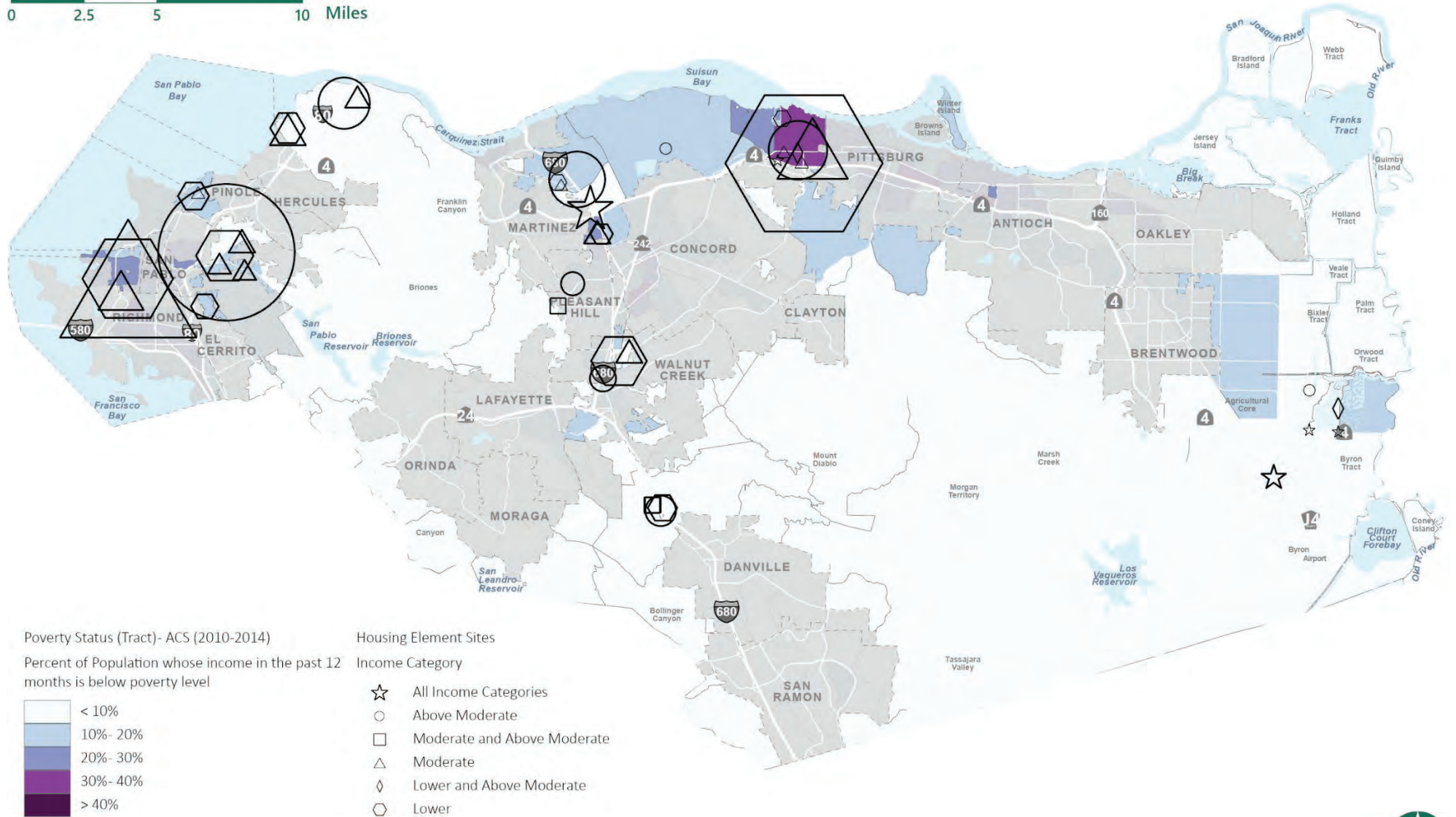


Data Source: 2015-2019 ACS



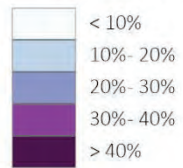
FIGURE 6-4 RATE OF POVERTY IN CONTRA COSTA COUNTY, 2014

0 2.5 5 10 Miles



Poverty Status (Tract)- ACS (2010-2014)

Percent of Population whose income in the past 12 months is below poverty level



Housing Element Sites

Income Category

- ☆ All Income Categories
- Above Moderate
- Moderate and Above Moderate
- △ Moderate
- ◇ Lower and Above Moderate
- ⬡ Lower

Data Source: 2010-2014 ACS



Those neighborhoods with moderate- and above-moderate median incomes correspond with those identified by the Urban Displacement Project as “stable/advanced exclusive,” meaning that they are affordable only to high or mixed high-income households and show signs of rapid increase in housing costs. Bay Point and eastern communities are considered to range from “low-income/susceptible to displacement” to “at risk of gentrification” or “at risk of becoming exclusive.” These indicate that, while lower-income households may have concentrated in coastal communities for more affordable housing costs, all communities are expected to become unaffordable without intervention.


In the Bay Area region, many areas with a concentration of poverty, low median incomes, and poor anticipated economic outcomes for residents have a history of redlining. The national practice of redlining in the 1930s made it difficult for residents within identified neighborhoods to get loans for homeownership or maintenance, resulting in cycles of disinvestment and preventing residents from building generational wealth. Redlined neighborhoods had concentrations of Black and African American residents and other minority populations. While racially restrictive covenants have been illegal for decades, the patterns of concentrated poverty that developed during this period, and a legacy of lost generational wealth, can still be seen throughout the Bay Area. While historic redlining maps are not available for Contra Costa County, the income patterns showing and public feedback received regarding concentrations of lower-income households in western and northern communities align with a history of industrial uses that reflects the patterns found in areas that do have formal redlining maps, such as Emeryville, Oakland, Berkeley, and San Francisco. In addition, outreach participants emphasized that NIMBYism has significantly impacted the type and distribution of affordable housing resources and resulting

concentrations of lower-income populations in the western portion of the county.

The distribution of wealth in Contra Costa County and the Bay Area has resulted in areas of exclusivity, presenting barriers to economic and housing mobility for lower-income households that would facilitate future integration. To address the obstacles to economic mobility for lower-income residents and proactively counter the anticipated gentrification in many lower-income communities, the County will implement Action HE-3.1 to provide financial assistance and other incentives for affordable rental and ownership opportunities, Action HE-A3.2 to support the development of affordable housing on County-owned land in Bay Point, North Richmond, and Rodeo, Action HE-A3.5 to encourage construction of accessory dwelling units (ADUs) as a potential affordable housing option in high resource and potentially exclusive areas such as the Alhambra Valley, Reliez Valley, Briones, Alamo, and Castle Hill areas, expand homeownership opportunities for lower-income households (Action HE-A5.1), and Action HE-A8.1 to target place-based revitalization through community-based programs rather than development in areas of concentrated poverty.

## Race and Ethnicity

As presented in the Housing Needs Assessment of this Housing Element, unincorporated Contra Costa County is an ethnically and racially mixed jurisdiction that has become increasingly diverse in the last two decades. Since 2000, the White population has decreased by approximately 17 percent, while the Hispanic or Latino population has increased by approximately 10 percent. However, while the unincorporated area is diverse, it is not necessarily integrated. Figure 6-5 shows how the predominant population varies notably across the county. In the



communities closer to the bay, diversity is higher, with a predominant population of Hispanic or Latino in Bay Point, North Richmond, Tara Hills, Montalvin Manor, and Rollingwood and predominantly Asian in the eastern portion of Rodeo, southwest of the cities of San Ramon and Danville, and between the cities of Pittsburg and Concord. In contrast, the center and eastern portions of the county, including the communities of Diablo, Discovery Bay, Reliez Valley/Briones, Alamo/Castle Hill, Saranap, San Miguel, Acalanes Ridge, La Casa Via, Shell Ridge, Mountain View, and Alhambra Valley are predominantly White. The patterns of concentrations of non-White populations in Contra Costa County reflect those found throughout the Bay Area, with minority populations predominantly in dense urban and historically industrial areas near the bay, with a larger presence of White persons in inland, suburban communities. The Contra Costa County *Analysis of Impediments to Fair Housing* (“County AI”) found that Contra Costa County is “slightly more heavily non-Hispanic White” compared to the greater San Francisco-Oakland-Hayward Metropolitan Statistical Area (“Region”), where many areas have slightly higher percentages of non-Hispanic Asian or Pacific Islanders.

While there are concentrations of minority populations throughout the unincorporated county, none qualify as racially and ethnically concentrated areas of poverty (R/ECAPs). A R/ECAP, as defined by HUD, is an area where 50 percent or more of the population identifies as non-White and 40 percent or more of individuals live below the poverty line. In the region, there are several R/ECAPs in incorporated jurisdictions, including one in the City of Concord, one in the City of Berkeley, and multiple in the City of Oakland. While no unincorporated areas meet this criterion or these criteria, North Richmond has a median household income of \$50,313, falling in the very low-income category, and is 65 percent Hispanic or Latino, and Bay Point is

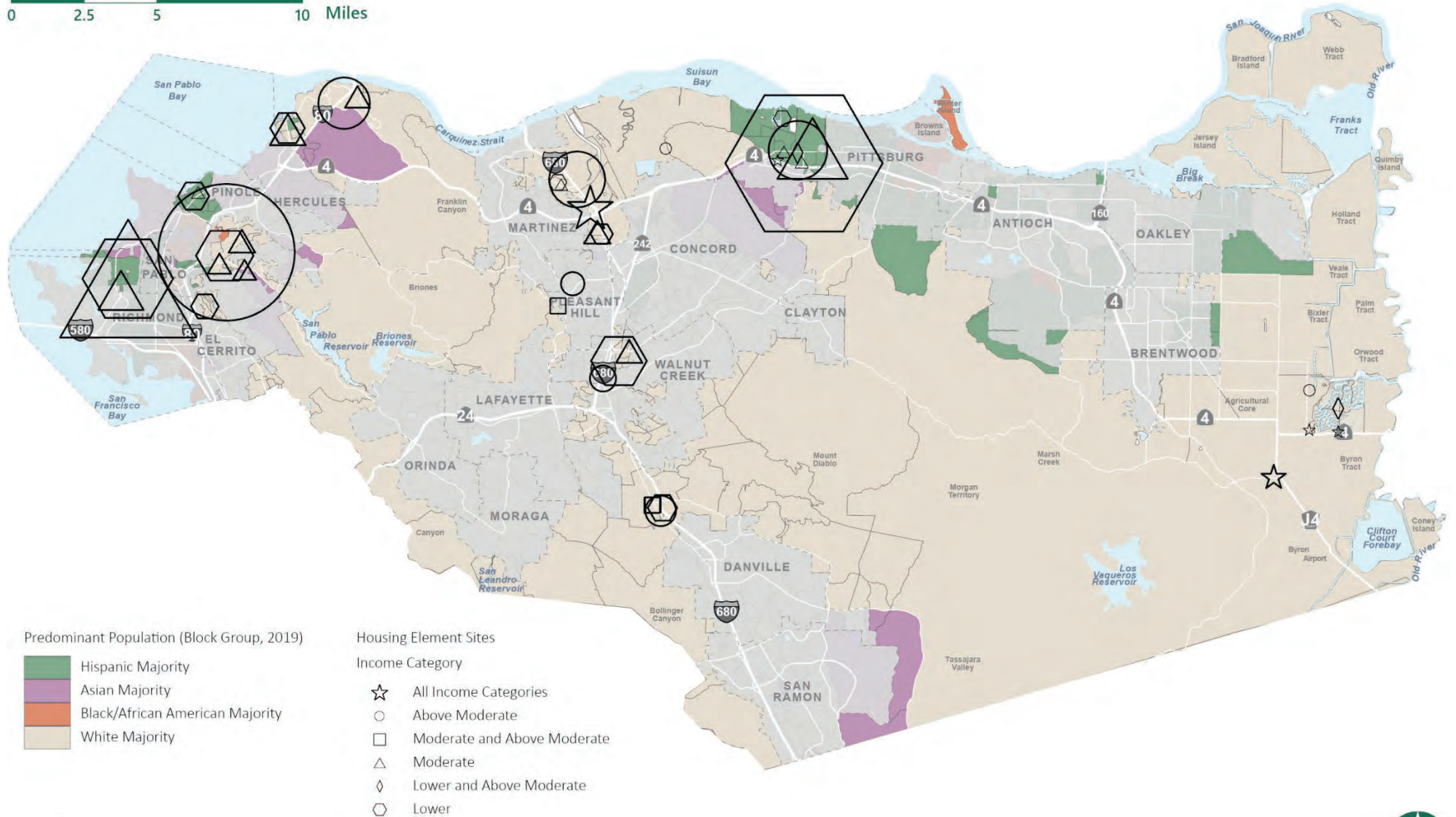
\$50,752, also in the very low-income category, and is 58 percent Hispanic or Latino. These communities, and others, have been identified by the County as disadvantaged communities under Senate Bill (SB) 1000. These include Bay Point, Crockett, Rodeo, North Richmond, Montara Bay, Vine Hill, and Mountain View. All of these communities have been identified based on a variety of indicators that may be present, such as ozone concentration, traffic density, cleanup sites, solid waste sites, impaired water bodies, limited English-speaking households, and more. While most of these indicators are not based on racial and ethnic concentrations, the areas in unincorporated Contra Costa County with concentrations of minority populations typically align with indicators that determine disadvantaged communities. The County has developed programs and policies to improve the conditions in these communities and, in turn, affirmatively further fair housing by promoting integration, housing choices, and place-based revitalization efforts (see Table 6-38 and other General Plan elements).

Unlike R/ECAPs, there are areas in unincorporated Contra Costa County that are possible racially concentrated areas of affluence (RCAA). A RCAA was defined in 2019 in the HUD’s Cityscape periodical by Goetz et al. in *Racially Concentrated Areas of Affluence: A Preliminary Investigation* as a census tract in which 80 percent or more of the population is White and has a median income greater than \$125,000 annually. By this definition, the community of Diablo and eastern portions of Discovery Bay are RCAAs. Additionally, many central areas of Contra Costa County are predominantly affluent and White, though do not meet the criteria of RCAAs.



FIGURE 6-5 PREDOMINANT POPULATIONS

0 2.5 5 10 Miles



Data Source: 2015-2019 ACS





## Familial Status

According to the County AI, there is a higher percentage of children in Contra Costa County than in the region as a whole. This corresponds with a higher representation of families with children and a lower percentage of seniors. While the percentage of children peaked in the early 2000s and has since declined, the dominance of families in Contra Costa County is reflected by a higher proportion of the housing stock consisting of multi-bedroom single-family detached homes than in the region overall. The rate of households who are married couples with children is higher in suburban communities such as Diablo, Discovery Bay, Blackhawk, and Alamo, among others. In more urban communities with higher housing densities, the rate of adults living alone or without a spouse (such as roommate situations) increases. Examples of communities with a more balanced rate of household types include District 1 and District 5 communities, including North Richmond, Tara Hills, and Bay Point. The concentration of female-headed households is highest in Rodeo and the portion of Crockett west of Interstate 80, where more than 40 percent of households are female, single-parent households. In this area, approximately 19 percent of households live below the poverty line. Despite the dominance of families with children in Contra Costa County, this area in Rodeo and Crockett indicates a possible concentration of female-headed households living below the poverty line and a greater need for affordable housing with multiple bedrooms for families. However, fair housing cases reported by HUD indicate that there is not an issue with discrimination based on familial status in this area of the county, supporting the finding these households may be concentrated here due to affordability or housing type. To encourage the construction of housing types geared toward families, the County has included Action HE-A4.1 to work with housing developers to provide housing for large households.

## Disability

As stated in the Housing Needs Assessment, nearly 20 percent of unincorporated County residents report having a disability. According to the County AI, ambulatory difficulties are the most common disability type for unincorporated county residents, followed by independent living difficulties, cognitive difficulties, hearing difficulties, self-care difficulties, and, least commonly, vision difficulties. Approximately 11 percent of the noninstitutionalized population in the unincorporated County have a disability, compared with nearly 10 percent of the region's population. The institutionalized population includes residents of nursing homes, prisons, jails, mental hospitals, and juvenile correctional facilities. This minor difference is reflected in the disability-specific comparison, with a slightly higher percentage of each individual disability in Contra Costa County than in the region. Persons with disabilities in Contra Costa County are more likely to earn a wage below the poverty line than non-disabled workers, indicating that a higher percentage of persons with disabilities may result in a higher rate of poverty, particularly for extremely low-income persons that need accessible housing options or supportive services.

While the percentage of the population with a disability varies slightly throughout the county, there are no significant concentrations of this population. In most populated County areas, disability rates range from less than 10 percent in Rodeo, Bay Point, and many central areas of the county to 17 percent in Crockett. The areas with the lowest poverty rates in the center of the county are mainly undeveloped and recreational, so they do not accurately represent patterns in the county. Given that the disability rate in populated areas has minimal variation, it is likely that persons with disabilities have similar accessible housing options throughout the county.



and therefore have housing options in all communities. Disability rates and patterns have not shifted notably since 2010.

While the disability rate is slightly higher in Contra Costa County than in the region, the patterns of concentration are similar between the two. More urban areas with a higher density of population, often along the bay and in downtown areas, have slightly higher rates of disability in both the Bay Area and the county. This may be due to a concentration of accessible housing, proximity to transit, and the availability of resources in these areas. Contra Costa County largely reflects disability patterns found throughout the region.

## Access to Opportunity

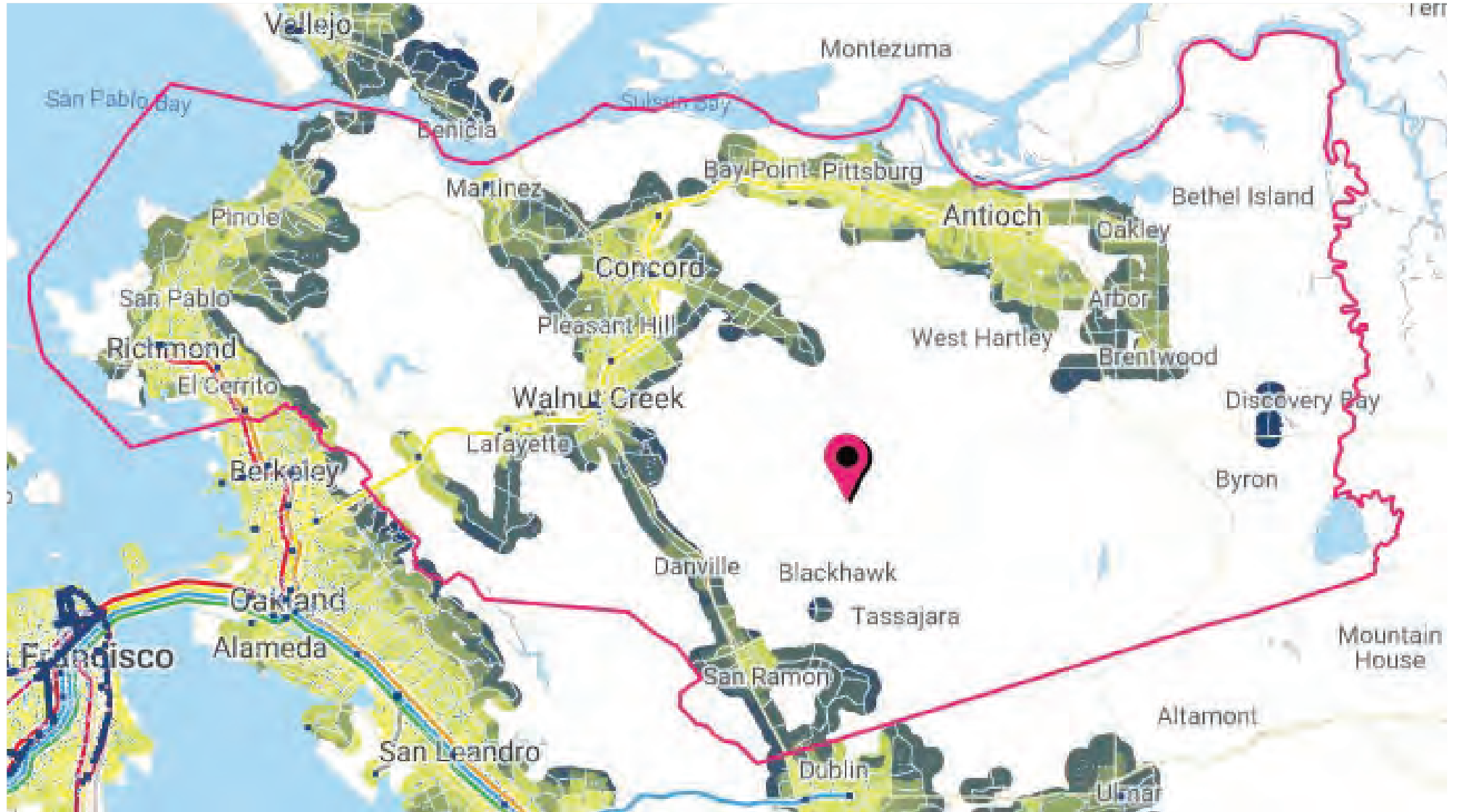
### Mobility

AllTransit is a transit and connectivity analytic tool developed by the Center for Neighborhood Technology to advance equitable communities and urban sustainability. The tool analyzes the transit frequency, routes, and access to determine an overall transit score at the city, county, and regional levels. Figure 6-6 depicts the areas in Contra Costa County where transit is available and shows areas with higher scores of connectivity, access to jobs, and frequency of service. Overall, Contra Costa County has a transit score of 5.0 compared to 7.1 in Alameda County, 3.9 in Solano County, and 6.8 in the San Francisco-Oakland-Hayward Metro Area. The slightly lower score in Contra Costa County than Alameda County and the urban MSA is likely due to the concentration of populations along the bay and in the center of the county. Limited to no transit services are available in the eastern areas, or connections running east-west. There are several public transportation options available to residents of Contra Costa County: County Connection, West-Cat, Tri-Delta Transit, Alameda-Contra Costa Transit District, and BART.

The County Connection is a fixed-route bus service that serves central County cities and communities from Martinez in the north to Pleasanton in the south. West-Cat serves Pinole, Hercules, Tara Hills, Rodeo, and Crockett, Tri-Delta Transit serves Bay Point to the west to Brentwood in the east. The Alameda-Contra Costa Transit District operates routes in the western county, with routes extending from Tara Hills in the north to Milpitas to the south, as well as with western connections to Palo Alto and San Francisco. BART is a regional light-rail system with several stops in Contra Costa County, connecting residents to destinations throughout the Bay Area. All three transportation options offer discounts for youth, seniors, and persons with disabilities.

As shown in Figure 6-6, the areas with the highest transit scores are in the western county, where Alameda-Contra Costa Transit District operates, and along BART corridors. As described in the analysis of patterns of integration and segregation, the highest concentrations of non-White and lower-income persons are in the western county, where there are several transit options. Therefore, it can be concluded that racial and ethnic groups and income classes have relatively equal access to transportation options. Given the higher transit scores in the west, it may be concluded that populations in the western area have better access to transit than residents of more affluent communities in the central county.

FIGURE 6-6 TRANSIT SCORES, CONTRA COSTA COUNTY



Overall transit score that looks at connectivity, access to jobs, and frequency of service.

- <1
- 1-2
- 2-4
- 4-5
- 5-6
- 6-7
- 7-9
- 9+

Data Source: Center for Neighborhood Technology, AllTransit.cnt.org, 2021





## Employment Opportunities

HUD developed two indices to analyze access to employment opportunities that were included in the County's AI. The jobs proximity index identifies census tracts based on their proximity to employment opportunities and the labor market engagement index scores labor force participation and human capital in each tract, with consideration of unemployment rates and educational attainment. For both indices, a higher score indicates stronger job proximity or labor force participation.

According to these indices, labor market engagement is highest in the central portion of the county, aligning with areas of affluence and concentrations of White, non-Hispanic populations. The lowest engagement scores are found in northwestern communities, including North Richmond, Rodeo, and Rollingwood.. These communities have higher concentrations of Hispanic and Black residents, revealing potentially disproportionate access to employment opportunities by race and ethnicity. In Contra Costa County, the highest labor force engagement rate among non-Hispanic Black residents is found in areas with the lowest concentration of residents that identify with this racial and ethnic group, while, in contrast, the lowest labor force engagement rate for this group is in areas with the highest concentration. This pattern is the opposite for Asians and Pacific Islanders.<sup>5</sup>, which have the highest labor force engagement rate in areas of the highest concentrations.

In support of the labor force engagement index findings, HUD's jobs proximity index indicates that the census tracts with the closest proximity to employment opportunities are in the central portion of the county (see Figure 6-7). HUD's jobs proximity index measures the accessibility of an area to all jobs within a statistical area, weighting large employment centers more heavily than individual jobs. The communities with the furthest proximity to jobs in the northwest and northeast portions of the county have higher concentrations of non-White residents than central portions of the County. While there are jobs available in these areas, there are few large employers given the density of population, which may require residents to commute to other areas of the county or into the greater Bay Area for employment. In contrast, large employers in suburban areas, such as the Kaiser Permanente Medical Center in Walnut Creek and Contra Costa County departments located throughout the central corridor of the county, offer a variety of jobs to residents in this area.

This pattern of close proximity of jobs to areas that are predominantly White can be found throughout the Bay Area, with the closest examples in the cities of Berkeley, San Francisco, Dublin, and Livermore. Minority populations throughout the region are often concentrated in areas with low labor market engagement and job proximity scores, with Asian and White residents having greater access to employment opportunities.

The Workforce Development Board of Contra Costa County offers a variety of services to help all job seekers, including youth aged 16-24, to identify job opportunities, improve resume and interviewing skills, and other job search

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<sup>5</sup> Contra Costa County Consortium, 2019. *Analysis of Impediments to Fair Housing*. p. 107. <https://www.contracosta.ca.gov/DocumentCenter/View/59623/Final-BOS-Approved-AI-6-11-19>

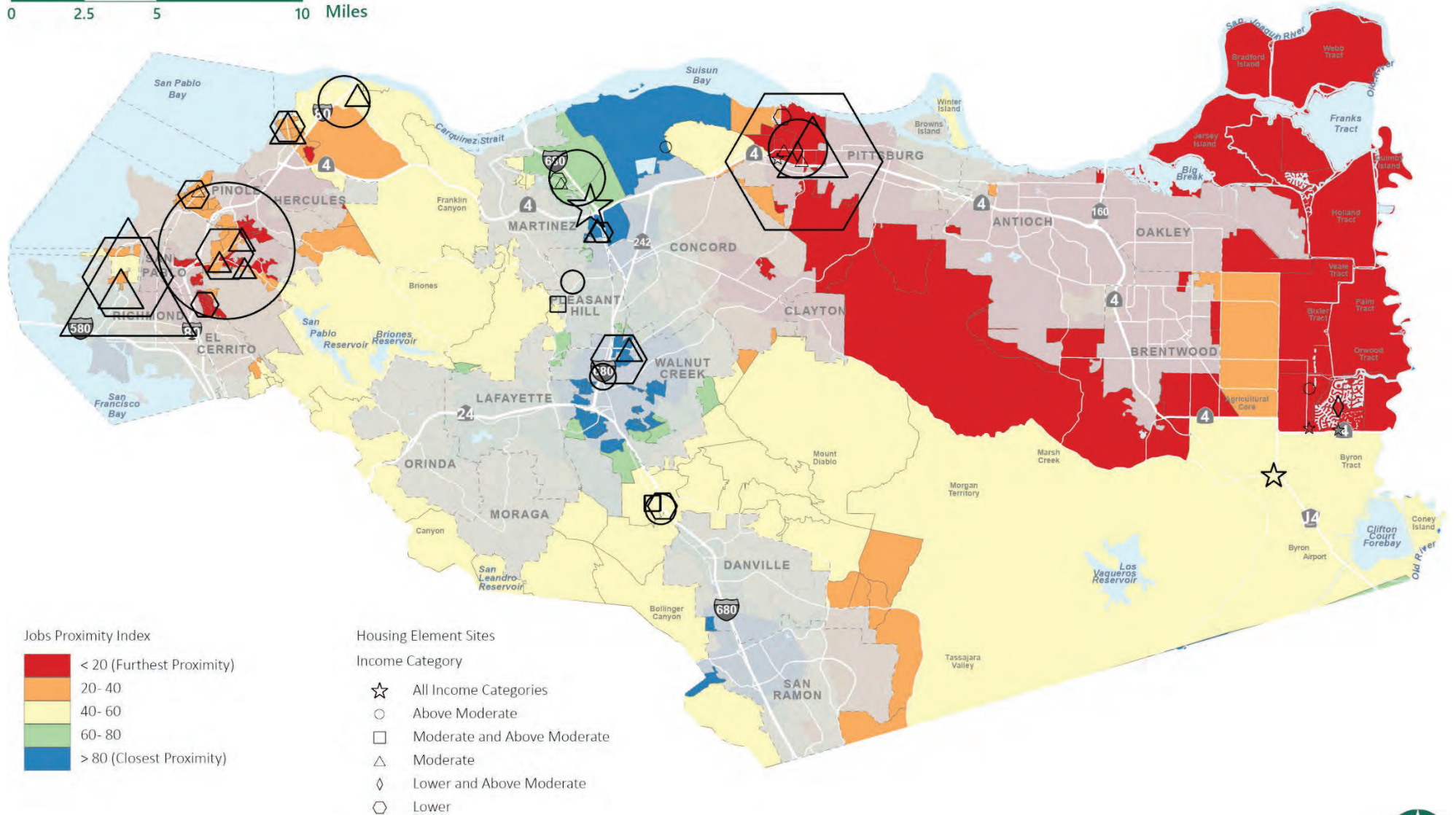


and training services. Contra Costa Employment and Human Services also encourages businesses to hire formerly incarcerated people, a group that is disproportionately unemployed and has difficulties securing housing. To further promote these programs and services and improve access to employment opportunities for lower-income and non-White residents, particularly in areas identified as having more limited access, the County has included Action HE-A8.1 to promote services provided by the Workforce Development Board and facilitate improved access to these services in communities of need.

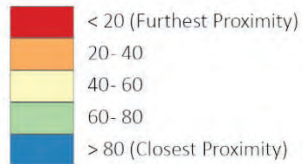


FIGURE 6-7 JOB PROXIMITY INDEX SCORES

0 2.5 5 10 Miles



Jobs Proximity Index



Housing Element Sites

- Income Category
- ☆ All Income Categories
  - Above Moderate
  - Moderate and Above Moderate
  - △ Moderate
  - ◇ Lower and Above Moderate
  - ⬡ Lower

Data Source: HUD, 2014-2017





## Educational Opportunities

School quality is often tied with housing, with neighborhoods with higher median incomes and home values often having access to higher-performing schools than lower-income neighborhoods. Income distribution influences home values, property taxes, and therefore funding for public schools. As such, school districts with higher concentrations of affordable housing typically have lower test scores, creating a cyclical problem of not offering these students equal educational opportunities. Therefore, disparities in access to solid school opportunities indicate fair housing and equal access to opportunities. According to the AI's analysis of HUD's School Proficiency Index, areas in Contra Costa County with greater affluence have higher school proficiency. In turn, areas with lower median incomes (typically the coastal communities) have lower index scores. In eastern and northern communities, schools are generally lower performing than in central and southern areas of the county. The AI overlaid race and ethnicity with school proficiency and found that non-Hispanic Black and Hispanic residents are concentrated in neighborhoods with low school proficiency scores.<sup>6</sup> The discrepancy between the location of lower-income households in low resource areas and higher-income households in high resource areas, particularly concerning educational resources, even within the same block group, was identified and discussed in outreach sessions.

Each year, the California Department of Education (DOE) publishes performance metrics for each school in the state, including student assessment results for English Language Arts and Mathematics as they compare to the state on meeting grade-level standards. There are approximately 21 schools in unincorporated communities of Contra Costa County, including 15 elementary schools, three middle schools, one high school, one continuation high school, and one charter school. Performance scores were not available for Gateway Continuation High School; however, it is worth noting that continuation schools typically serve students who struggle with traditional school environments and present a valuable opportunity for students who may otherwise not complete high school.

Of the remaining 20 schools, in 2019, the DOE reported that all but three fall below statewide grade standards in either English Language Arts or Mathematics, or both. The only schools that scored at or above statewide grade standards include:

- John Swett High in Crockett scored 23.8 points above state standards in English Language Arts.
- Discovery Bay Elementary in Discovery Bay scored 31 points above state standards in English Language Arts and 26 points above state standards in Mathematics.
- Old River Elementary in Discovery Bay scored 2.2 points above state standards in English Language Arts.

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<sup>6</sup> Contra Costa County Consortium, 2019. *Analysis of Impediments to Fair Housing*. p. 98-102. <https://www.contracosta.ca.gov/DocumentCenter/View/59623/Final-BOS-Approved-AI-6-11-19>



With the exception of John Swett High in Crockett, the anticipated educational outcome, according to TCAC/HCD opportunity maps, is lowest in western and northern communities, where there are greater concentrations of lower-income households and more limited access to resources. The highest educational outcomes are expected in Central Contra Costa County, where communities have higher median incomes (see Figure 6-8).

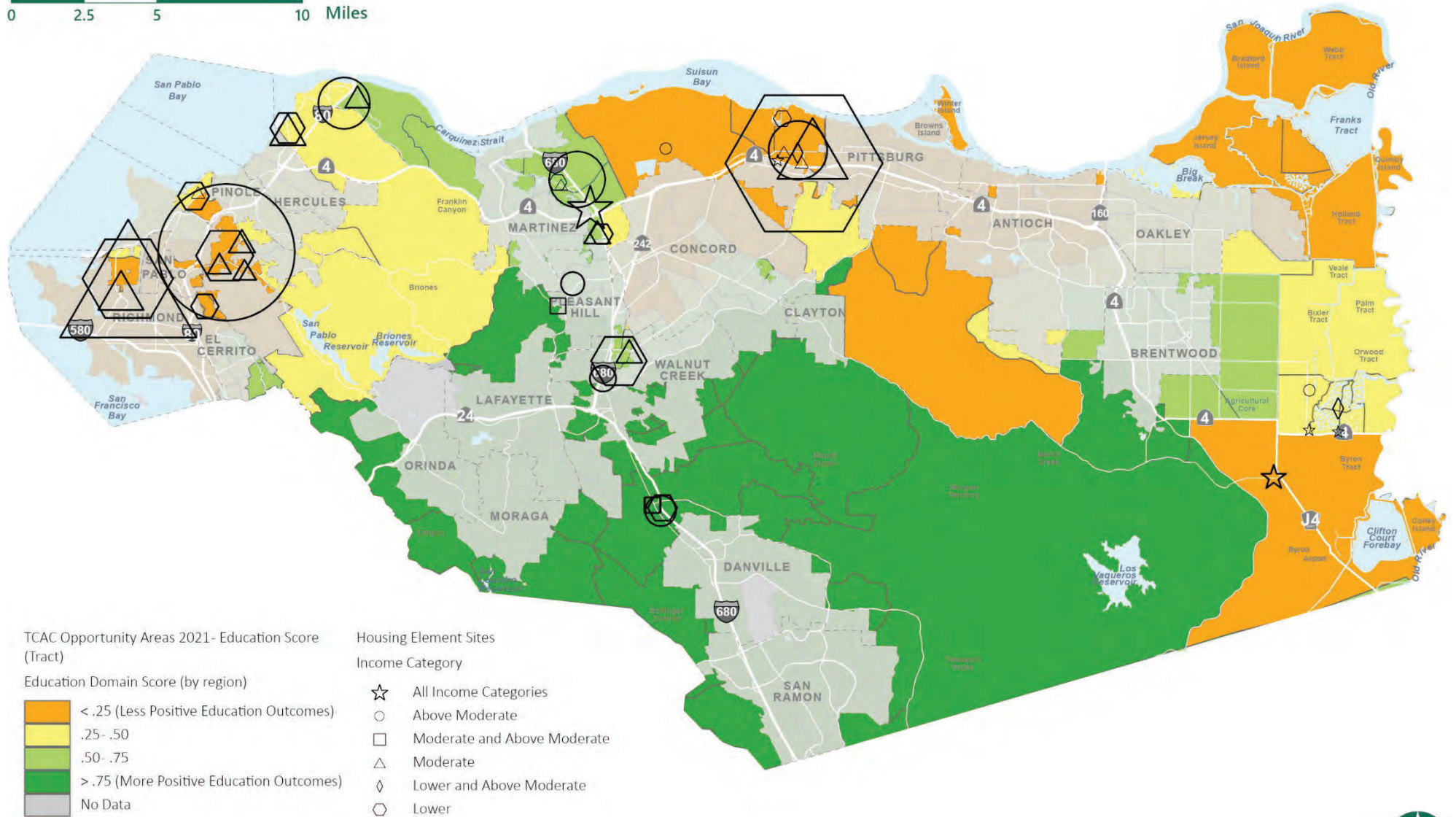
On average, nearly 14.0 percent of students at schools in unincorporated communities are chronically absent, according to DOE, meaning that they are missing 10 percent or more of the instructional days they were enrolled. The highest rates of chronic absenteeism typically correlate with those schools with the highest percentage of students that are considered socially disadvantaged or students that are eligible for free or reduced-price meals or have parents or guardians who did not receive a high school diploma. For example, Verde Elementary in North Richmond has a chronic absenteeism rate of approximately 22.0 percent, and 97.0 percent of students are considered socially disadvantaged. Performance metrics at Verde Elementary are also 87 points below state grade standards for English Language Arts and 112 points below the state grade standard for Mathematics. This correlation between high rates of socially disadvantaged students, chronic absenteeism, and poor performance scores can be found throughout the county and beyond. From this, it can be concluded that instability arising from poverty, housing, and food insecurity, among other factors, may affect school performance.

Addressing housing instability for families with children living in substandard housing or poverty, paired with encouraging integration of affordable housing in high opportunities, may improve educational opportunities for all students. The Housing Element includes a set of housing programs to increase housing opportunity for extremely low-income households,

including Action HE-A8.1 to expand Housing Choice Voucher usage throughout the county and encourage affordable housing in high resource areas.

FIGURE 6-8 EXPECTED EDUCATIONAL OUTCOME SCORE

0 2.5 5 10 Miles



Data Source: TCAC/HCD 2021



## Environmental Health

A disadvantaged community or environmental justice community (“EJ Community”) is identified by the California Environmental Protection Agency (“Cal EPA”) as “areas that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation,” and may or may not have a concentration of low-income households, high unemployment rates, low homeownership rates, overpayment for housing, or other indicators of disproportionate housing need. The Envision Contra Costa 2040 General Plan update referred to these communities as “Impacted Communities”. In February 2021, the California Office for Environmental Health Hazard Assessment (COEHHA) released the fourth version of CalEnviroScreen, a tool that uses environmental, health, and socioeconomic indicators to map and compare a community’s environmental scores. In the CalEnviroScreen tool, communities that have a cumulative score in the 75th percentile or above (25 percent highest score census tracts) are those that have been designated as disadvantaged communities under SB 535. The cumulative score for each census tract includes an exposure score, with a low score being a positive outcome, for each of the following:

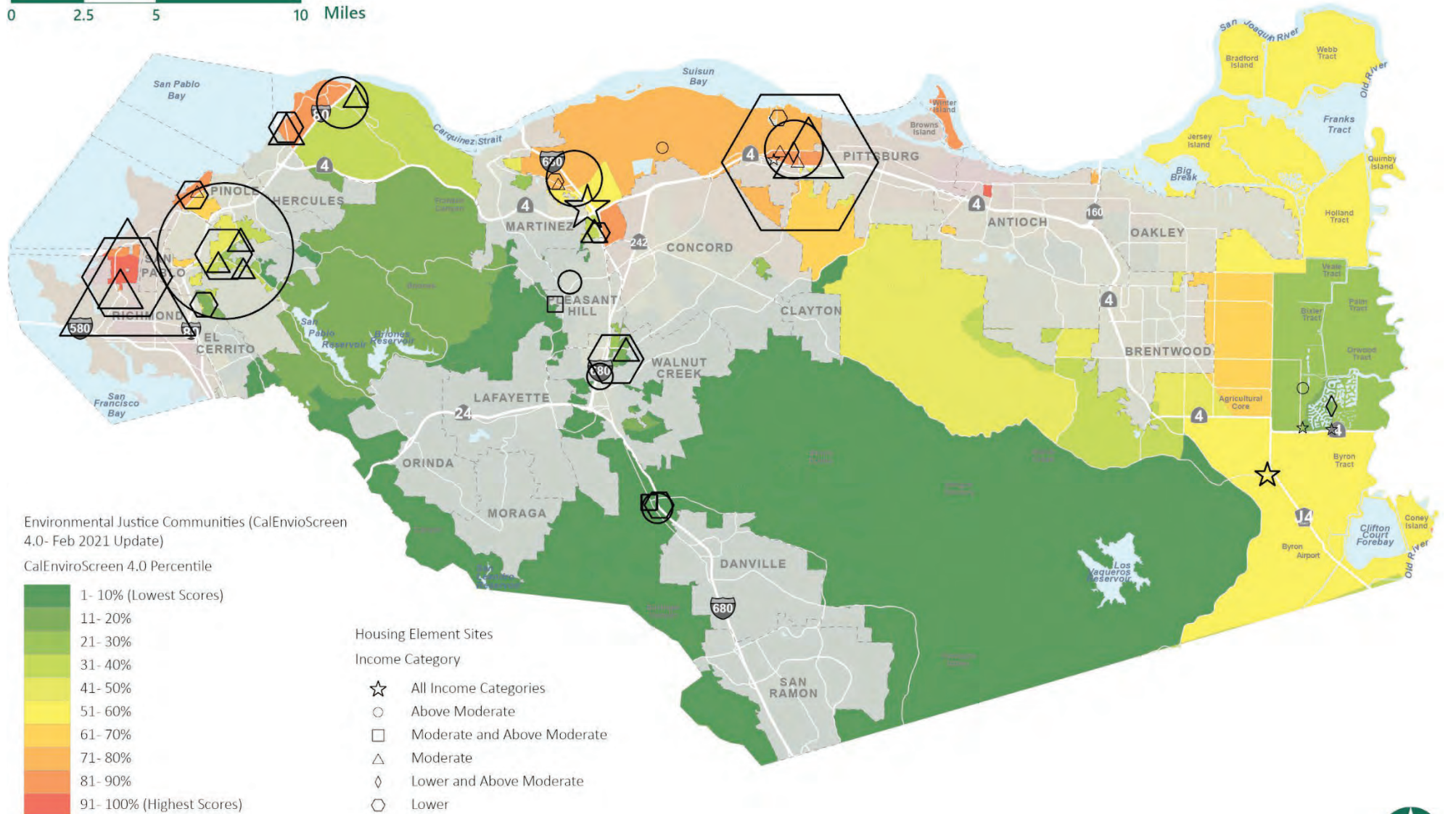
- Ozone concentrations
- PM<sub>2.5</sub> concentrations
- Diesel particulate matter emissions
- Drinking water contaminants
- Children’s lead risk
- Use of certain high-hazard, high-volatility pesticides
- Toxic releases from facilities
- Traffic impacts

Communities that are identified as disadvantaged communities based on their cumulative pollution exposure score are targeted for investment through the State cap-and-trade program. However, the condition of these communities poses fair housing concerns due to disproportionate exposure to unhealthy living conditions. Under SB 535, the communities of Bay Point, Rodeo, Crockett, Montalvin Manor, and Bayview are considered disadvantaged due to exposure to environmental contaminants (see Figure 6-9).

In addition to this SB 535 designation, the County identified these communities, as well as Tara Hills, Vine Hill, and Mountain View, as disadvantaged under SB 1000. SB 1000 disadvantaged communities are scored on the same eight exposure risks as SB 535, in addition to considering historic discrimination, negligence, and political and economic disempowerment that often result in disproportionate burden of pollution and health impacts in these communities. Each of the disadvantaged communities has its roots in heavy industrial and manufacturing uses given their locations along railway tracks and near ports for shipment of raw materials and products and, later, their proximity to freeways. The combined impact of these factors has led to pollution and unhealthy environmental conditions for residents.

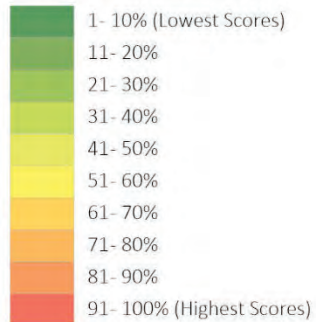
FIGURE 6-9 ENVIRONMENTAL BURDEN

0 2.5 5 10 Miles



Environmental Justice Communities (CalEnviroScreen 4.0- Feb 2021 Update)

CalEnviroScreen 4.0 Percentile



Housing Element Sites

Income Category

- ☆ All Income Categories
- Above Moderate
- Moderate and Above Moderate
- △ Moderate
- ◇ Lower and Above Moderate
- ⬡ Lower

Data Source: OEHHA, CalEPA 2021, CalEnviroScreen 4.0, 2021





With the exception of Vine Hill and Mountain View, all disadvantaged communities have a lower rate of non-Hispanic White residents than the county overall, significantly lower than those areas with high environmental scores in the central portion of the county (Figure 6-9). When compared to the region, the AI found that non-Hispanic Black and Hispanic residents have more limited access to environmental healthy neighborhoods than non-Hispanic White and non-Hispanic Asian residents. Throughout the Bay Area region, non-Hispanic Blacks more often are concentrated in neighborhoods with poor environmental conditions while non-Hispanic White residents have access to the strongest environmental conditions. This may be due to the concentration of historically industrial and disadvantaged communities near shipping ports, railway tracks, and freeways. Today, these communities remain the most affordable in the region due to poor environmental conditions, resulting in a persistent fair housing issue of concentrating lower-income and non-White households in areas of poor environmental quality.

## Disability Services

According to the California Department of Social Services (CDSS), in the unincorporated areas of Contra Costa County, there are licensed adult residential care facilities in El Sobrante, Rodeo, Bay Point, and Alamo, and assisted living facilities for the elderly in El Sobrante, Rodeo, Mountain View, Bay Point, and Alamo. In addition to these resources, there are facilities in incorporated jurisdictions that also serve nearby residents of unincorporated areas. The County supplements these facilities by offering In-Home Supportive Services (IHSS) to eligible seniors and persons with disabilities to assist with daily living activities and support individuals living independently in their own homes.

In addition to support services, paratransit services are available to persons with disabilities through County Connection LINK, East Bay Paratransit Consortium, Tri-Delta Transit Dial-A-Ride, and WestCAT Dial-A-Ride. These programs offer door-to-door transportation to assist persons with disabilities with accessing non-emergency medical appointments, running errands, and other daily activities.

The County also requires new developments to comply with Title 24 of the 2019 California Building Code to ensure that all new construction meets accessible design standards, thus ensuring that all new housing is accessible for all residents regardless of disability. Additionally, the County will ensure that older housing that may not meet the same accessibility requirements can be adapted as needed by formalizing a written reasonable accommodation procedure (Action HE-A4.2).

## Disproportionate Housing Need and Displacement Risk

### Overcrowding

As discussed in the Housing Needs Assessment, the U.S. Census Bureau defines an overcrowded household as a unit that is occupied by more than one person per room. A small percentage of overcrowded units is not uncommon, and often includes families with children who share rooms or multi-generational households. However, high rates of overcrowding may indicate a fair housing issue resulting from situations such as two families or households occupying one unit to reduce housing costs (sometimes referred to as “doubling up”). Situations such as this may indicate a shortage of appropriately sized and affordable housing units. The patterns of

overcrowding seen in the western portion of the county reflect the experience reported by members of the public during the outreach process. Participants expressed that high housing costs and difficulties of securing housing with a poor rental history can present a barrier to securing housing at an affordable price that meets the needs of the household.

There are two areas of concentrated overcrowding in unincorporated Contra Costa County: the far western area surrounding and including North Richmond and the northern area of Bay Point and surrounding areas. According to the 2015-2019 ACS, across all unincorporated Contra Costa County, approximately 3.2 percent of households are overcrowded and an additional 1.4 percent are severely overcrowded. In comparison, roughly 13.6 percent of North Richmond households, 7.8 percent of Montalvin Manor/Bayview households, and 11.8 percent of Bay Point households are overcrowded. Outside of these areas, rates of overcrowding are largely consistent, typically less than 5 percent. The central portion of the county, south of the community of Alamo, and the eastern portion, including Bethel Island and DiscoveryBay, have overcrowding rates of less than 2 percent. The overcrowding in the eastern and northern communities aligns with areas of concentrated lower-income households and non-White persons, indicating a possibly disproportionate housing burden and a need for more affordable large units in these areas. While overcrowding is a pressing issue in the North Richmond and Bay Point areas, this does not translate into severe overcrowding. The County's severe overcrowding rates are approximately equal to or less than the county-wide rate.

In addition to analyzing the specific locations of housing needed to address displacement risk due to overcrowding, the County analyzed tenure by occupants per room. In 2019, according to the ACS, approximately 3.2 percent of households in the unincorporated area were overcrowded, an

increase from 2.1 percent of households in 2010. Similarly, the rate of severe overcrowding has increased to 1.4 percent from 0.8 of households in 2010. As shown in Table 6-34, renters are more burdened by overcrowding than owners, with 6.3 percent of renters overcrowded and 3.4 percent severely overcrowded in 2019, compared to 1.9 percent of owners overcrowded and 0.5 percent severely overcrowded. While tenure by overcrowding is not tied to specific geographic areas, it is likely that the areas with the highest rates of overcrowding (North Richmond, Montalvin Manor/Bayview, and Bay Point) follow the patterns of the unincorporated county and have higher rates of renter overcrowding than owners.

**TABLE 6-34 OVERCROWDED HOUSEHOLDS BY TENURE**

Overcrowding Status	2010		2019	
	Number	Percentage	Number	Percentage
<b>Total Households</b>	<b>57,997</b>	<b>100.0%</b>	<b>61,542</b>	<b>100.0%</b>
Overcrowded	1,234	2.1%	1,978	3.2%
Severely Overcrowded	474	0.8%	840	1.4%
<b>Total Owner Households</b>	<b>43,034</b>	<b>100.0%</b>	<b>43,555</b>	<b>100.0%</b>
Overcrowded	650	1.5%	841	1.9%
Severely Overcrowded	249	0.6%	226	0.5%
<b>Total Renter Households</b>	<b>14,963</b>	<b>100.0%</b>	<b>17,987</b>	<b>100.0%</b>
Overcrowded	584	3.9%	1,137	6.3%
Severely Overcrowded	225	1.5%	614	3.4%

Data Source: 2006-2010 and 2015-2019 ACS, Table B25014



In the Bay Area, approximately 4.4 percent of households experience overcrowding and 2.8 percent experience severe overcrowding. When compared to other counties in the ABAG region, Contra Costa has one of the lowest rates of overcrowding, with lower rates only in Marin and San Francisco Counties. This may indicate that, while overcrowding is a problem, particularly for renters, in Contra Costa County, there are more appropriately sized housing opportunities for residents here than in other areas of the region.

## Cost Burden

A household is considered cost burdened when they spend more than 30 percent, but less than 50 percent, of their income on housing costs. A severely cost-burdened household is one whose housing costs exceed 50 percent of their income. In unincorporated Contra Costa County, approximately 23.7 percent of renters and 16.8 percent of owners are cost-burdened, and 21.6 percent of renters and 12.0 percent of owners are severely cost-burdened (Table 6-35). White, Asian, and American Indian or Alaska Native renters report the lowest cost-burden rate among all racial groups. However, it is worth noting that 68 individuals identify as American Indian or Alaska Native, compared to 7,215 White residents and 2,039 Asian residents. Pacific Islander residents experience the highest rates of both cost burden and severe cost burden among renters, though significantly lower rates among owners. Generally, minority households experience higher rates of cost-burden than White and Asian households, and renters experience higher rates overall than owners.

As seen in Figures 6-9 and 6-10, and demonstrated by Table 6-35, overpayment for housing is a chronic problem across the county and the region. However, renters experience much higher rates of overpayment throughout the county, while owner overpayment is primarily, not exclusively, in the North Richmond and Bay Point areas. Since 2014, the rate of owner overpayment has decreased in most of the county (Figure 6-10), while renter overpayment has remained high in most areas (Figure 6-11).

**TABLE 6-35 COST BURDEN BY TENURE AND RACE/ETHNICITY**

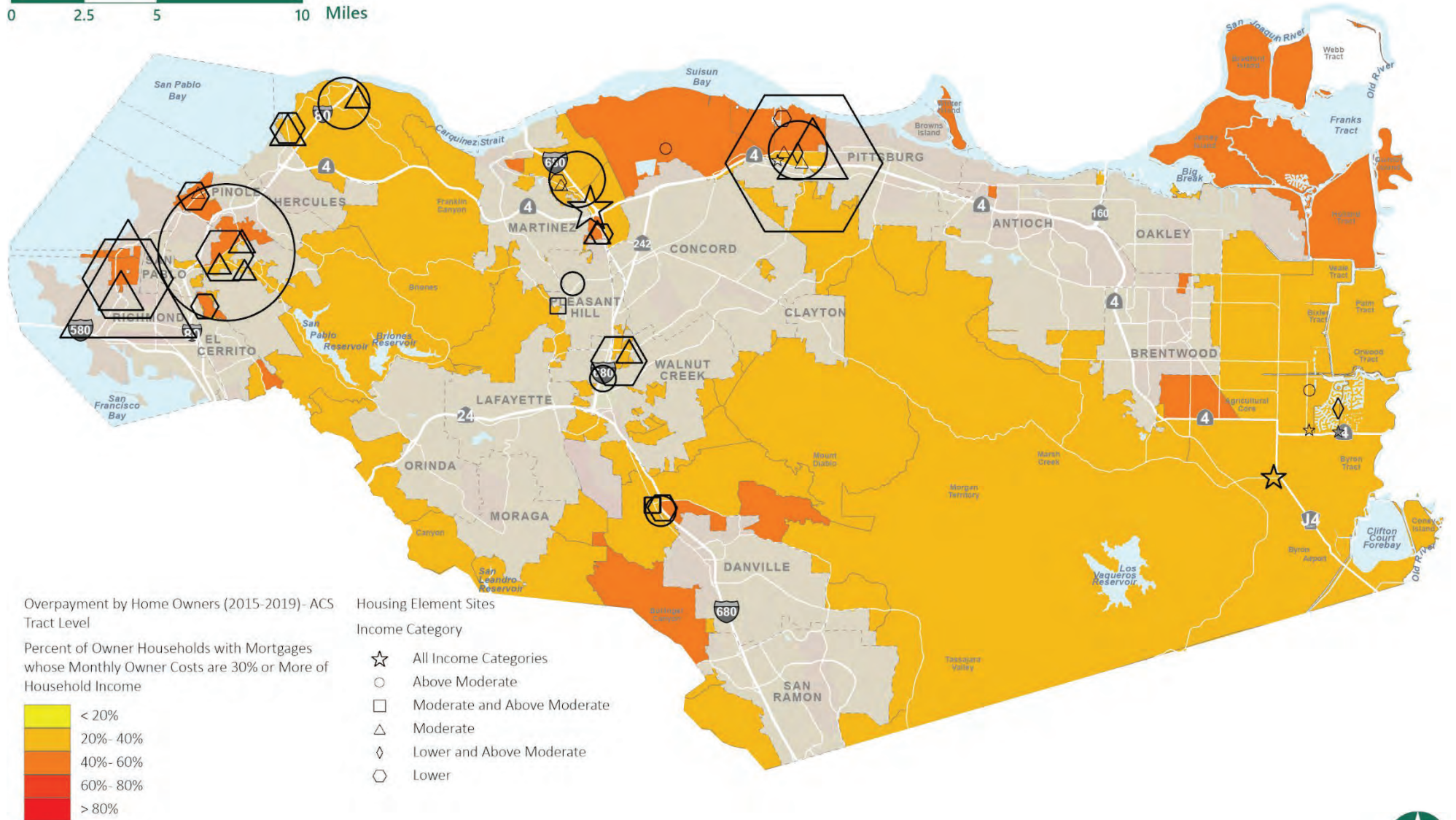
	White	Black or African American	Asian	American Indian or Alaska Native	Pacific Islander	Hispanic	Other	All
Cost Burden >30% and <50%								
Renter-Occupied Households	20.7%	28.6%	21.1%	0.0%	45.5%	26.4%	30.2%	23.7%
Owner-Occupied Households	14.6%	18.6%	18.5%	38.9%	14.8%	22.4%	26.5%	16.8%
<b>Total Households</b>	<b>15.9%</b>	<b>23.6%</b>	<b>19.3%</b>	<b>24.3%</b>	<b>22.3%</b>	<b>24.2%</b>	<b>28.2%</b>	<b>18.9%</b>
Cost Burden >50%								
Renter-Occupied Households	20.1%	29.1%	20.3%	0.0%	34.1%	22.6%	17.3%	21.6%
Owner-Occupied Households	11.8%	9.8%	12.3%	17.7%	0.0%	13.4%	13.8%	12.0%
<b>Total Households</b>	<b>13.6%</b>	<b>19.6%</b>	<b>14.7%</b>	<b>11.0%</b>	<b>8.4%</b>	<b>17.5%</b>	<b>15.5%</b>	<b>14.9%</b>

Data Source: HUD CHAS 2014-2018



FIGURE 6-10 HOMEOWNER OVERPAYMENT, 2019

0 2.5 5 10 Miles

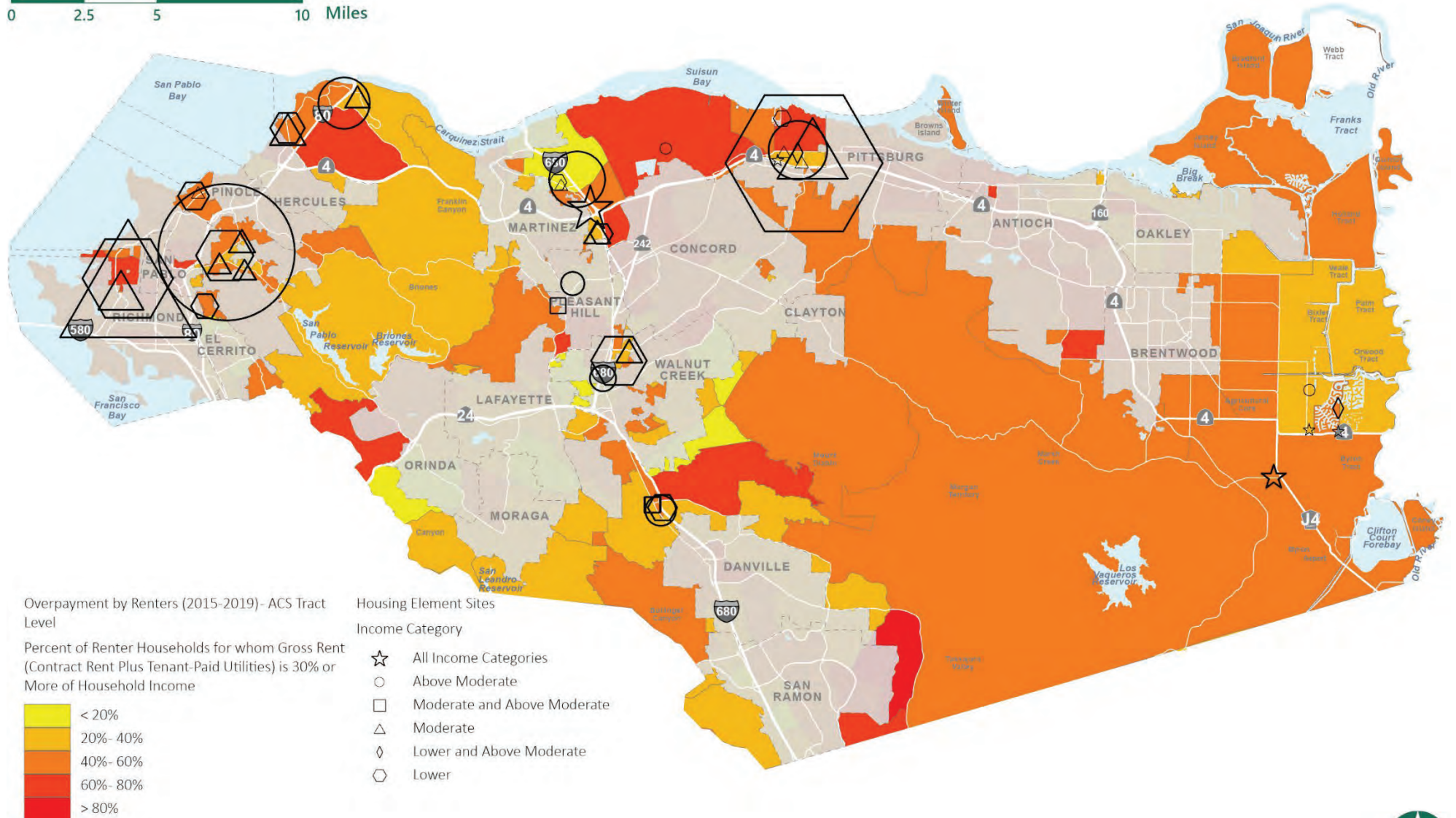


Data Source: 2015-2019 ACS



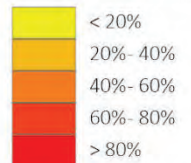
FIGURE 6-11 RENTER OVERPAYMENT, 2019

0 2.5 5 10 Miles



Overpayment by Renters (2015-2019)- ACS Tract Level

Percent of Renter Households for whom Gross Rent (Contract Rent Plus Tenant-Paid Utilities) is 30% or More of Household Income



Housing Element Sites

Income Category

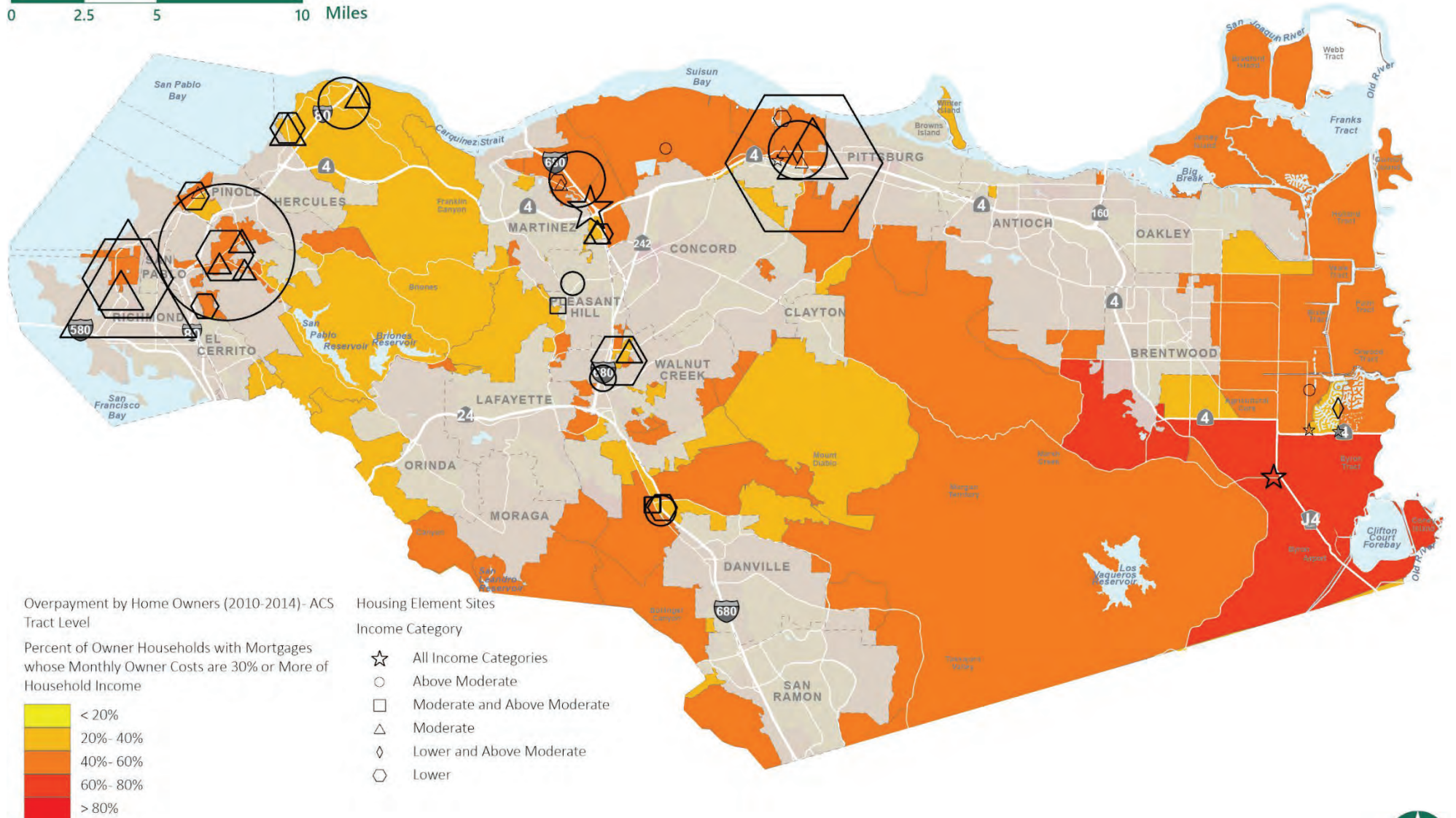
- ☆ All Income Categories
- Above Moderate
- Moderate and Above Moderate
- △ Moderate
- ◇ Lower and Above Moderate
- ⬡ Lower

Data Source: 2015-2019 ACS



FIGURE 6-12 HOMEOWNER OVERPAYMENT, 2014

0 2.5 5 10 Miles



Overpayment by Home Owners (2010-2014)- ACS Tract Level

Percent of Owner Households with Mortgages whose Monthly Owner Costs are 30% or More of Household Income

- < 20%
- 20% - 40%
- 40% - 60%
- 60% - 80%
- > 80%

Housing Element Sites

Income Category

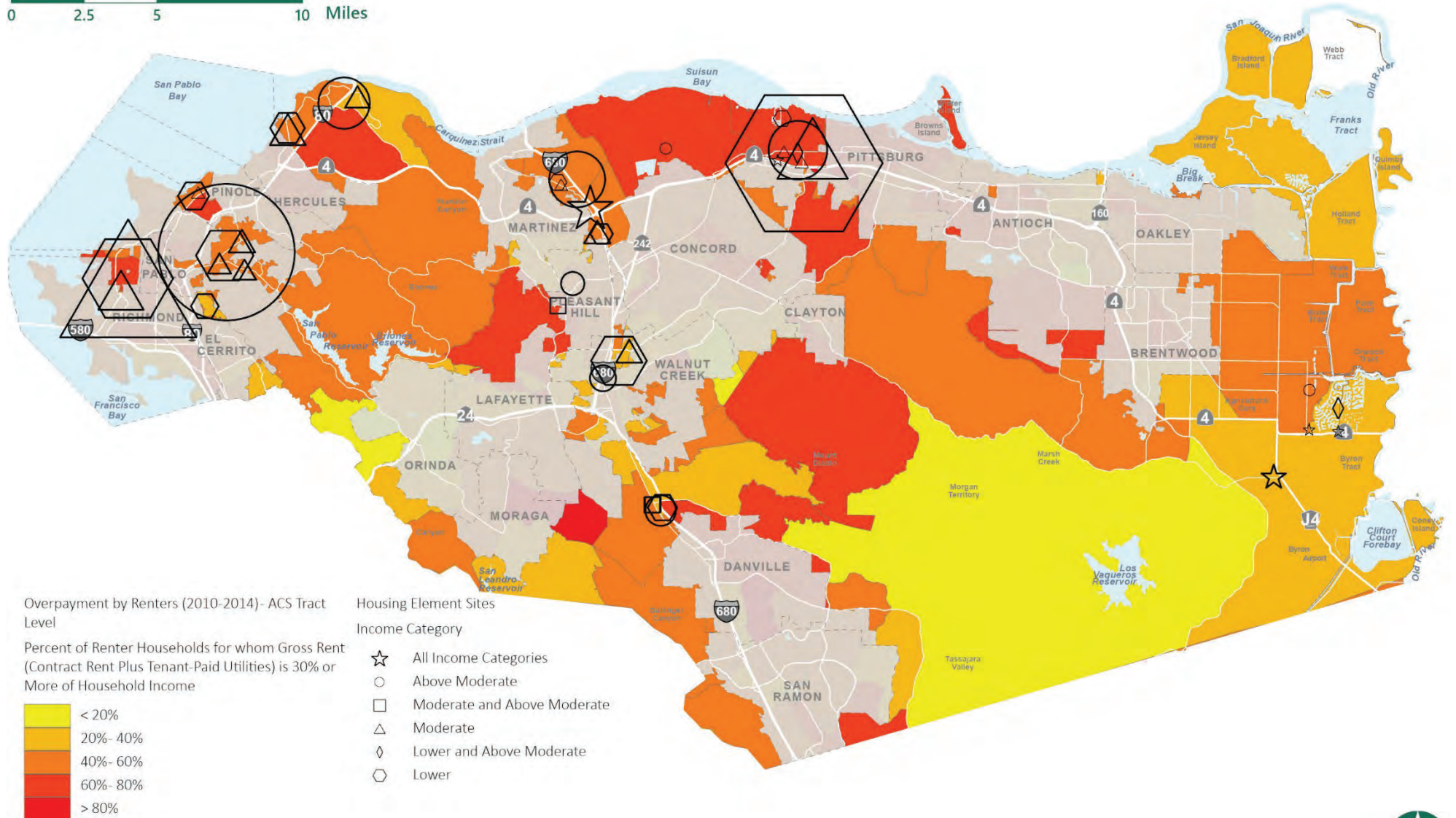
- ☆ All Income Categories
- Above Moderate
- Moderate and Above Moderate
- △ Moderate
- ◇ Lower and Above Moderate
- ⬡ Lower



Data Source: 2010-2014 ACS

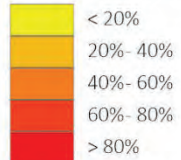
FIGURE 6-13 RENTER OVERPAYMENT, 2014

0 2.5 5 10 Miles



Overpayment by Renters (2010-2014)- ACS Tract Level

Percent of Renter Households for whom Gross Rent (Contract Rent Plus Tenant-Paid Utilities) is 30% or More of Household Income



Housing Element Sites

Income Category

- ☆ All Income Categories
- Above Moderate
- Moderate and Above Moderate
- △ Moderate
- ◇ Lower and Above Moderate
- ⬡ Lower

Data Source: 2010-2014 ACS





## Substandard Housing

Housing condition presents another issue in unincorporated Contra Costa County that may increase displacement risk for residents. Approximately 75 percent of housing units in the County's unincorporated areas are older than 30 years. At this age, many units need at least minor repairs. As discussed in Section C of this Housing Needs Assessment, an estimated 2,906 housing units in Unincorporated Contra Costa County have moderate or severe physical problems. Additionally, according to the County Building Department, approximately 20 residential units per year in the Unincorporated County are identified as not inhabitable and needing immediate replacement. While stakeholders did not identify substandard housing conditions as a fair housing issue in the county, residents in the February 2022 breakout session discussed rental housing conditions, and the circumstances that, in many cases, the only housing available for ownership opportunities requires significant rehabilitation investment, which is usually beyond the economic feasibility of lower-income households. Typically areas with higher median incomes have better housing conditions despite the age of the housing stock, as occupants are more likely to have a high enough income to afford ongoing maintenance. To alleviate the costs associated with rehabilitating units and mitigate this fair housing barrier, the Department of Conservation and Development currently offers the Neighborhood Preservation Program, providing zero and low-interest loans for rehabilitating units owned and occupied by lower-income households in unincorporated areas.


## Homelessness

As discussed in the Special Housing Needs Analysis section of the Housing Needs Assessment, there are approximately 2,277 homeless persons living in Contra Costa County. Contra Costa County Health, Housing, and Homeless Services (H3) agency reported that in 2020, just 54 homeless persons resided in unincorporated areas of the county based on where they reported their last permanent address or where they slept the night before accessing homeless services provided by H3.

Persons experiencing homelessness or at risk of becoming homeless are typically extremely low-income and are displaced from housing due to inability to pay or other issues. While there may be additional homeless persons in unincorporated areas that did not access H3 services during the reporting period, it can be assumed that the 2,277 homeless persons in the county predominately reside in incorporated areas.

As discussed in the Housing Needs Assessment, the County Health Services Department (HSD) develops plans and programs to assist people experiencing homelessness throughout Contra Costa County. These efforts include a 2014 update to the "Ending Homelessness in Ten Years: A County-Wide Plan for Communities of Contra Costa County" and developing the plan "Forging Ahead Towards Preventing and Ending Homelessness." The County's Fiscal Year 2021/22 Action Plan identifies the following actions to address homelessness:

- Use Emergency Solutions Grant (ESG) funds for homeless street outreach, emergency shelters, homelessness prevention, rapid re-housing assistance, and data collection.

- 
- Target CDBG funds to support public service activities for homelessness and those at risk of homelessness, including allocating funds for operating expenses of an emergency shelter, providing a homeless hotline, housing counseling and legal services, and food distribution.
  - Allocate funding for Contra Costa County Health Services Coordinated Outreach, Referral, and Engagement (CORE) Homeless Street Outreach Program.

To support and further these efforts, the County has included Action HE-A7.6 to allow low-barrier navigation centers in all zones that allow mixed-use and nonresidential zones that allow multi-family uses and Actions HE-A3.1, HE-A3.4, and HE-A5.2 to encourage and prioritize development of housing for extremely low-income households.

## Displacement Risk

The annual rate of increase in average home value or rental prices compared with annual changes in the average income in the County may also indicate an increased risk of displacement due to housing costs outpacing wage increases, a trend that is felt throughout the region, state, and nation. According to Zillow, the average home value in Contra Costa County has increased 17.1 percent annually since 2011. While housing costs have increased rapidly, wages have not kept pace. The average income in Contra Costa County has increased approximately 3 percent annually, from \$78,385 in 2010 to \$99,716 in 2019 according to the ACS. The difference in these trends indicates the growing unaffordability of housing in Contra Costa County. To address affordability challenges, the County will encourage and incentivize the development of affordable housing units, particularly in high-

opportunity areas, and will develop a program to connect lower-income residents with affordable housing opportunities (see Table 6-38).

Displacement risk increases when a household is paying more for housing than their income can support, their housing condition is unstable or unsafe, and when the household is overcrowded. Each of these presents barriers to stable housing for the occupants. In Contra Costa County, overpayment is pervasive and is not necessarily linked to areas with a lower median income. However, as discussed under Patterns of Integration and Segregation, there are higher poverty rates near North Richmond and Bay Point. As shown in Figures 6-9 and 6-10, the overpayment rate is slightly higher in these areas of the county. The County has included Actions HE-A3.1, HE-A3.5, HE-A5.2, HE-A6.6, and HE-A7.1 to provide financial assistance and other incentives for construction of lower-income rental and ownership opportunities, promoting ADU construction in high resource areas, and encouraging flexibility in lot consolidation and development. Additionally, the County will pursue developing affordable housing on County-owned land (Action HE-A3.2) and expanding homeownership opportunities for lower-income households (Action HE-A5.1).

## Other Relevant Factors

### Housing and Demographic Trends

Since 2010, vacancy rates have decreased across unincorporated Contra Costa County, likely increasing the demand for the existing housing stock. In 2010, many unincorporated communities had vacancy rates greater than 10 percent, including Bethel Island (22.7 percent), Diablo (13.0 percent), Discovery Bay (13.0 percent), North Richmond (17.0 percent), and Norris Canyon (10.5 percent). By 2020, the vacancy rate in all but 8 communities



had dropped to 5 percent or less, with 13 communities having a vacancy rate of less than 3 percent, which typically reflects an impacted housing market. In unincorporated Contra Costa County, the percentage of renter-occupied households has increased very slightly since 2000, from 27 to 29 percent of households, indicating that the decrease in vacancy rates has not altered the proportion of owner and renter households.

Across unincorporated Contra Costa County, there was a decrease in two-unit housing structures since 2010, while there was an increase in all other housing types. The greatest increase was in multi-family structures with 5 to 9 units (21.9 percent increase in the stock) and structures with 10 to 19 units (27.0 percent increase in the stock). This focus on increasing the supply of multi-family units may have assisted in the increase in the percentage of renter-occupied households and provides a greater variety of housing options than single-family homes, which are often unaffordable to lower-income households.

## History of Development and Investment


As with most of the Bay Area, early development in Contra Costa County was shaped by industrial uses and investment, including shipping and railway transportation of materials and products and the construction of freeways. This development in Contra Costa County began in the early 1900s in the western and northern portions of the county, where there was access to shipping ports and the construction of the Union Pacific Railroad. By the mid-1900s, freeway construction further influenced nearby communities. Throughout the United States, freeways were built through and sometimes displaced, lower-income communities that often contained concentrations of Black or Hispanic residents. This was no different in Contra Costa County. Interstate 80 and State Route 4 were constructed through and around many

communities, altering the landscape. While many of these communities are those that have concentrated poverty and non-White populations today, freeway development in Contra Costa County did not exclusively result in these patterns. Interstate 680 also bisects several communities, but these are primarily affluent suburban communities in the central and southern portions of the county, indicating that it is likely that early heavy industrial uses may have played a greater role in development patterns than freeway construction.

Older communities in Contra Costa County, particularly those that have their roots in shipping, are those that today have greater concentrations of lower-income households and non-White persons than suburban communities in the central county. Outreach participants also emphasized the role that NIMBYism played in shaping the county in terms of new development, often resulting in concentrations of lower-income households in the aging and industrial adjacent locales. Many of these areas are susceptible to gentrification, according to the Urban Displacement Project. Therefore, the County has included Action HE-A3.2 to address development of affordable housing on County-owned land in Bay Point, North Richmond, and Rodeo and Action HE-A8.1 to target place-based revitalization through community-based programs rather than new development in areas of concentrated poverty.

## Public Housing

Public housing provides a safe and affordable option for lower-income households, seniors, and persons with disabilities who may otherwise encounter challenges securing and affording housing. As reported in the County AI, the Housing Authority of Contra Costa County (HACCC) owns approximately 1,177 public housing units in 14 developments throughout



the county, in addition to administering the Housing Choice Voucher program. Public housing in unincorporated areas is located in Rodeo and the City of Brentwood Sphere of Influence. HUD reported that, throughout Contra Costa County, Black residents comprise approximately 55.0 percent of residents in the public housing developments, despite comprising only 9.0 percent of the Contra Costa County Consortium's total population. In contrast, White and Hispanic populations are underrepresented in public housing compared to the total population. The Urban Displacement Project identified all locations of public housing in Contra Costa County as the more urbanized western and northern cities and unincorporated communities, with no public housing in central and southern Contra Costa County. The discrepancy in where public housing is located may inform tenants' demographics, as there are higher concentrations of Black and African American residents in western and northern areas than in southern and central Contra Costa County. This may indicate that either residents of central and southern regions do not have access to public housing and are therefore underrepresented, or there is a greater need among Black residents than in other populations. To ensure that all eligible residents, regardless of location, race, or ethnicity, have access to safe and affordable housing, the County has included Action HEA-3.2 to develop affordable housing on County-owned land, Action HE-A3.4 to assist with the acquisition and rehabilitation of rental units by affordable housing providers, prioritizing projects in high resource areas, and Action HE-A8.1 to facilitate place-based revitalization through community efforts to encourage resident retention.

## Homeownership Trends

According to findings of the County AI, areas with high concentrations of non-Hispanic White residents tend to have the highest homeownership rates. In contrast, communities with concentrations of Black and Hispanic residents have the lowest homeownership rates. Typically, communities in the western, urbanized portion of the county have the lowest homeownership rates, aligning with those areas with lower median incomes, further proximity to jobs, and greater concentrations of non-White residents. In the suburban communities of central Contra Costa County, where there is greater job access and higher median incomes, there are higher rates of homeownership. While this trend is true for most of the county, Bayview, in the western county with a predominantly non-White population, has a high homeownership rate. In Bayview, approximately 92.5 percent of housing units are owner-occupied, according to the 2015-2019 ACS. Of all units in Bayview, just 24 (3.8 percent) are less than 40 years old; 96.2 percent of units were built before 1980. Older housing units are typically more affordable. In 2019, the ACS estimated the Bayview home value was \$479,300, and all Bayview homes are single-family structures. Therefore, this community may be a more affordable option for lower- and moderate-income households seeking homeownership opportunities than other western communities with fewer single-family homes or higher home values. However, breakout session participants discussed the situation facing many potential lower-income homeowners in that more affordable housing units such as these often are in stages of dilapidation, and the resources necessary to rehabilitate these structures make the goal of homeownership unattainable.



### 3. Enforcement and Outreach Capacity

#### Compliance with Fair Housing Laws

Contra Costa County enforces and complies with fair housing laws and regulations through a twofold process: regular review of County policies and code for compliance with State law, and referring fair housing complaints to appropriate agencies. Contra Costa County refers fair housing complaints to ECHO Housing (“ECHO”). ECHO provides housing counseling services, and tenant/landlord services conducts fair housing investigations, and operates periodic fair housing audits throughout Contra Costa County, including unincorporated areas. Additionally, ECHO provides counseling and assistance for first-time homebuyers and lower-income households seeking housing.

The County does not have a formal process currently to disseminate information about fair housing laws. However, Action HE-A8.1 has been included to provide information in County buildings and on the County’s website regarding fair housing rights, requirements, and resources for residents, landlords, and property managers. This information will be updated at least annually.

In addition, the County demonstrates compliance or intention to comply with fair housing laws through the following:

- The County demonstrates compliance with Density Bonus Law (Gov. Code, Section 65915.) through its density bonus ordinance, which currently allows for an increase of 5 to 35 percent over the maximum allowable residential density. Assembly Bills 2753, 2372, 1763, 1227, and 2345 were passed in 2018, 2019, and 2020 and revised density bonus

law to provide additional benefits for qualifying projects. The County has included Action HE-A6.4 to update the density bonus ordinance to be consistent with recent State law.

- The County intends to comply with No-Net-Loss (Gov. Code Section 65863) through identifying a surplus of sites available to meet the County’s RHNA allocation. In total, the County’s surplus unit capacity is 2,485 units, composed of 844 lower-income units, 343 moderate-income units, and 1,299 above moderate-income units.
- The County complies with the Housing Accountability Act (Gov. Code, Section 65589.5) by allowing emergency shelters by right in the General Commercial District.
- The County will comply with SB 35 (Gov. Code Section 65913.4) by establishing a written policy or procedure, as well as other guidance as appropriate, to streamline the approval process and standards for eligible projects by 2022 (Action HE-A7.6).
- The County will comply with SB 330 (Gov. Code Section 65589.5), relying on regulations outlined in the law for processing preliminary applications for housing development projects, conducting no more than five hearings for housing projects that comply with objective General Plan and development standards, and making a decision on a residential project within 90 days after certification of an environmental impact report or 60 days after adoption of a mitigated negative declaration or an environmental impact report for an affordable housing project.



## Housing Discrimination Cases

In October 2021, ECHO provided fair housing case numbers for fiscal years 2018-2019, 2019-2020, and 2020-2021. During fiscal year 2018-2019, ECHO recorded all cases reported from most incorporated jurisdictions (excluding Antioch, Concord, and Walnut Creek) and unincorporated areas as originating in “Urban County.” Therefore, for this year, case numbers may not accurately represent residents in unincorporated areas. In fiscal years 2019-2020 and 2020-2021, ECHO reported cases by community. The cases received are presented in Table 6-36. Most fair housing cases were filed for incidences of discrimination based on race and disability.

**TABLE 6-36 ECHO HOUSING FAIR HOUSING CASES, 2018-2021**

Geography	Race	Disability	Religion	Familial Status	Income Source	General Information Request	Other
<b>Fiscal Year 2018-2019</b>							
Urban County	7	23		1	1	15	5
<b>Fiscal Year 2019-2020</b>							
Bay Point	1	4	1				
Discovery Bay	1	1				1	
Alamo	1						
Crockett	1	1					
Rodeo	1						
<b>Fiscal Year 2020-2021</b>							
Discovery Bay		2					
Alamo		2					
El Sobrante	1	1					

Data Source: ECHO Housing, 2021



In its 2019 Annual Report, the Department of Fair Employment and Housing (DFEH) reported 22 housing complaints from residents of all of Contra Costa County, not just unincorporated areas. This was approximately 2.4 percent of the total number of cases in the state that year (934). Due to confidentiality, DFEH does not report the specific origin of cases within the county. However, as part of the Fair Housing Assistance Program (FHAP), some DFEH cases are dual-filed with HUD’s Region IX Office of Fair Housing and Equal Opportunity (FHEO), which can identify the specific jurisdiction or community from which a complaint originates. According to HUD’s Region IX FHEO, 17 fair housing discrimination cases were filed with and accepted by HUD from unincorporated areas of Contra Costa County between January 1,

2013, and March 24, 2021. As shown in Table 6-37, most cases originated from Bay Point, though disability discrimination was the most common reason for the alleged discrimination. No cases were reported in communities not listed in the table during the reporting timeframe. The percentages total more than 100 percent because some cases claimed multiple reasons. In addition to these cases, 34 inquiries with known and unknown reasons for the alleged discrimination were sent to HUD to determine their validity. In reviewing these cases, 13 failed to respond to HUD’s follow-up, and 21 were found not to have a valid basis. Of these inquiries, 10 were inquiries against a public entity in the county.

**TABLE 6-37 HUD FAIR HOUSING CASES, 2013-2021**

Geography	National Origin	Religion	Familial Status	Disability	Race	Retaliation	Sex	Total
Bay Point	2	1	1	7	2	1	0	14
Bethel Island							1	1
Crockett				1		1		2
Rodeo				1				1
Discovery Point				1				1
Pacheco				1				1
El Sobrante			1		1			2
<b>Total</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>22</b>

Source: HUD FHEO, 2021

\*As some cases alleged multiple bases of discrimination, the total reports of each form of discrimination total more than 100%.



## Accessibility of Outreach

The necessity to identify ways to implement more widespread outreach efforts with the intent to connect underrepresented and low-income groups into the planning effort was reiterated in outreach dialogues. Approximately 6 percent of the population 5 years and older in unincorporated Contra Costa County speaks English “not well” or “not at all,” according to the 2015-2019 ACS. This is made up of approximately 10,600 residents who require translation services to be able to participate in public engagement events and processes. To meet this need, the County provides Spanish translation at all Board of Supervisor meetings and other languages by request. To ensure all residents have equal access to participate in outreach efforts, the County will promote the availability of translation services by, at least annually, distributing information and how to access these services to community organizations and on the County’s website in multiple languages (Action HE-A8.1).

## 4. Sites Inventory Analysis

The location of housing in relation to resources and opportunities is integral to addressing disparities in housing needs and opportunities and to fostering inclusive communities where all residents have access to opportunities. This is particularly important for lower-income households. AB 686 added a new requirement for housing elements to analyze the location of lower-income sites in relation to areas of high opportunity.

Figures 6-14 and 6-15 show the sites and income categories of units geographically throughout the unincorporated county. Figures 6-16 through 6-27 show the distribution of projected units by income category of the following indicators compared to unincorporated countywide patterns to understand how the projected locations of units will affirmatively further fair housing: TCAC opportunity areas, median income, predominant population, familial status, disability rates, educational score, environmental health, and overpayment. The following sites inventory discussion includes an analysis of the number of projected units by income category, total RHNA capacity, and unincorporated county acreage by income category, to further assess the potential impacts of the sites inventory to affirmatively further fair housing.

## Potential Effects on Patterns of Integration and Segregation

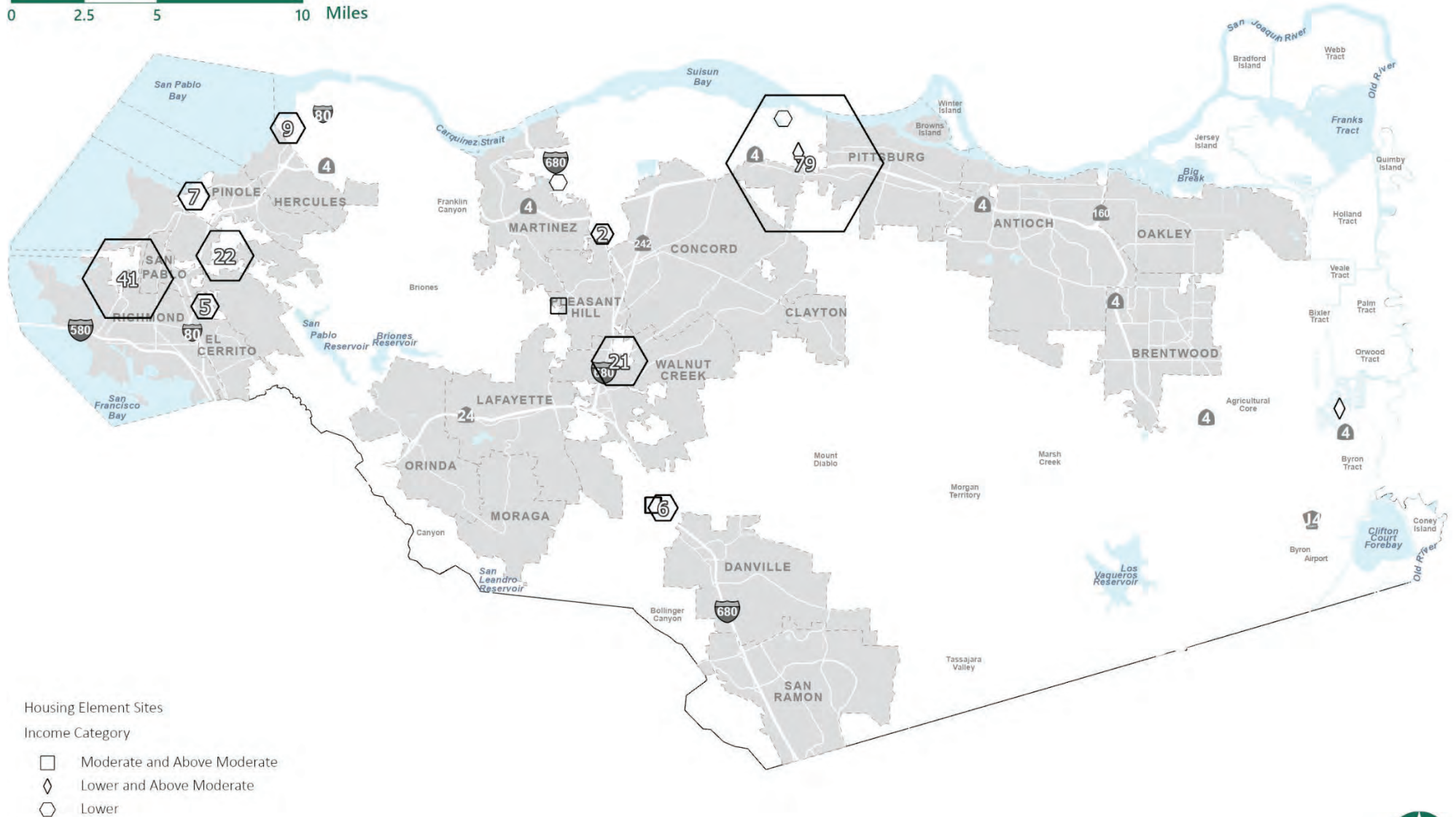
Figure 6-16 (Percentage of Unit Capacity and County Acreage by TCAC Resources) presents the breakdown of unit capacity in unincorporated Contra Costa County by resource area designation and income category. As seen previously in Figure 6-2 (TCAC Resource Opportunity Areas), the high and highest resource areas in Contra Costa County are within the central and southern portions of the county. The western and northern portions are designated low resource, and areas of moderate resource are scattered in the northwest and eastern areas. Discovery Bay is the only area with high and highest resource designation outside central Contra Costa County.





FIGURE 6-14 SITES BY INCOME CATEGORY (LOWER, LOWER AND ABOVE MODERATE, MODERATE AND ABOVE MODERATE)

0 2.5 5 10 Miles

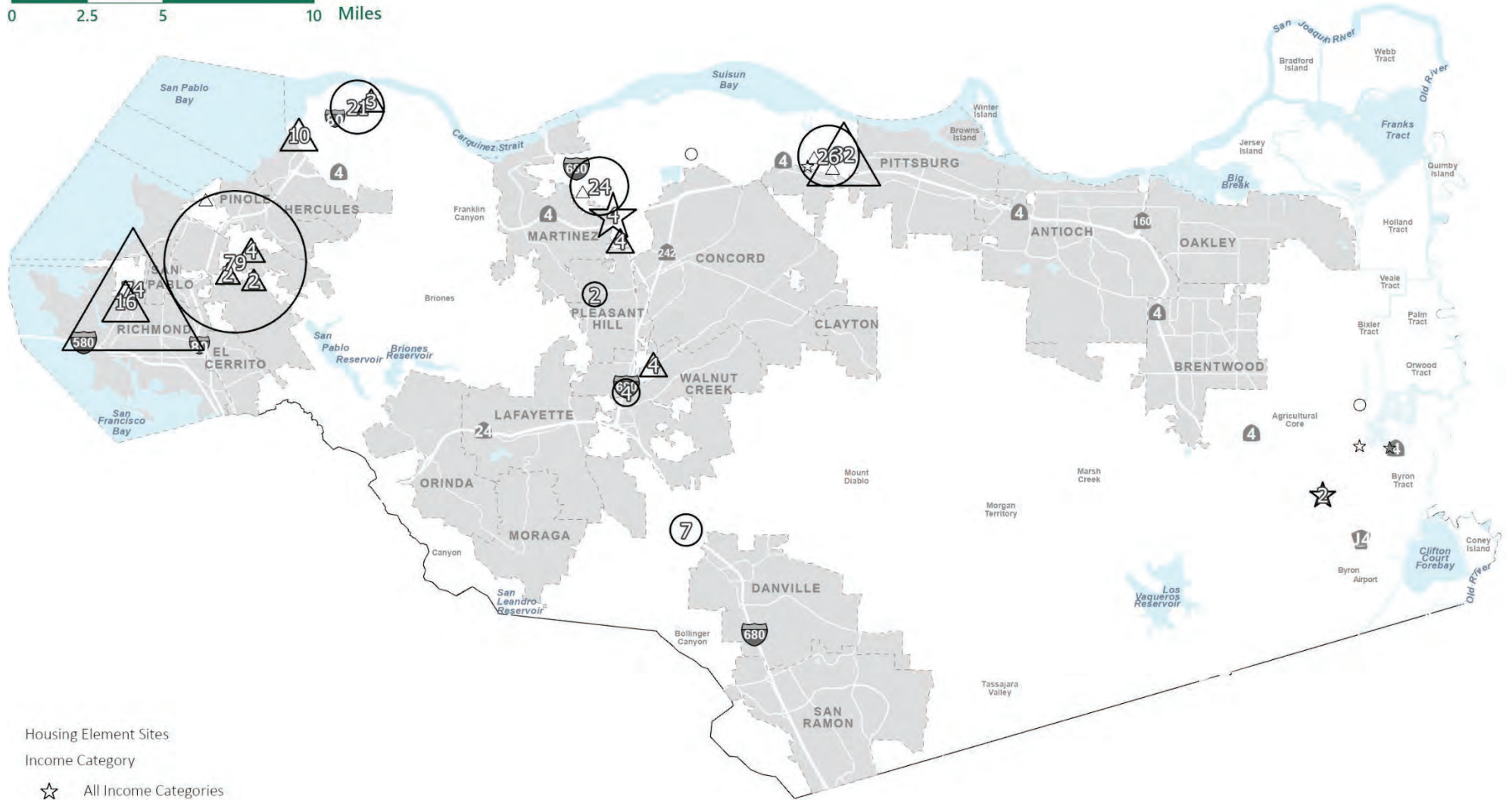


Source: Contra Costa County



FIGURE 6-15 SITES BY INCOME CATEGORY (ABOVE MODERATE, MODERATE)

0 2.5 5 10 Miles



Housing Element Sites

Income Category

- ☆ All Income Categories
- Above Moderate
- △ Moderate

Source: Contra Costa County

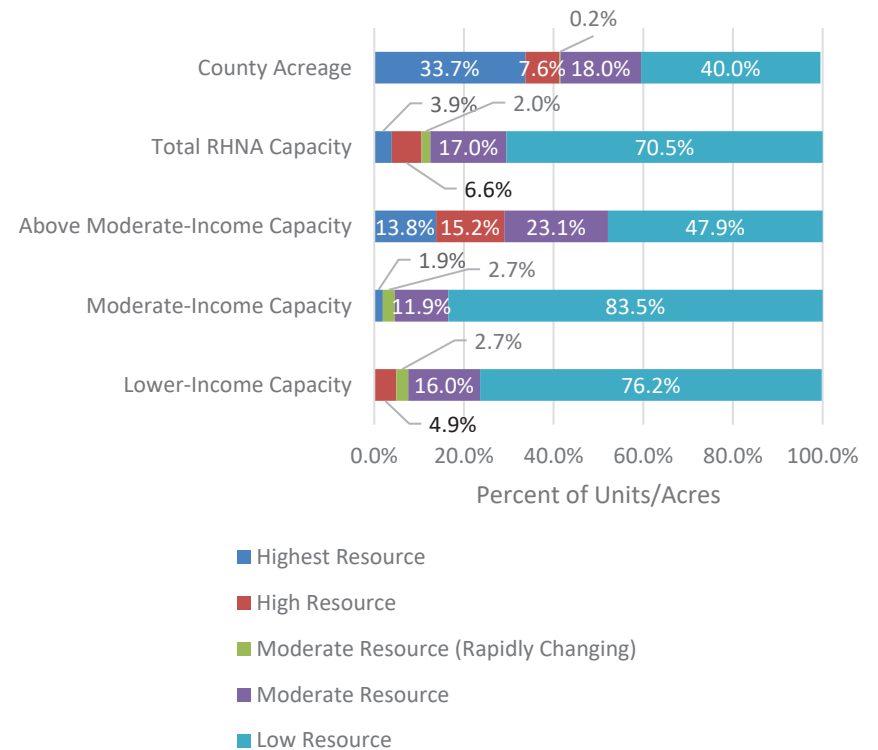




As shown in Figure 6-16, 70.5 percent of the total unit capacity identified to meet the RHNA is in low- resource areas, and 19.0 percent is in moderate-resource areas (inclusive of 2.0 percent rapidly changing areas) while these areas account for approximately 58.0 percent of the land area in Contra Costa County, with an additional 0.2 percent designated as a moderate resource – rapidly changing. The lower-resource areas are concentrated in North Richmond, San Pablo, North Richmond Heights, and Bay Point, on either side of I-80 in the communities of Bay View, Montalvin Manor, Tara Hills, and El Sobrante, along San Francisco and Suisun Bays, where industrial uses and older housing stock are more prevalent, and in the semi-rural community of Byron. The moderate-resource designations in the northern central communities, including the vicinity of Alhambra Valley, Reliez Valley, Briones, Pacheco, portions of Vine Hill, and Contra Costa Centre, are not as densely developed, although infill and use of underutilized school district and church-owned land plays a large role in the identification of available sites.


Approximately 7.6 percent of lower-income housing opportunity is within highest and high--resource designations. Approximately 35.4 percent of the total site capacity identified in Discovery Bay is for lower-income units within mixed-income neighborhoods. Additional capacity for lower-income units within a high resource designation is in the vicinity of the Alamo community, with 30.5 percent of the total unit capacity identified in this area for lower-income units. These sites offer an opportunity for lower-income housing mobility and helps reduce potential concentration of lower-income units in other areas of the Unincorporated County. While the Discovery Bay and Alamo sites satisfy 8.9 percent of the total RHNA capacity for unincorporated County, they provide 5.2 percent of the lower-income housing capacity.

**FIGURE 6-16 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY TCAC RESOURCE AREA DESIGNATION**



Source: TCAC/HCD, 2021; Acreage analysis by Contra Costa County Department of Conservation and Development, 2022

The majority of lower-income unit capacity, 76.2 percent, is identified within low resource areas, with 16.0 percent of the lower-income unit capacity located within the moderate resource designation. While the site potential in the communities of Bay Point and the vicinity of West Pittsburg on Suisun



Bay accounts for 31.2 percent of total RHNA unit capacity, approximately 44.1 percent of the lower-income RHNA capacity is satisfied. There are two significant lower-income housing opportunities identified in the sites inventory within this area, satisfying 21.4 percent of the total lower-income RHNA: one large site in north Bay Point provides the potential for 500 lower-income units. Although this area is designated as low resource, new retail, services, and amenities are an integral component in the future development vision of the area. Therefore, locating these units here is not expected to negatively concentrate lower-income residents in areas with limited access to resources. The second site identifies the potential for 650 lower-income units just north of SR 4 and the commercial node on Bailey Road at the SR 4 access ramps... These two sites offer a significant housing mobility opportunity for lower-income households.

In the central area of the El Sobrante community off of the San Pablo Dam Road, there are numerous individual parcels with the potential for about 10.0 percent of the lower-income RHNA allocation. Although the El Sobrante community is designated as low resource, the potential exists for some of the identified units to be included in mixed-use developments. In addition, there are sites identified to accommodate above moderate-income units satisfying 23.5 percent of the above moderate-income RHNA capacity and additional moderate-income unit capacity within the community, fostering income-integration and housing mobility opportunities for households of all incomes. Other opportunities for meeting the lower-income RHNA allocation are primarily found in the western communities in the vicinity of the I-80 and within the north-central communities in both low- and moderate-resource designations. Within the Montalvin Manor community and adjacent Bay View, several sites have been identified with lower-income housing unit capacity, including two underutilized school district sites for multi-family residential

and adjacent acreage proposed for mixed-use, constituting approximately 11.4 percent of the RHNA allocation for lower-income households. These sites are adjacent to sites zoned for mixed-use which are identified for the majority of moderate-income unit capacity in the unincorporated county, as discussed below, which will help to revitalize this area of the community, aiming to improve access to resources for residents.

Lower-income opportunities identified in central North Richmond count for 6.5 percent of unit capacity toward meeting the lower-income RHNA, including several vacant adjacent parcels owned by the Housing Authority of Contra Costa County with potential for affordable multi-family residential, . While located in a low-resource area, this combination of sites in North Richmond will help to revitalize this area of the community, aiming to improve its resource designation. In addition to the abovementioned site consolidation opportunity, other lower-income opportunity sites in North Richmond are scattered throughout the community, many of which are owned by the Housing Authority, which has the potential for smaller multi-family infill complexes. Most scattered sites with potential for lower-income housing are adjacent to identified properties with infill potential for moderate- or above moderate-income units to facilitate a more mixed-income community with proximity to existing and proposed services, transit, and other opportunities to revitalize underutilized areas without risking displacement of existing residents.

Mixed-use redevelopment within underutilized and vacant sites along San Pablo Avenue in the community of Rodeo yield 4.1 percent of lower-income unit capacity with additional individual sites in the vicinity identified for moderate-income units. The West Contra Costa County Unified School District properties, which have been closed, are considered for lower-income units within the East Richmond Heights neighborhoods, provide



additional lower-income housing unit capacity to meet the RHNA allocation within this designation.

Moderate-income unit capacity is also predominantly located within the low resource designation, accounting for 83.5 percent of unit potential in these areas, the majority of which are identified in Bay View and Montalvin Manor with unit capacity accommodated within potential mixed-use development and mixed-income neighborhoods, comprising 49.1 percent of the total moderate-income RHNA unit count for the unincorporated county. An additional 24.7 percent of the unit capacity towards the moderate-income RHNA is identified in the low resource communities of Bay Point and North Richmond. The remainder of the moderate-income unit capacity within the low resource designation is scattered between the communities of El Sobrante, Byron, and portions of Vine Hill.

The distribution of unit capacity within moderate resource communities (17.0 percent of total unit capacity) is fairly comparable to the distribution of moderate resource acreage (18.0 percent) in the unincorporated county. The majority of unit capacity in moderate resource communities is located within Contra Costa Centre and the surrounding areas (74.5 percent of total unit capacity in moderate resource areas). Approximately 64.8 of the unit capacity identified for these Costra Contra Centre sites are lower-income units (17.3 percent of total lower-income RHNA unit capacity), 10.5 percent are moderate-income units (14.9 percent of above moderate-income RHNA unit capacity), and 24.7 percent is above-moderate income unit capacity (8.6 percent of moderate-income RHNA unit capacity); , providing mixed-income housing mobility opportunities with nearby access to a major public transit hub in the central portion of the unincorporated county. Another 18.5 percent of the total unit capacity within the moderate resource designation is identified in a portion of the community of Vine Hill, as primarily above

moderate-income unit capacity with additional moderate unit capacity is identified on limited sites in Crockett, and 5.9 percent of unit capacity within moderate resource designated areas in Pacheco, including lower-income and moderate-income unit capacity.

Although slightly over 41.0 percent of the acreage in the unincorporated county is designated high and highest resource, only 29.0 percent of the above moderate unit capacity is identified in these higher resource communities. Conversely, 71.0 percent of above moderate-income unit capacity is integrated into low and moderate resource areas of the unincorporated county, with concentrations in the Vine Hill, Pacheco, El Sobrante, Bay Pointe and Contra Costa Centre communities, offering an opportunity for above moderate-income housing mobility, while fostering the reduction of concentration of lower-income units in low and moderate resource areas. As discussed previously, a portion of the moderate- and lower-income unit capacity is also integrated into the high resource communities of Discovery Bay and Alamo, providing housing mobility opportunities in high resource communities.

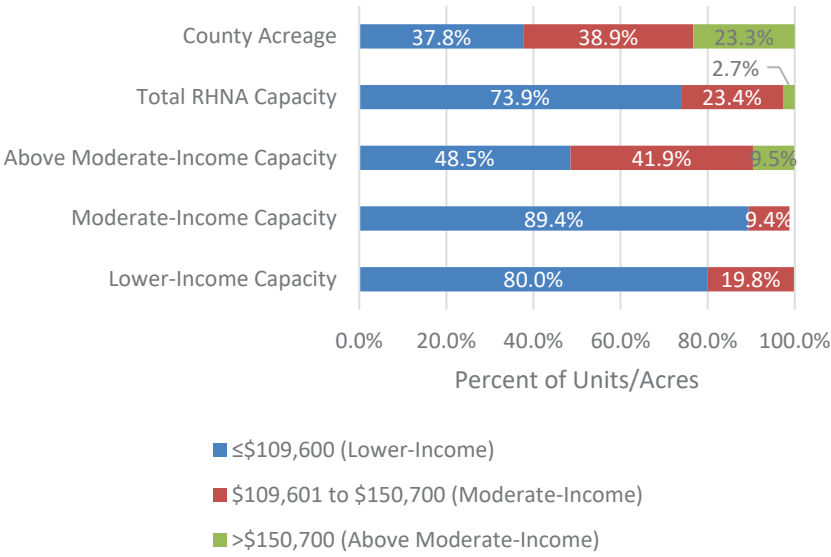
There are also a number of sites identified to meet the County's RHNA which have the capacity to accommodate units at all three income levels – lower, moderate, and above moderate, including mixed-income units in Bay Points and Discovery Bay, helping to facilitate mixed-income neighborhoods and encourage future integration in areas that are currently designated as low and moderate resource.

## Income

As shown in Table 6-33 (Median Income by Unincorporated Area), only six unincorporated areas (Alhambra Valley/Reliez Valley/Briones, Alamo/Castle Hills, Diablo, Kensington, Canyon, and Discovery Bay) have median incomes in the moderate- or above moderate-income range. These areas largely correspond with portions of Contra Costa County that TCAC and HCD have designated as high and highest resource areas, having the most significant anticipated economic outcomes for residents, reflecting distribution of opportunity in more affluent areas. The communities with the highest median income and lowest poverty rates are those in central Contra Costa County and the communities of Kensington and Discovery Bay. Figure 6-17 (Percentage of Unit Capacity and County Acreage by Income Category Rate) identifies where opportunity sites are located by income category in the unincorporated area.

Figure 6-17 shows that 73.8 percent of the total RHNA capacity is identified in lower-income communities, which comprise 37.8 percent of unincorporated county acreage. The majority of lower-income housing capacity, 80.0 percent, as well as 89.4 percent of moderate-income capacity, and 48.5 percent of above moderate-income capacity, is located primarily in lower-income communities in the vicinity of North Richmond and Bay Point, as well as western and north-central communities along San Francisco and Suisun Bays, including El Sobrante, East Richmond Heights, Bay View/Montalvin Manor, Crockett, and Rodeo. The inclusion of lower-income housing units in mixed-income housing development helps mitigate existing income patterns through integration.

**FIGURE 6-17 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY MEDIAN INCOME**



Source: American Community Survey, 2015-2019; Contra Costa County. Department of Conservation and Development, 2022

The remaining lower-income capacity is identified on sites within moderate-income localities in Discovery Bay, in Contra Costa Centre near the Pleasant Hill/Contra Costa Centre BART station, in Saranap to the south of Walnut Creek, and the Vine Hill community, with a small cluster of above moderate-income sites near Alamo.

As discussed in the Population Characteristics section analyzed previously, the highest rates of poverty are concentrated in the vicinity of North Richmond and Bay Point, and the western unincorporated communities that

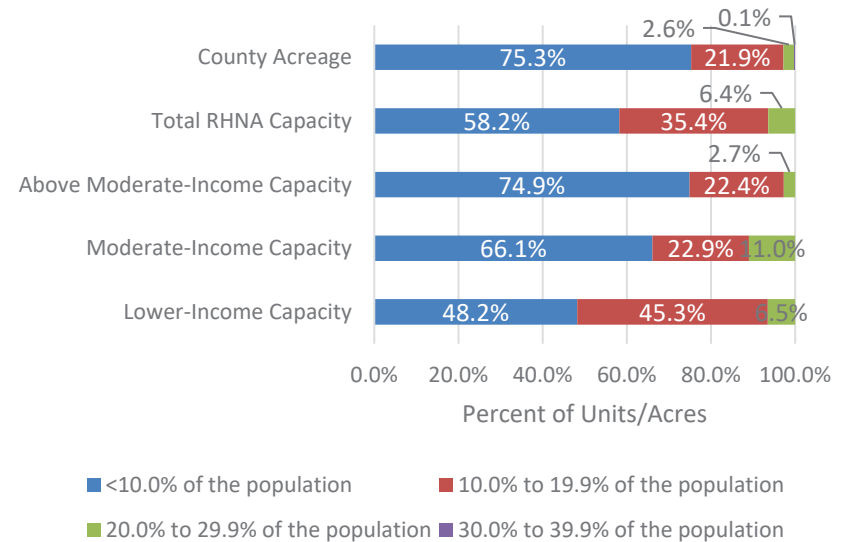


developed in response to the industrial economic base along the waterfront, as well as a presence of extremely low-income households in the more rural and less densely developed north central communities. However, analysis indicates that while lower-income households may have concentrated in coastal communities for more affordable housing costs, all communities are expected to become unaffordable without intervention. In addition, outreach input disclosed that NIMBYism has had a significant impact on the type and distribution of affordable housing resources and resulting concentrations of lower-income and populations in poverty in the western portion of the county.


Figure 6-18 (Percentage Unit Capacity and County Acreage by Percentage of Population Below the Poverty Line) identifies the poverty rate in the unincorporated area and where the opportunity sites are located for comparison. As shown in Figure 6-18, 58.2 percent of the total site opportunities are identified in areas where the poverty rate is below 10 percent. In contrast, this rate exists within 75.3 percent of the unincorporated county. Although 21.9 percent of the acreage within the unincorporated county has a population that falls within the poverty range of 10.0 to 19.9 percent, 35.4 percent of the total RHNA sites are within these areas. Comparatively, 45.3 percent of the lower-income capacity sites are determined in these higher-poverty areas. Further, while 2.6 percent of the unincorporated area's acreage falls within the 20.0 to 29.9 percent poverty range, 6.4 percent of the total RHNA capacity is within these areas, with 6.5 percent of the lower-income capacity, 11.0 percent of the moderate-income capacity, and 2.7 percent of above moderate-income capacity sited on properties within portions of communities with 20.0 to 29.9 percent poverty. However, most of these sites are the properties owned by the Contra Costa County Housing Authority in Bay Point, North Richmond, and Rodeo, and the

introduction of moderate- and above-moderate-income housing opportunities in these areas promotes income integration and helps reduce the concentration of populations in poverty. While there is a TCAC Area of High Segregation and Poverty in Martinez, no sites have been identified in this area.

**FIGURE 6-18 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY PERCENTAGE OF POPULATION BELOW THE POVERTY LINE**



Source: US Census, 2019; Contra Costa County Department of Conservation and Development, 2022  
 Note: There are no areas in Contra Costa County in which 40.0 percent or more of the population is below the poverty line.



While much of the lower-income site capacity is in Bay Point, El Sobrante, North Richmond, Rodeo, and Montalvin Manor, it is important to note two things. First, while only a small portion of the unincorporated area has an extremely high rate of poverty, over 20 percent, with approximately 22.0 percent of the unincorporated area with a poverty rate between 10.0 and 19.9 percent, much of the inland unincorporated area is either not populated at all, or sparsely populated. This suggests that the land along San Francisco and Suisun Bay in the vicinity of I-80, State Route 4, and I-680 may comprise a higher percentage of the populated areas and more closely reflect the RHNA. Second, the distribution of sites in the communities with access to I-80 and State Route 4, as well as I-680, are supported by commercial uses and services, and connections to the BART and bus services, thus increasing access to opportunity regardless of current income distributions. According to stakeholders, many lower-income households are currently concentrated in the western, north central, and inland central areas due to low housing costs, but not necessarily good housing conditions. The identification of the lower-income unit capacity in Discovery Bay and near Alamo provides housing mobility opportunities in high resource areas and areas with higher median incomes to promote, rather than concentrating affordable housing in the lower resource communities in the unincorporated county. In contrast, the inclusion of moderate- and above moderate-income infill sites or a mix of income households in the portions of the unincorporated areas where the majority of lower-income sites are identified can stimulate redevelopment and revitalization of neighborhood conditions through income integration, thus potentially attracting an influx of supporting services and housing options, increasing resource opportunities.

The distribution of wealth in Contra Costa County and the Bay Area has resulted in areas of exclusivity, presenting barriers to economic and housing mobility for lower-income households that would facilitate integration. To address barriers to economic mobility for lower-income residents and proactively counter the anticipated gentrification in many lower-income communities, the County will implement Action HE-3.1 to provide financial assistance and other incentives for affordable rental and ownership opportunities; Action HE-A3.2 to develop affordable housing on County-owned land in Bay Point, North Richmond, and Rodeo; Action HE-A5.1 to encourage construction of ADUs as a potential affordable housing option in high resource and potentially exclusive areas such as the Alhambra Valley, Reliez Valley, Briones, Alamo, and Castle Hill areas; expand homeownership opportunities for lower-income households (Action HE-A5.1); and Action HE-A8.1 to target place-based revitalization through community-based programs rather than development in areas of concentrated poverty.

## Race and Ethnicity

As presented in the Housing Needs Assessment of this Housing Element, unincorporated Contra Costa County is ethnically and racially mixed, although it is not necessarily integrated. In communities closer to San Francisco Bay, diversity is higher, with a predominantly Hispanic/Latinx population in Bay Point, Pittsburg, Antioch, North Richmond, Tara Hills, Montalvin Manor, and Rollingwood, generally corresponding to the current concentration of lower-income households. In contrast, the central and eastern portions of the unincorporated county are predominantly White. The patterns of concentrations of non-White populations find minority populations predominantly in dense urban and historically industrial areas near the San Francisco Bay, with a larger presence of White persons in

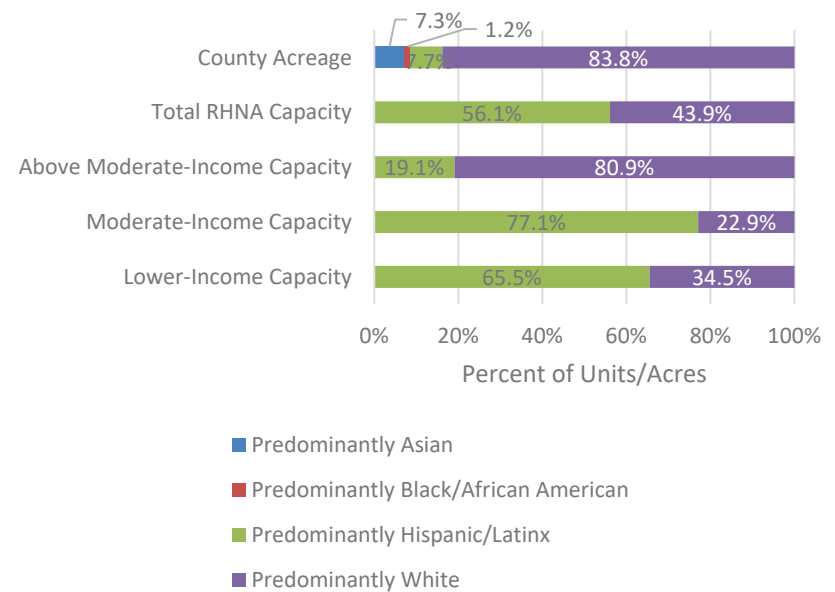




inland, suburban communities. Predominantly Asian households are found in the eastern portion of Rodeo, southwest of San Ramon and Danville, and between the cities of Pittsburg and Concord. The areas in unincorporated Contra Costa County that are predominantly African American or Black are east of Pittsburg.

Approximately 43.9 percent of the units identified to meet the entire RHNA are identified in areas that are predominantly White, with 56.1 percent in areas that are predominantly Hispanic/Latinx, whereas land patterns indicate that 7.7 percent of total unincorporated county acreage is predominantly Hispanic/Latinx and 83.8 percent is predominantly White. The remainder is predominantly Asian or Black, although no sites are identified in those areas. As supported by the 2015-2019 ACS, and corroborated by stakeholders, many of the Hispanic/Latinx households are lower income, 12.9 percent experience overcrowding, and approximately 44.0 percent overpay for housing, therefore suggesting these households are a community in need of affordable housing options. The inclusion of 65.5 percent of lower-income units and 77.1 percent of moderate-income units in areas of high diversity will help meet this need while enabling residents to remain in their community with continued access to their employment, public transportation, and interstate system, while the 34.5 percent of lower-income units and 22.9 percent of moderate-income units in areas of lower diversity will promote housing mobility opportunities that may help to increase diversity in areas of greater affluence. The inclusion of 19.1 percent of above moderate-income units in areas of high diversity may achieve a similar goal by reducing the concentration of minority and lower-income households through mixed neighborhoods.

**FIGURE 6-19 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY PREDOMINANT POPULATION**



Source: US Census, 2019; Contra Costa County Department of Conservation and Development, 2022

## Familial Status

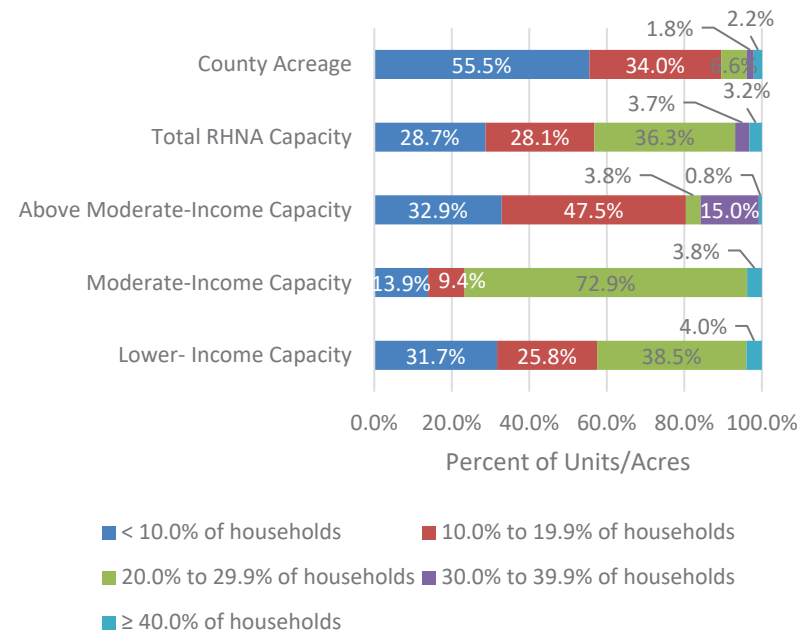
As discussed in earlier sections, there is a higher percentage of children in Contra Costa County than in the overall region. A higher rate of married couples with children households tends to correlate with suburban communities with high TCAC resource ranking. The concentration of female-headed households is highest in Rodeo/Crockett west of I-80 and in Martinez, where more than 40.0 percent of households are female, single-parent households. In these areas, approximately 19.0 percent of

households live below the poverty line. Additionally, rates above 20.0 percent of female-headed households with no husband<sup>7</sup> with children generally correlate to lower resource communities and higher rates of poverty, similar to many of the previous indicators. These areas suggest a possible concentration of female-headed households living below the poverty line and a greater need for affordable housing with an appropriate number of bedrooms.

Approximately 42.5 percent of lower-income, 76.7 percent of moderate-income, and 15.8 percent of above moderate-income capacity, for a total of 43.2 percent of the RHNA, are identified on sites with rates of single female householders with children above 20.0 percent. However, only 10.6 percent of the total unincorporated county acreage falls within this designation (Figure 6-20, Percentage of Unit Capacity and County Acreage by Female-Headed Households with Children). The integration of moderate- and above moderate-income unit capacity in these areas may help reduce the concentrations of both single female-headed households and the often associated poverty rate, as discussed previously. Most of the unincorporated area land (55.5 percent) has a rate of single female householders with children below 10.0 percent. Total RHNA capacity within these predominantly married couple household areas is 28.7 percent, meeting 31.7 percent of lower-income, 13.9 percent of moderate-income, and 32.9 percent of above moderate-income unit capacity. On approximately 34.0 percent of the land in the unincorporated areas, 10.0 to 19.9 percent of households are single female householders with children. In these areas, sites have been identified to meet 34.0 percent of the total RHNA unit

capacity, providing opportunities for 28.1 percent of above moderate-income, 9.4 percent of moderate-income, and 25.8 percent of lower-income unit capacity.

**FIGURE 6-20 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY FEMALE-HEADED HOUSEHOLDS WITH CHILDREN**



Source: American Community Survey, 2015-2019; Contra Costa County. Department of Conservation and Development, 2022

<sup>7</sup> This terminology is directly from the Census data.



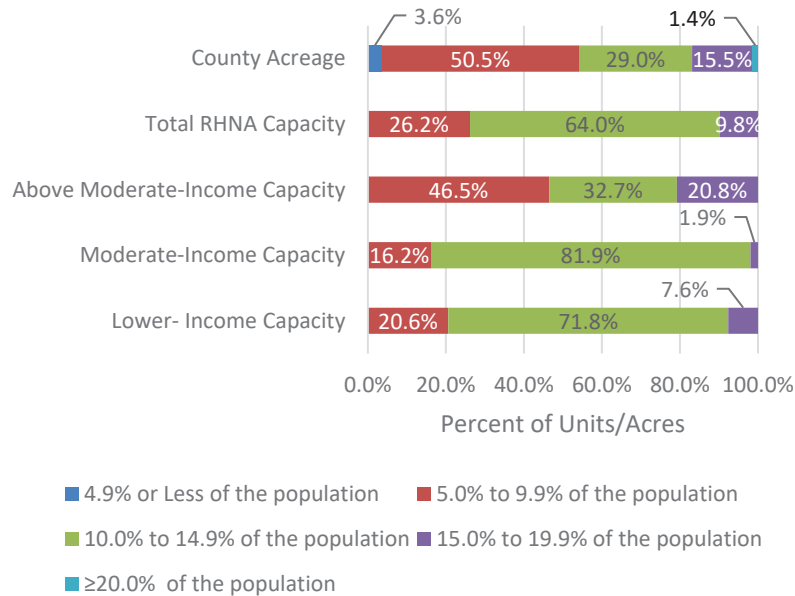
## Disability Rate

Approximately 20.0 percent of the population in the unincorporated area lives with at least one disability. Persons with disabilities are often underserved in locating housing to meet their accessibility needs and affordability range. More urbanized areas with higher density of population, often along the bay and in downtown areas, have slightly higher rates of disability possibly due to a concentration of accessible housing, proximity to transit, and the availability of medical and support resources in these areas.

As shown in Figure 6-21 (Percentage of Unit Capacity and County Acreage by Percent of Population with a Disability), approximately 29.0 percent of the land area in the unincorporated area has a population disability rate between 10.0 and 14.9 percent, and 15.5 percent of the land area has a population disability rate between 15.0 and 19.9 percent. Unincorporated communities with disability rates within this range include El Sobrante, Tara Hills, Montalvin Manor, North Richmond, East Richmond Heights, Rodeo, Crockett, Bay Point, Discovery Bay, Byron, and portions of Vine Hill and Pacheco. Only 1.4 percent of unincorporated county land has a disability rate of over 20.0 percent and no RHNA capacity has been identified within this area. Approximately 64.0 percent of the RHNA capacity is sited in areas with a 10.0 to 14.9 percent disability rate, accounting for 71.8 percent of the lower-income, and 81.9 percent of the moderate-income, yet slightly lower rates, 32.7 percent, of the above moderate-income unit capacity are indicated. An additional 7.6 percent of lower-income, 1.9 percent of moderate-income, and 20.8 percent of above moderate-income capacity, equivalent to 9.8 percent of total RHNA capacity, is sited on acreage reflecting a population with a 15.0 to 19.9 percent disability rate. Although over half of the unincorporated county acreage (54.1 percent) has a rate of

disability below 10.0 percent, 26.2 percent of the RHNA is identified within these areas, including 16.2 percent of moderate-income capacity, 46.5 percent of above moderate-income, and 20.6 percent of lower-income capacity. This rate is reported within the unincorporated communities of Alamo, Saranap, Contra Costa Centre, and portions of Vine Hill and Pacheco. The identification of units within communities with lower incidence of disabilities helps to reduce concentration of persons experiencing disabilities in other portions of the unincorporated county and provide housing mobility opportunities in areas higher access to resources and lower rates of associated poverty, potentially in mixed-use developments. The allocation of lower- and moderate-income units to meet the RHNA generally responds to the pattern of the 10.0 to 20.0 percent disability rate by acreage in the unincorporated areas, with the intent of meeting needs where residents are located to reduce displacement risk from their communities. Further, the sites to meet the allocation are near the incorporated jurisdictions, thus facilitating improved access to transit, the interstate system, medical services, and amenities for persons with disabilities.

**FIGURE 6-21 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY PERCENTAGE OF POPULATION WITH A DISABILITY**



Source: American Community Survey 2015-2019; Contra Costa County. Department of Conservation and Development, 2022

## Potential Effects on Access to Opportunity

### Employment Opportunities

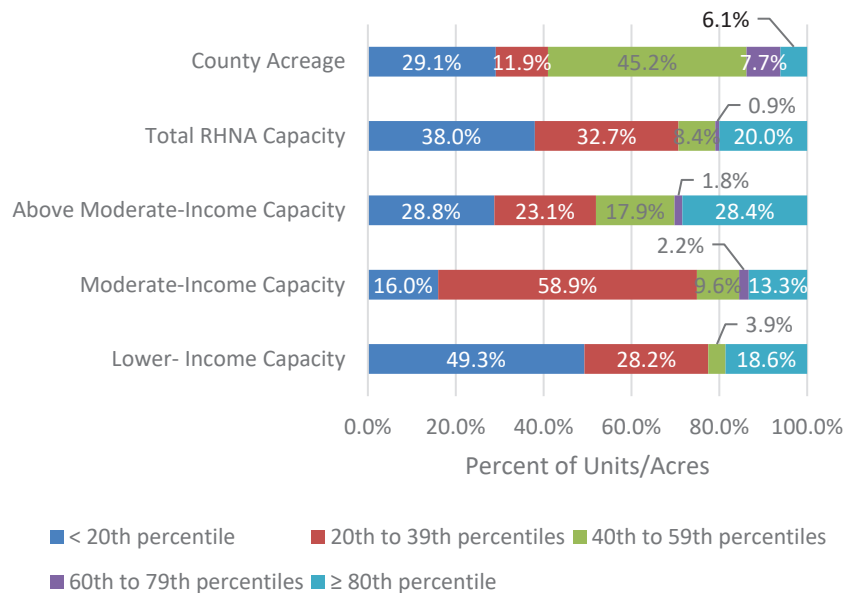
As discussed in earlier sections, HUD’s jobs proximity index indicates that the census tracts closest to employment opportunities are in the central portion of the county (see Figure 6-7). The communities with the furthest proximity to jobs (an index score below the 20th percentile), comprising 29.1 percent of total county acreage, are located in the northwest and northeast portions of the county, including Bay Point, West Pittsburg, and areas east and south of Antioch to the county line, as well as Discovery Bay. Except for Discovery Bay, these communities generally have higher concentrations of non-White residents than central and southern portions of the county. While there are jobs available in these areas, there are few large employers given the density of population, which may require residents to commute to other areas of the county or into the greater Bay Area for employment.

As presented by Figure 6-22 (Percentage of Unit Capacity and County Acreage by Jobs Proximity Index Score), 45.2 percent of the total RHNA capacity is identified in the areas discussed above, accounting for 49.3 percent of the lower-income, 16.0 percent of the moderate-income, and 28.8 percent of the above moderate-income capacity. These sites are primarily within Discovery Bay and Bay Point. Communities with Jobs Proximity Index scores within the 20 to 39th percentile range include North Richmond, El Sobrante, Montalvin Manor, Tara Hills, and Rodeo. Approximately 32.7 percent of RHNA capacity is identified in these areas, with potential capacity for 28.2 percent of lower-income units, 58.9 percent of the moderate-income units, and 23.1 percent of above moderate-income units. Although the greatest portion (45.2 percent) of the unincorporated county is within




the 40th to 59th percentile range, a comparatively small percentage of the total RHNA unit capacity (8.4 percent) is identified within this percentile, including 3.0 percent of lower-income unit capacity, 9.6 percent of moderate-income unit capacity, and a slightly higher proportion of above moderate-income unit capacity, 17.9 percent. Approximately 20.9 percent of the units (15.5 percent moderate-income, 30.2 percent above moderate-income, and 22.5 percent lower-income) are anticipated in areas with scores at or above the 60th percentile, higher than the unincorporated county acreage of 13.7 percent.

**FIGURE 6-22 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY JOBS PROXIMITY INDEX SCORE**



Source: HUD, 2020; Contra Costa County Department of Conservation and Development, 2022

While a greater share of lower- and moderate-income units are projected in areas scoring below the 39th percentile, additional strategies included in this Housing Element, such as HE-P2.2 (encourage and provide incentives for the production of housing near public transportation and services) and HE-A5.4 (making additional mixed-use sites available for residential development housing in close proximity to key services such as transportation, and continue to encourage mixed-use development where appropriate by offering flexible development standards), will ensure improved mobility opportunities for all residents. Additionally, the incorporation of units at all income levels as mixed-use infill and redevelopment of underutilized sites, including school and church sites, many of which are serviced by public transit routes, BART stations, and the interstate system, will aid in improving access to employment opportunity, providing close proximity to transit for occupants of these units. This distribution improves access to mixed-income communities and increases mobility opportunities in higher-resource areas, particularly within Discovery Bay and Alamo. Additionally, many of the sites identified in the inventory are currently underutilized, which may indicate that the area is not built out to its fullest potential for office, service, or commercial uses for a greater supply of jobs or residential uses for improved access to nearby job opportunities. Additionally, many of the identified sites will be developed as mixed-use, contributing to revitalization of commercial areas and providing improved accessibility to employment opportunities. When considering where to locate future housing for all income levels, particularly lower-income units, the western portion of the county and sites in the vicinity of I-680 offer the most convenient access to jobs and transit to other parts of the Bay Area. Further, construction of these sites will help improve the jobs-housing ratio with residential development in and near commercial and transit corridors as well as mixed-use development, thus improving job proximity for current and future residents of Contra Costa



County. To further promote these programs and services and improve access to employment opportunities for lower-income and non-White residents, particularly in areas identified as having more limited access, the County has included Action HE-A7.1 to promote services provided by the Workforce Development Board and facilitates improved access to these services in communities of need.

### Educational Opportunities

Areas in central Contra Costa County with greater affluence have higher school proficiency and, in turn, areas with lower median incomes (typically the coastal communities) have lower school proficiency index scores, higher rates of chronic absenteeism, and higher rates of socially disadvantaged students. In western and northern county communities, schools are typically lower performing than in central and southern areas of the county. When race and ethnicity are overlaid with lower school proficiency, analysis found that lower-income households and more highly diverse populations are concentrated in neighborhoods with low school proficiency scores, and more limited access to resources, as indicated by the correlation between performance standards, chronic absenteeism, and socially disadvantaged students with income.

As shown in Figure 6-22 (Percentage of Unit Capacity and County Acreage by Education Domain Score), approximately 3.8 percent of the unincorporated county's total capacity to meet the RHNA is on sites in areas that score above the 75th percentile in the expected educational outcome, although 40.9 percent of the unincorporated county's land falls into this category. Approximately 79.4 percent of lower-income units, 83.9 percent of moderate-income units, and 59.4 percent of above moderate-income units meeting 75.3 percent of the total RHNA capacity, are identified in areas with

standardized test scores below the Education Domain 50th percentile score. While this generally includes areas with the highest concentration of socioeconomically disadvantaged students, including Bay Point, El Sobrante, Montalvin Manor, Vine Hill, and Pacheco, the integration of moderate- and above moderate-income unit capacity in these areas may have the potential to improve the educational outcomes. While the sites inventory does not necessarily locate units, at all incomes, near high-performing schools, the County has included the following actions to improve school quality near housing:

- HE-A2.5: Promote ADU construction in high resource areas to create housing mobility opportunities.
- HE-A7.1: Work with school districts to develop strategies to improve access to high-performing schools, and work with the Housing Authority to encourage landlords throughout the county, but particularly in high resource areas where there are high performing schools, to advertise their units for voucher holders.

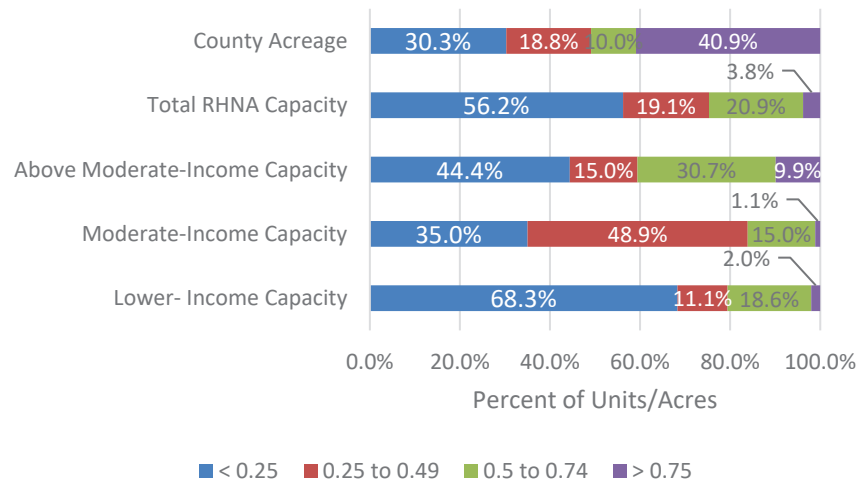
Additionally, the identification of new affordable opportunities in areas with high rates of poverty, as well as within higher performing moderate and higher scoring communities including Contra Costa Centre, Discovery Bay, and Alamo may also provide stabilized home environments for students to help reduce pressure at school and improve educational opportunities for all students.

It is important to note here that lower standardized test scores do not indicate limited educational opportunities as much as they indicate lower access to those opportunities than students in wealthier neighborhoods have had. To ensure that development of these units does not concentrate lower-income households in certain neighborhoods and instead more evenly



distributes socioeconomic diversity across the county, the Housing Element includes a set of housing programs to increase housing opportunity for extremely low-income households, including Action HE-A7.1 to expand Housing Choice Voucher usage throughout the county and encourage affordable housing in high resource areas.

**FIGURE 6-23 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY EDUCATIONAL DOMAIN SCORE**



Source: TCAC/HCD, 2021; Contra Costa County Department of Conservation and Development, 2022

## Environmental Health

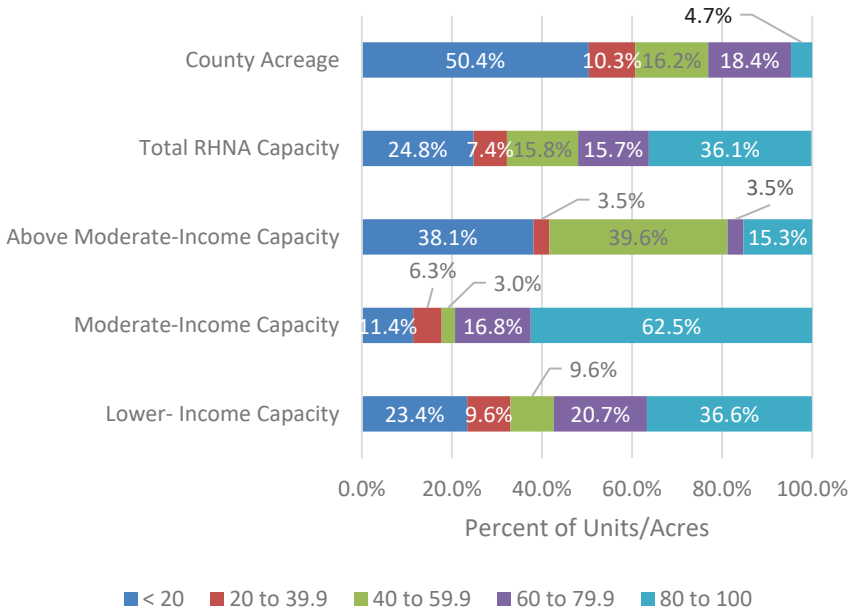
Under SB 535, the communities of Bay Point, Rodeo, Crockett, Montalvin Manor, and Bayview are considered disadvantaged due to exposure to environmental contaminants. These communities are also considered

disadvantaged under SB 1000 as well as Tara Hills, Vine Hill, and Mountain View, which scores areas under eight exposure risks (SB 535), in addition to considering historic discrimination, negligence, and political and economic disempowerment that often result in a disproportionate burden of pollution and health impacts in these communities. Each of the disadvantaged communities has its roots in heavy industrial and manufacturing uses given their locations along railway tracks and near ports for shipment of raw materials and products and, later, their proximity to freeways. The combined impact of these factors has led to pollution and unhealthy environmental conditions for residents, resulting in a persistent fair housing issue of concentrating lower-income and non-White households in areas of poor environmental quality. Approximately 23.1 percent of the acreage in the unincorporated county scores above the 60th percentile score.

As a result, approximately 51.8 percent of the sites inventory capacity is in neighborhoods scoring in the 60th percentile and above. Approximately 36.1 percent of the total unit capacity is identified in highly environmentally impacted communities, including North Richmond and Rodeo, which are considered Environmental Justice Communities (Impacted Communities). These are near highly industrialized areas, which may have resulted in poor environmental conditions, though the areas are otherwise prime for redevelopment with a large portion of the sites owned by the Housing Authority and near transit and job opportunities. Redevelopment and revitalization of these portions of the unincorporated county is expected to improve the environmental health of neighborhoods. Investment in this area through redevelopment efforts will facilitate place-based revitalization and will increase the supply of affordable housing in an area susceptible to displacement due to housing costs while also encouraging income integration in new development, with 18.8 percent of above moderate-

income and 79.3 percent of moderate-income units also located in environmentally challenged areas. Conversely, 32.2 percent of the RHNA, including 33.0 percent of lower-income, 17.7 percent of moderate-income, and 41.6 percent of above moderate-income capacity is anticipated to occur on sites with CalEnviroScreen scores below the 40th percentile, particularly in the Discovery Bay, East Richmond Heights, portions of El Sobrante and Alamo communities, therefore promoting housing mobility to environmentally healthy areas.

**FIGURE 6-23 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY CALENVIROSCREEN SCORE**



Source: OEHHA, CalEPA, CalEnviroScreen 2021; Contra Costa County Department of Conservation and Development, 2022

## Potential Effects on Displacement Risk

### Overcrowding

As discussed previously, overcrowding is not a significant problem in most of the Unincorporated Areas, although the increased rate of overcrowding seen in the western portion of the county reflects the experience reported by members of the public during the outreach process. Participants expressed that high housing costs and difficulties in securing housing with a poor rental history can present a barrier to securing housing at an affordable price that meets the needs of the household.

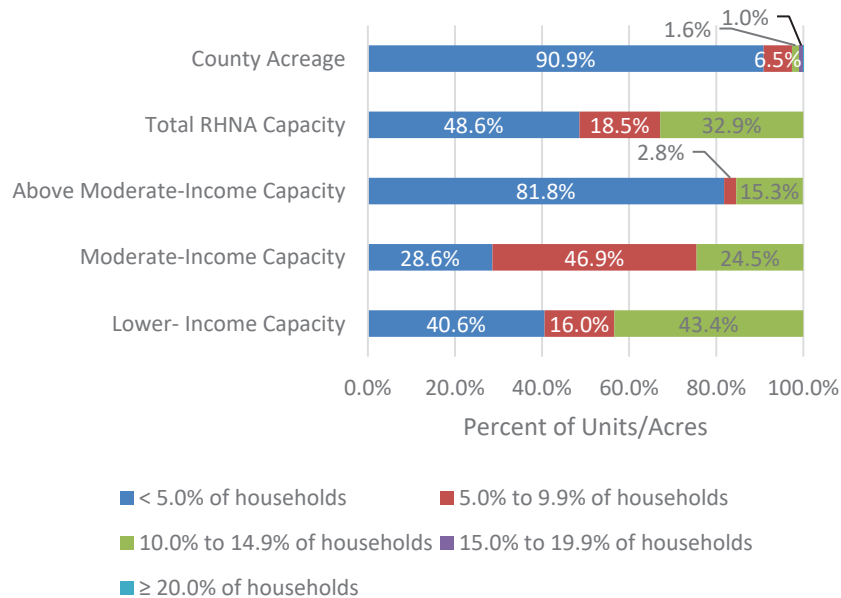
Only 2.6 percent of the total unincorporated county acreage has a rate of overcrowding over 10.0 percent of households, in areas in the North Richmond, Montalvin Manor, Bayview, and Bay Point communities. It is likely that the rates of overcrowding by tenure in these communities follow the patterns of the overall unincorporated county and have higher rates of renter overcrowding than owner. However, approximately 43.4 percent of lower-income units, 24.5 percent of moderate-income units, and 15.3 percent of above moderate-income units, for 32.9 percent of the total RHNA capacity, are identified in these communities with higher rates of overcrowding to help to alleviate this issue by increasing the housing supply for a range of households. A significant portion of the total lower-income capacity (40.6 percent), and 28.6 percent of the moderate-income capacity, as well as 81.8 percent of the above moderate-income units are sited in areas with less than 5.0 percent overcrowding, accounting for 48.6 percent of total RHNA capacity. The remainder of the RHNA capacity (18.5 percent), including 46.9 percent of the moderate-income unit capacity, is anticipated in areas with incidence of overcrowding between 5.0 and 9.9 percent. This





will facilitate housing mobility opportunities in areas of the unincorporated county with lower overcrowding rates near services and resources adjacent to incorporated areas. Additionally, the sites will ease pressure on the housing stock, thus potentially reducing displacement risk and overcrowding, as more units become available.

**FIGURE 6-25 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY PERCENTAGE OF OVERCROWDED HOUSEHOLDS**



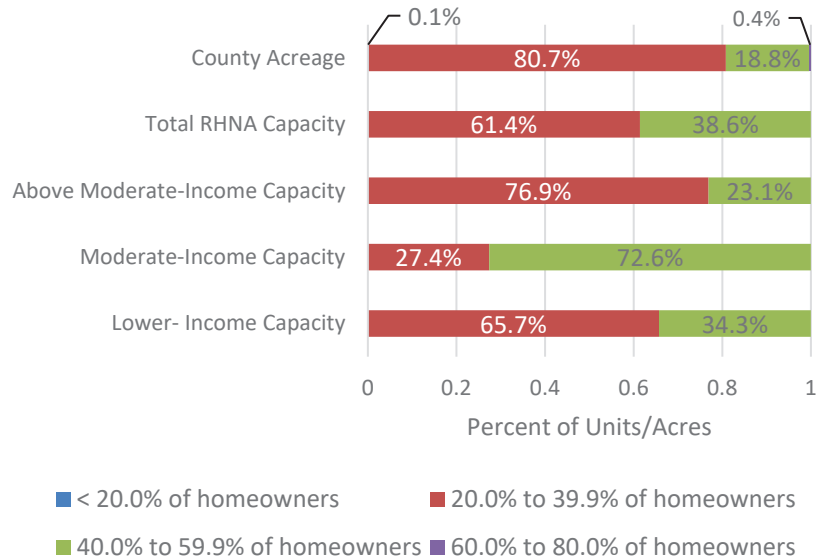
Source: California Health and Human Services (CHHS), 2020 Contra Costa County Department of Conservation and Development, 2022

## Cost Burden

As discussed previously, in unincorporated Contra Costa County, 23.7 percent of renters and 16.8 percent of owners are cost burdened, while 21.6 percent of renters and 12.0 percent of owners are severely cost burdened (Table 6-35). Generally, communities of color households experience higher rates of cost burden than White and Asian households, and renters experience higher rates overall than owners.

While 80.7 percent of the total acreage in unincorporated county has relatively low rates of homeowner overpayment, below 40.0 percent, 61.4 percent of the RHNA capacity is anticipated in areas of low to moderate homeowner overpayment, including 65.7 percent of lower-income, 27.4 percent of moderate-income, and 76.9 percent of above moderate-income units, the remainder of RHNA capacity is anticipated to occur on sites with moderately high homeowner overpayment between 40.0 and 59.9 percent. Although comprising 18.8 percent of total unincorporated county acreage, 34.3 percent of lower-income and 72.6 percent of moderate-income units are anticipated in higher homeowner overpayment communities of North Richmond, El Sobrante, Montalvin Manor, Tara Hills, Bay Point, West Pittsburg, and along I-680. An increase in the supply of lower- and moderate-income units in those areas impacted by overpayment will help to alleviate conditions that contribute to overpayment by reducing the gap between supply and demand for these housing types and further promoting housing mobility opportunities. Additionally, integration of above moderate-income units in these communities with higher homeowner overpayment may facilitate reduction of the concentration of cost burdened homeowners in these communities.

**FIGURE 6-26 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY PERCENTAGE OF HOMEOWNERS OVERPAYING FOR HOUSING**



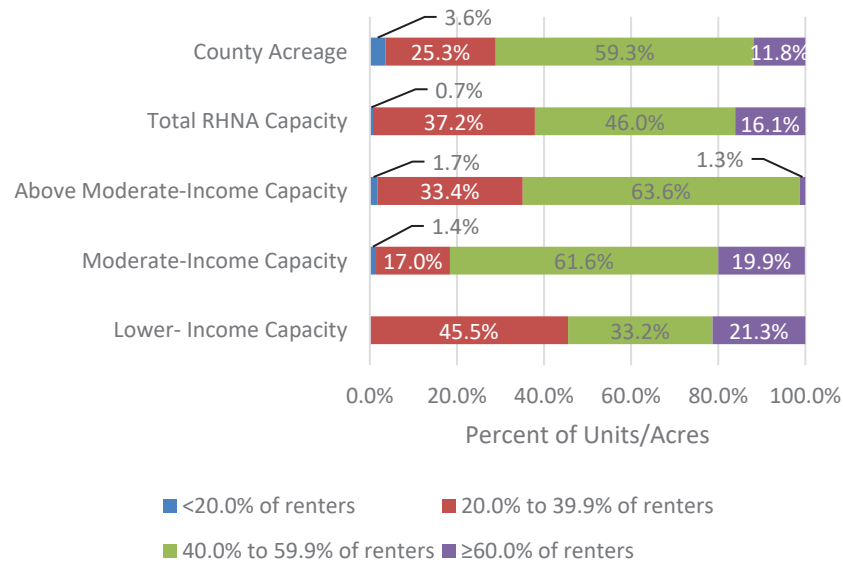
Source: ACS 2015-2019; Contra Costa County Department of Conservation and Development, 2022

In contrast, although 28.9 percent of the unincorporated county acreage has low to moderate renter overpayment rates (less than 40.0 percent), 37.9 percent of the RHNA capacity is anticipated in these areas including 45.5 percent of lower-income, 18.4 percent of moderate-income, and 35.1 percent of above moderate-income units. The remainder of the RHNA capacity is anticipated to occur on sites with moderately high renter overpayment between 40.0 and 59.9 percent (46.0 percent of total RHNA capacity) and high renter overpayment above 60.0 percent (16.1 percent of total RHNA capacity).

Communities experiencing 40.0 to 59.9 percent renter overpayment rates, comprising 59.3 percent of unincorporated county acreage, including portions of El Sobrante, Discovery Bay and Rodeo, East Richmond Heights, Montalvin Manor, Tara Hills, Vine Hill, and Pacheco are anticipated to accommodate the largest proportion of moderate- and above moderate-income unit capacity, 61.6 percent and 63.6 percent respectively, as well as 33.2 percent of lower-income unit capacity. Comprising 11.8 percent of total unincorporated county acreage, 21.3 percent of lower-income and 19.9 percent of moderate-income units are anticipated in the higher renter overpayment communities of North Richmond and Bay Point, many of which are anticipated on the properties owned by the Contra Costa Housing Authority, in contrast to 1.3 percent of the above moderate-income unit capacity identified on sites within the high renter overpayment communities. However, the benefit of locating lower-income housing in these areas is that it will help reduce displacement risk for households experiencing overpayment by providing affordable housing where there is the greatest demand for these options. Typically, above moderate-income rental units are unaffordable to cost-burdened renter households, while lower- and moderate-income housing units can help alleviate overpayment. Therefore, sites for new units have been identified across a range of overpayment rates for both owners and renters with the intent of increasing the supply of affordable housing for all income categories, thus reducing the risk of displacement due to overpayment for all Contra Costa County residents.



**FIGURE 6-27 PERCENTAGE OF UNIT CAPACITY AND COUNTY ACREAGE BY PERCENTAGE OF RENTERS OVERPAYING FOR HOUSING**



Source: ACS 2015-2019; Contra Costa County Department of Conservation and Development, 2022

## 5. Contributing Factors

Through discussions with stakeholders, fair housing advocates, and this assessment of fair housing issues, the County identified factors that contribute to fair housing issues in Contra Costa County, as shown in Table 6-38. While there are several strategies identified to address the fair housing issues, the most pressing issues are the disproportionate housing need and access to opportunities between the communities in unincorporated western and northern Contra Costa County and central, southern, and

eastern portions of the county. In the western and northern areas, there are concentrations of poverty, fewer homeownership opportunities, greater overcrowding, and more limited access to employment and education. As such, identifying mechanisms to promote housing mobility to central, eastern, and southern Contra Costa County as well as facilitating place-based revitalization in western and northern areas are key to affirmatively furthering fair housing in Contra Costa County. Prioritized contributing factors are **bolded** in Table 6-38 and associated actions to meaningfully affirmatively further fair housing related to these factors are ***bold and italicized***.



**TABLE 6-38 FACTORS THAT CONTRIBUTE TO FAIR HOUSING ISSUES**

AFH Identified Issues	Contributing Factors	Meaningful Programs
<p>Concentration of affluence in the central and eastern portions of the County, resulting in potential areas of exclusion (possible RCAAs)</p>	<p><b>Lower-density development leading to typically higher home values</b></p> <p>Lack of Public Housing and shortage of affordable housing options in general</p>	<p>HE-A2.1 Provide funding for affordable housing development.</p> <p>HE-A3.4 Prioritize funding for affordable housing providers for acquisition and rehabilitation of rental housing.</p> <p><i>HE-A2.5 Promote ADU construction in high resource areas/areas of concentrated affluence.</i></p> <p><i>HE-A5.1 Increase the supply of land zoned for high-density housing.</i></p> <p>HE-A5.5 Facilitate lot consolidation for multi-family development.</p> <p><i>HE-A6.1 Encourage updates to zoning to support very high density development.</i></p>
<p>Concentration of lower-income households in the western and northern portions of the County (i.e. North Richmond, Montalvin Manor, Tara Hills, Bayview, Rodeo, Bay Point)</p>	<p><b>Higher-density housing</b></p> <p><b>History of industrial uses influencing development patterns and conditions</b></p> <p>Higher rates of families with children in central and eastern areas</p> <p>Lower labor force participation in western communities</p>	<p>HE-A2.4 Prioritize funding for affordable housing providers for acquisition and rehabilitation of rental housing.</p> <p>HE-A5.5 Encourage infill development through lot consolidation for both single-family and multi-family development.</p> <p><i>HE-A7.1 Promote services and programs to assist persons secure employment.</i></p> <p>HE-A7.1 Review the Zoning Ordinance to ensure there are no constraints on locating childcare near employment centers.</p>
<p>Displacement risk due to housing costs, particularly in western and northern communities</p>	<p>Concentrations of lower-income households</p> <p><b>Rapidly increasing housing costs paired with a shortage of affordable units</b></p> <p>Rise in housing costs outpacing wage increases</p> <p><b>New development has largely been above moderate-income single-family homes, or similar.</b></p>	<p><i>HE-A2.3 Increase the supply of affordable housing through implementation of the Inclusionary Housing Ordinance.</i></p> <p><i>HE-A2.4 Prioritize funding for affordable housing providers for acquisition and rehabilitation of rental housing to preserve units, including in high resource areas.</i></p> <p>HE-A2.5 Promote ADU construction in high resource areas.</p> <p>HE-A4.1 Promote the availability of programs that facilitate homeownership opportunities, including assistance for first-time homebuyers.</p> <p>HE-A5.6 Encourage infill development through lot consolidation for both single-family and multi-family development.</p> <p><i>HE-A7.2 Prioritize projects that will not involve permanent relocation of residents, offer first right to return if temporary relocation is unavoidable.</i></p>



AFH Identified Issues	Contributing Factors	Meaningful Programs
<p>Displacement risk due to overcrowding in North Richmond and Bay Point</p>	<p>Rapid drop in vacancy rates since 2010 leaving fewer housing options.</p> <p><b>Rapidly increasing housing costs paired with a shortage of affordable units</b></p>	<p><i>HE-A2.2 Pursue affordable housing development on County-owned land in North Richmond, Bay Point, and Rodeo.</i></p> <p><i>HE-A2.3 Provide incentives for developers subject to IHO who provide affordable units with three or more bedrooms in areas of concentrated overcrowding.</i></p> <p>HE-A2.4 Prioritize funding for affordable housing providers for acquisition and rehabilitation of rental housing.</p> <p>HE-A7.2 Prioritize projects that will not involve permanent relocation of residents, offer first right to return if temporary relocation is unavoidable.</p>
<p>Disproportionate access to high performing schools</p>	<p><b>Lower school performance schools in neighborhoods with lower median income and/or concentrations of Hispanic and non-Hispanic Black residents.</b></p> <p>Higher rates of absenteeism in schools in disadvantaged communities.</p>	<p><i>HE-A2.5 Promote ADU construction in high resource areas to create housing mobility opportunities.</i></p> <p><i>HE-A7.1 Work with school districts to develop strategies to improve access to high performing schools.</i></p> <p>HE-A7.1 Work with the Housing Authority to encourage landlords throughout the County, particularly in high resource areas, to advertise their units for voucher holders.</p>
<p>Disadvantaged community designations for 8 communities in western and northern areas</p>	<p><b>Exposure to pollutants resulting from industrial uses, vehicle traffic, and water contamination</b></p> <p><b>Historic patterns of discrimination and pollution from industrial uses</b></p> <p>High-density residential areas with slightly more affordable options than other areas in the county</p>	<p><i>HE-A2.3 Increase the supply of affordable housing throughout the County through implementation of the Inclusionary Housing Ordinance.</i></p> <p><i>HE-A2.4 Prioritize funding for affordable housing providers for acquisition and rehabilitation of rental housing to preserve units, facilitate place-based revitalization and increase mobility options.</i></p> <p>HE-A2.5 Promote ADU construction in high resource areas to create housing mobility opportunities.</p>



## 6.3 Housing Constraints

The provision of adequate and affordable housing opportunities is an important goal of the County. However, a variety of factors can constrain the development, maintenance, and improvement of housing. These include development costs, government constraints, lack of infrastructure, and environmental issues. This section addresses these potential constraints that affect the supply of housing in the unincorporated areas of Contra Costa County.

In evaluating the residential growth potential based on the development of vacant and underutilized sites in the unincorporated areas, the County has undertaken a parcel-by-parcel review of the available sites within the Urban Limit Line (ULL). Realistic development potential is assessed, considering the market trends, development standards, environmental constraints, and infrastructure and public facility/service constraints discussed in this section. The residential development potential is presented in Section 4 of this Housing Element.

### A. MARKET CONSTRAINTS

Land costs, construction costs, and market financing contribute to the cost of housing development, and can potentially hinder the production of new housing. Although many constraints are driven by market conditions, jurisdictions have some leverage in instituting policies and programs to address such constraints. The section analyzes these market constraints as well as the activities that the County undertakes to mitigate their effects.

### 1. Development Costs

Construction costs vary widely according to the type of development, with multi-family housing generally less expensive per unit to construct than single-family homes. However, wide variation within each construction type exists depending on the size of the unit and the number and quality of amenities provided.

In addition to construction, the price of land is also one of the largest components of housing development costs. Land costs may vary depending on where the site is in the county (Central County is significantly more expensive than portions of East and West County), and whether the site is vacant or has an existing use that must be removed. Similarly, site constraints, such as environmental issues (i.e., steep slopes, soil stability, seismic hazards, or flooding) can also be a major factor in the cost of land. A survey of sales price listings of vacant lots in unincorporated communities across the county in November 2021 finds that most lots for sale tend to be smaller. Although the largest vacant lot for sale was more than 37 acres in size, the median vacant lot was 0.64 acres. The survey also shows that vacant lots can vary in affordability from \$50,000 to \$2,499,888, though the median vacant lot in the county costs \$395,000, which is lower than most home sales prices as determined by the home sales price listing survey in the Housing Needs Assessment section. However, due to the small size of most vacant lots surveyed, acreage tends to be expensive, with the median dollar per acre amount equaling \$1,080,992.65. The most expensive vacant lots were in the Central sub-region of the county, with all but one sales price listings for vacant lots with a price of at least \$1 million. Sales price listings for vacant lots in the Western and Eastern sub-regions ranged from \$50,000 to \$1.9 million and \$135,000 to \$650,000, respectively.



Based on pro forma work detailing construction costs of two recent multi-family developments, the average cost to construct an apartment unit in the unincorporated areas is approximately \$526,797 (including the cost of land and impact fees). The more costly development was Galindo in the Central sub-region, which cost \$1,008,601 per unit, while some portions of the Legacy development in the West sub-region cost less, at \$571,788 per unit. Single-family home construction costs can be less than multi-family development. However, land costs and other charges can off-set those costs and result in higher costs overall. The estimated average development cost of a two-story single-family home consisting of 2,000 square feet in Contra Costa County would cost an approximate \$427,205 total, or approximately \$213.60 per square foot. The cost will vary significantly depending on the quality of materials used, the size of the unit and lot, the location, and the number and quality of amenities provided.

A reduction in amenities and the quality of building materials (above a minimum acceptability for health, safety, and adequate performance) could result in lower prices. In addition, prefabricated factory-built housing may provide lower-priced housing by reducing construction and labor costs. Another factor related to construction costs is the number of units built simultaneously. As the number increases, costs generally decrease as builders benefit from economies of scale.

Another key component is the price of raw land and any necessary improvements. The high demand for residential development keeps land cost relatively high throughout the Bay Area. In the unincorporated areas, residential land costs vary depending on the site and the area. In addition, in-fill development, which is the current regional priority, is more expensive than “green field” development. Many in-fill parcels have existing structures and/or contaminated conditions. Aging infrastructure may require

replacement. These factors increase the cost of development. The County owns former redevelopment agency residential parcels in the unincorporated communities of Bay Point, Rodeo, and North Richmond. All sites will be developed with affordable housing.


## 2. Home Financing

The availability of financing affects a person’s ability to purchase or improve a home. Currently, lending standards are recovering from the COVID-19 pandemic and associated economic slowdown, which caused the average mortgage rate for a 30-year fixed-rate mortgage to fall to 2.68 percent by December 2020 from the previous rate of 3.7 percent reported in January 2020. Rates are now trending upwards but are still below where they were in recent years. Table 6-38 reports the varying mortgage and refinance rates for homebuyers as of November 2021.

**TABLE 6-38 INTEREST RATES – NOVEMBER 2021**

Product	Interest Rate	APR
<b>Conforming and FHA Loans</b>		
30-Year Fixed Rate	5.375%	5.557%
30-Year Fixed-Rate VA	4.750%	5.078%
15-Year Fixed Rate	4.750%	5.017%
<b>Jumbo Loans</b>		
30-Year Fixed-Rate Jumbo	4.750%	4.855%
15-Year Fixed-Rate Jumbo	4.500%	4.701%

Source: Wells Fargo – Current Mortgage and Refinance Rates (accessed: August 26, 2022): <https://www.wellsfargo.com/mortgage/rates/?linkLoc=fn>



Specific housing programs such as first-time homebuyer programs or other mortgage assistance programs can be a useful tool providing help with down payment and closing costs, which are often significant obstacles to home ownership for lower-income and minority groups.

## B. GOVERNMENTAL CONSTRAINTS

Local policies and regulations can impact the price and availability of housing and, in particular, the provision of affordable housing. Land use controls, site improvement requirements, fees and exactions, permit processing procedures, and other factors may constrain the maintenance, development, and improvement of housing. This section discusses potential governmental constraints as well as policies that encourage housing development in the unincorporated areas of Contra Costa County.

### 1. Land Use Controls

The Land Use Element of the Contra Costa County General Plan sets forth the policies for guiding development. These policies, together with existing zoning regulations, establish the amount and distribution of land allocated for different uses within the unincorporated areas of the county. As described in Table 6-39, the General Plan has four residential designations for single-family dwellings and seven for multi-family uses, permitting varying density for rural and urban residential uses. The County is currently undertaking “Envision Contra Costa 2040,” an effort to update the entire

General Plan, including the Land Use Element and its Land Use Map. The General Plan update will effectively establish the land use and housing development patterns across the County’s unincorporated areas for the next two decades. The State of California requires that the County update its Housing Element every eight years on established cycles so the Housing Element, once adopted, will only be effective until 2031. This Housing Element reports the land use controls in effect in the current Contra Costa County General Plan (adopted 2005).

### Residential Development Standards

The County regulates the type, location, density, and scale of residential development primarily through the Zoning Code. Zoning regulations are designed to protect and promote the health, safety, and general welfare of residents as well as implement the policies of the County’s General Plan. The Zoning Code also serves to preserve the character and integrity of existing neighborhoods. The County maintains the current Zoning Code with zoning and development standards along with current fees on the County website.





**TABLE 6-39 RESIDENTIAL LAND USE CATEGORIES**

General Plan Land Use Designation	Single-Family Residential	Multiple-Family Residential	Single-Family Residential	Multiple-Family Residential	Single-Family Residential	Multiple-Family Residential	Single-Family Residential	Multiple-Family Residential	Single-Family Residential	Multiple-Family Residential	Single-Family Residential	Multiple-Family Residential
	Very Low (SV)	Low (SL)	Very Low (SV)	Low (SL)	Very Low (SV)	Low (SL)	Very Low (SV)	Low (SL)	Very Low (SV)	Low (SL)	Very Low (SV)	Low (SL)
Consistent Zoning District(s)	R-40, R-65, R-100	R-15, R-20,	R-10, R-12,	R-6, R-7, D-1	Undefined	R-6, D-1, T-1, M-6, M-9	T-1, M-9, M-12, M-17	M-17, M-29	M-29	P-1	P-1	T-1
Possible Zoning District(s)	P-1, A Districts	P-1, A Districts	P-1, A Districts	P-1, A Districts	N/A	P-1	P-1	P-1	P-1			P-1
Density	0.2 – 0.9	1.0 – 2.9	3.0 – 4.9	5.0 – 7.2	0.2	7.3 – 11.9	12.0 – 21.9	22.0 – 29.9	30.0 – 44.9	45.0 – 99.9	N/A	1.0 – 12.0
Residential Type(s)	Detached single-family homes consistent with rural lifestyle	Detached single-family homes on large lots	Detached single-family homes on moderate-sized lots	Detached single-family homes and duplexes on smaller lots	Detached single-family homes with densities as defined in the SV, SL, or SM designations per density bonus program allowances.	Single- or two-story duplexes, condos, town houses, mobile home parks,	Denser and larger-size residential uses as in the ML designation.	Multi-story residential uses as defined in the ML designation.	Multi-story apt. and condo complexes with smaller units	Multi-story apartment and condo complexes with smaller units with very high density	Senior housing with shared facilities	Mobile homes

- Notes:
1. Residential land uses may sometimes occur at densities lower than the allowed.
  2. The zoning districts listed in this column could be found consistent with the General Plan designation under certain circumstances depending upon the specific use that is proposed.
  3. Density increases available through participation in bonus programs described in the Contra Costa General Plan Land Use Element pg. 3-22 (2005).

Source: Contra Costa County General Plan, Land Use Element, 2005-2020.



Table 6-40 summarizes the most pertinent residential standards for single-family, while Table 6-41 summarizes residential multi-family housing standards, including those for mobile homes and mobile home parks. In each table, zone districts are grouped by the General Plan land use category in which they are permitted (i.e., Very Low, Low, Medium, and High). Note that there are not minimum open space standards in residential zones so that standard has not been included in the table.

**TABLE 6-40 SINGLE-FAMILY RESIDENTIAL DEVELOPMENT STANDARDS**

Development Standard	General Plan Land Use Category and Zone District									
	Very Low			Low		Medium		High		
	R-100	R-65	R-40 <sup>1</sup>	R-20	R-15 <sup>1</sup>	R-12	R-10 <sup>1</sup>	R-7	R-6	P-1
Max. Density (du/ac)	0.4	0.67	1.1	2.2	2.9	3.6	4.4	6.2	7.2	Varies based on proposed project
Min. Lot Area (sq. ft.)	100,000	65,000	40,000	20,000	15,000	12,000	10,000	7,000	6,000	Varies based on proposed project
Min. Lot Size (ft.)	200 x 200	140 x 140	140 x 140	120 x 120	100 x 100	100 x 100	80 x 90	70 x 90	60 x 90	Varies based on proposed project
Front Yard (ft.)	30	25	25	25	20	20	20	20	20	Varies based on proposed project
Side Yard (ft.)	30	20	20	15	10	10	10	5	5	Varies based on proposed project
Aggregate Side Yard	60	40	40	35	25	25	20	15	15	Varies based on proposed project
Rear Yard (ft.)	30	15	15	15	15	15	15	15	15	Varies based on proposed project
Max. Bldg. Ht. (stories)	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	2.5 35 ft.	Varies based on proposed project
Parking Req. (space/unit)	2	2	2	2	2	2	2	2	2	Varies based on proposed project

Notes:  
 1. The Land Use Element indicates that this zoning district is consistent with two General Plan land use designations.  
 Source: Contra Costa County Zoning Code, November 2021.



## Single-Family Residential Development Standards

Given the diversity of residential areas in the county, the minimum lot size for single-family homes ranges from 6,000 to 100,000 square feet, translating to densities of seven dwelling units per acre (du/ac) down to less than one du/ac. The maximum height limit for single-family homes is two and a half stories (or 35 feet in height), while setbacks vary by lot size.

The D-1 zone permits two-family or duplex units such as townhomes to be located on an 8,000-square-foot parcel, while the R-6 zone permits more than one detached dwelling on a parcel so long as the lot size does not exceed 6,000 square feet per dwelling unit.

## Multi-family Residential Development Standards

Multi-family units are permitted in all M zones, providing densities ranging from 6 to 29 du/ac. Mobile homes and mobile home parks are permitted in T-1 zones. In addition, the lower-density multi-family zones permit the development of single-family units. This often results in the development of detached single-family homes on small lots (3,000 – 4,000 sq. ft.). The D-1 zone promotes the development of various housing types including single-family or duplexes. The P-1 or Planned Unit District provides flexible development standards to promote a variety of housing types from single-family to very high-density residential development and mixed use development, while the General Plan Mixed-Use category enables the County to provide residential units in conjunction with commercial uses. Both of these are described in more detail later in this section.

**TABLE 6-41 MULTI-FAMILY RESIDENTIAL DEVELOPMENT STANDARDS**

Development Standard	General Plan Land Use Category & Zone District							
	Low/Medium					High	Very High	Very High - Special
	T-1 <sup>1</sup>	M-6	M-9	M-12	D-1	M-17	M-29	P-1
Max. Density (du/ac)	12	6	9	12	N/A	17	29	V <sup>2</sup>
Min. Lot Area (sq. ft.)	2,500 <sup>4</sup>	7,200	4,800	3,000	8,000	2,500	6,000 to 10,000 <sup>5</sup>	217,800 <sup>6</sup>
Min. Lot Size (ft.)	40 x 90	varies	varies	varies	80 x 90	varies	None	V
Front Yard (ft.)	20	25	25	25	20	25	25	V
Side Yard (ft.)	5	20	20	20	10	20	20	V
Rear Yard (ft.)	15	20	20	20	15	20	20	V
Lot Coverage (%)	N/A	25	25	25	N/A	25	35	V
Max. Bldg. Height (stories or feet)	20	30	30	30	2.5 35 ft.	30	30	V
Parking Req. (space/unit)	2	c	c	c	2	c	c	V

**Notes:**

- 1 T-1 Zone District for mobile homes and mobile home parks.
- 2 V = Variable, dependent on Planning Commission approval.
- 3 Dependent upon type of unit, refer to Table 6-42, Parking Requirements.
- 4 2,500 sq. ft. for mobile home park lots (mobile park requires 3-acre minimum area).
- 5 Residential uses in P-1 district shall be a minimum of 5 acres (217,800 square feet) except for mobile home subdivisions, which shall be a minimum of 10 acres (435,600 square feet). Mixed uses consisting of residential and non-residential uses shall have a minimum of 15 acres (653,400 square feet).
- 6 Minimum lot size for Zoning District M-29 depends on the building or structure proposed for the parcel.

Source: Contra Costa County Zoning Code, November 2021.

The Zoning Code uses maximum height, lot area, and lot coverage regulations to ensure the quality of multi-family development. The maximum height limit in most multi-family zones is 35 (2.5 stories) feet; however, in the P-1 zone, the permitted height may be higher subject to Planning Commission approval. Lot coverage is typically limited to 25 percent, though this increases to 35 percent in the M-29 zone. The development standards in the T-1 zone are similar to those of the single-family zones; however, the lot size and lot area are smaller.

The type of built density varies from site to site. The County has been supportive in allowing the maximum number of units as long as there are no physical constraints to the site (i.e., topographic, hydrologic, etc.). Often, residential projects have sought flexibility in design and requested rezoning to Planned Unit Development (P-1), which has facilitated the development of projects because P-1 is consistent with all of the land use designations. On a few occasions, a parcel may have two different land use designations and the total density has to match the portion of the lot that it represents. For example, one piece of the parcel may have a land use designation of Single-family High Density, and other Multi-family High Density. The density has to consider the amount of square footage covering each land use. Otherwise, the County has been supportive in allowing the maximum number of units within the allowed density range. The County has not approved any residential projects on sites in the existing Housing Element sites inventory at densities below those identified in the inventory.

## Parking Standards

The County's parking requirements for residential districts vary by housing type, the number of units, and parking needs. Table 6-42 outlines the County's parking requirements for different housing types. Single-family units are required to have two spaces per dwelling, which may be open or

covered. Similar to single-family units, the requirement for mobile homes, duplexes, or town homes is two spaces per unit.

**TABLE 6-42 PARKING REQUIREMENTS**

Residential Type	Required Spaces
Single-family	2 covered or open spaces
Duplex or Town House	2 covered or open spaces
Multi-family Unit (Apt. or Condo) <sup>1</sup>	
Studio	1 space + ¼ space for guests <sup>2</sup>
One-bedroom	1 ½ spaces + ¼ space for guests <sup>2</sup>
Two or more bedrooms	2 spaces + ¼ space for guests <sup>2</sup>
Mobile Home	2 covered or open spaces <sup>3</sup>
Accessory Dwelling Unit	1 off-street space (may be in the setback) <sup>4</sup>
Emergency Shelter	1 space for every 10 beds, plus 2 spaces for staff <sup>5</sup>

**Notes:**

- 1 Half of the multi-family spaces shall be covered. Ten percent of the multi-family spaces shall be electric vehicle charging spaces (EV spaces).
- 2 Curb parking along the property's street frontage may be used to satisfy the guest parking requirements.
- 3 Only applicable to mobile home subdivisions.
- 4 Parking space is not required if the ADU is established under County Code Section 82-24.006(b), or is exempt from the parking requirement pursuant to County Code Section 82-24.012(i).
- 5 May be on an adjacent lot.

Source: Contra Costa County Zoning Code, November 2021.

The number of parking spaces required for multi-family apartment units and condominiums ranges from one space for a studio to two spaces for units with two or more bedrooms. An additional one-quarter parking space must be provided per unit to accommodate guests. Action A3.5 is proposed to update zoning requirements related to accessory dwelling units for consistency with current state law. In the case of accessory dwelling units, a parking space is not required if the ADU is established under County Code Section 82-24.006(b), or is exempt from the parking requirement pursuant



to County Code Section 82-24.012(i). One of the exemptions is proximity to public transit (within one-half mile) which encourages transit use. The driveway may also be used for parking for an ADU. . Since the County does not require enclosed parking for multi-family developments, cost reductions can be achieved by providing open spaces to fulfill the parking requirements. Furthermore, multi-family developments can use curbside parking along the property's street frontage to fulfill part of the parking requirements for guest parking. Ten percent of the multi-family spaces must be electric vehicle charging spaces (EV spaces).

To facilitate the development of housing projects at locations that encourage public transit use, the County has set forth a maximum amount of parking permitted rather than a minimum. This has been done at the mixed-use development at the Contra Costa Centre and is also proposed at a transit-oriented development in Bay Point.

## Flexibility in Development Standards

The County offers mechanisms that facilitate the provision of a diversity of housing types. These mechanisms provide greater flexibility regarding residential development standards than in conventional residential zone districts. Such mechanisms include the Planned Unit District (P-1) and density bonuses, described in more detail below.

**Planned Unit District:** The Planned Unit District (P-1) provides the opportunity for a more imaginative and flexible design for large-scale residential developments than would be permitted in conventional residential districts. The use of the P-1 district is intended to promote the diversification of buildings, lot sizes, and open spaces to produce an environment in harmony with surrounding existing and potential uses. The flexibility associated with the P-1 district includes variation in structures, lot

sizes, yards, and setbacks, and enables the developer to address specific needs or environmental constraints in an area. The final plan for a planned development is subject to approval by the County Planning Commission. The P-1 designation is applicable to all residential districts.

Using the P-1 designation, increased residential densities can be achieved. Density of up to 44.9 du/ac can be achieved in the P-1 district if the underlying General Plan designation is Very High-Density Residential. The density can be increased up to 99 du/ac if the underlying General Plan designation is Very High-Density – Special Residential.

Currently, a few unincorporated communities in the county are entirely zoned P-1 as a means of facilitating residential and other types of development in these areas. The general direction of the County is to encourage P-1 zoning in unincorporated areas, where it is appropriate in relation to the community's setting.

**Mixed-Use Developments:** The County General Plan Land Use Element includes a category for mixed-use developments in the unincorporated areas. This category has enabled the County to create unique projects that combine residential uses, such as apartments or condominiums, with commercial and other uses. Such developments provide needed housing near key services such as transportation. The development at the Contra Costa Centre is a prime example of this. Other mixed-use land use designations in county unincorporated areas include the Bay Point Willow Pass Corridor and the Parker Avenue downtown area in Rodeo. The mixed-use category offers the County greater flexibility by providing needed housing in urban areas close to important services, where larger residential units are not appropriate. Table 6-43 lists the County's designated mixed-used areas and includes each area's maximum allowable densities and residential uses envisioned for those areas.



**TABLE 6-43 GENERAL DENSITY RESTRICTIONS AND ALLOWED RESIDENTIAL USES IN MIXED-USE AREAS OF CONTRA COSTA COUNTY**

Mixed-Use Area	Maximum Allowable Density	Residential Uses
Parker Avenue Mixed Use (M-1)	29 units per acre	Multi-family residential
Downtown/Waterfront Rodeo Mixed Use (M-2)	16 to 30 units per acre	Boarding homes, duplexes, home occupations, live-work studios, multi-family, and detached single-family residential uses.
Pleasant Hill BART Station/Contra Costa Centre Mixed-Use (M-3)	60 units per acre	Multi-family residential
Willow Pass Road Mixed Use (M-4)	21 to 29 units per acre	Boarding homes, single-family, duplexes, home occupations, multi-family, and second residences.
Willow Pass Road Commercial Mixed Use (M-5)	21 to 29 units per acre	Multi-family residential
Bay Point Residential Mixed Use (M-6)	Development Zone 2: 40-unit per net acre minimum with 65 units per acre encouraged Development Zone 3: 21 to 29.9 units per acre	Multi-family residential
Dougherty Valley Village Center Mixed Use (M-8)	Within the Village Center -40 units per net acre	High-density residential
Montalvin Manor Mixed Use (M-9)	Site 1: 12 to 20.9 units per acre. Site 2: 7.3 to 11.9 units per acre	Single-family, duplexes, multi-family, second residences, family member mobile homes, mobile home parks, mobile home subdivisions, permanent mobile homes, and RV parks or campgrounds
Appian Way General Mixed Use (M-11)	8 units per net acre	Duplexes, apartments, condominiums, townhouses, attached or detached single-family residences (in compliance with P-1 design criteria), senior or congregate care housing, and live-work quarters. Creative mixing of types of residential development will be encouraged.
Triangle Area Mixed Use (M-12)	8 units per net acre	Duplexes, apartments, condominiums, townhouses, attached or detached single-family residences (in compliance with P-1 design criteria), and live work quarters.
San Pablo Dam Road Mixed Use (M-13)	12 units per net acre	Duplexes, apartments, condominiums, townhouses, attached single-family residences (in compliance P-1 design criteria), senior or congregate care housing, and live work quarters.
Heritage Point Mixed Use (M-14)	Approximately 52 units per net acre	Affordable, multi-family residential units.
Saranap Village Mixed Use (M-15)	Approximately 53.5 units per net acre	High-density residential uses (apartments and condominiums).

Source: Contra Costa County General Plan Land Use Element 2005; Contra Costa County Zoning Code and Area Wide Planned Unit Development Plans (accessed December 29, 2021): <https://www.contracosta.ca.gov/4736/Zoning-Code-and-Area-Wide-Planned-Unit-D>; Contra Costa County staff communication (December 9, 2021).



**Density Bonus:** In accordance with state law and the County's Residential Density Bonus Ordinance, Contra Costa County provides density bonuses to qualified new housing projects. Specifically, the developer must have: (1) at least 10 percent of the total units affordable to lower-income households; (2) at least 5 percent of the total units affordable to very-low-income households; (3) 10 percent of a for-sale housing development as moderate-income housing; (4) an age-restricted senior citizen housing development (5) 10 percent of a housing development for transitional foster youth, disabled veterans, or homeless persons with an affordability restriction of 55 years as very low income units; (6) 20 percent of total units for lower income students in a student housing development; or (7) 100 percent of units in the development, including density bonus units, for lower income households. Affordability must be maintained for at least 55 years for a rental project and 45 years for owner-occupied housing units. If these conditions are met, the developer is entitled to a density bonus of between 5 and 80 percent of the maximum density permitted in the underlying zone plus one to three incentives (e.g., modified standards, regulatory incentives, or concessions) of equal financial value based on land costs per dwelling unit. The County has used density bonuses to facilitate the development of affordable housing. The County is proposing Action HE-A4.5 to update their zoning in Section 822-2 for consistency with the current state density bonus law.

**Inclusionary Housing:** In November 2019 and February 2022, the Contra Costa County Board of Supervisors updated the Inclusionary Housing Regulations in Chapter 822-4 of the County Ordinance Code. This section of the Ordinance Code establishes the currently adopted inclusionary housing program for the county's unincorporated communities. A summary of Chapter 822-4's provisions is below:


*Inclusionary unit requirement.* Table 6-44 outlines the minimum number of inclusionary units that the County's Ordinance Code requires at each income level per quantity of housing units developed by each project.

**TABLE 6-44 MINIMUM NUMBER OF INCLUSIONARY UNITS BY HOUSEHOLD INCOME BY TYPE AND NUMBER OF HOUSING UNITS DEVELOPED**

Number and Type of Units Proposed	Inclusionary Units			Total Inclusionary Units of all Units
	Very Low Income (VLI)	Lower Income (LI)	Moderate Income	
5 to 125 rental units	20+%	Remainder of inclusionary units after VLI threshold	N/A	15%
5 to 125 for-sale units	N/A	20+%	Remainder of inclusionary units after LI threshold	15%
126 or more rental units	20+%	N/A	Remainder of inclusionary units after VLI threshold	15%
126 or more for-sale units	N/A	20+%	Remainder of inclusionary units after LI threshold	15%

Source: Contra Costa County Ordinance Code, Article 822-4.4

*In-lieu Fee.* Developers may pay an in-lieu fee as an alternative to building some of the inclusionary housing units as required by Table 6-44. The fee schedule establishes the valuation of the in-lieu fee. In general, the fee paid in lieu of developing for-sale inclusionary units equals the difference between the (1) affordable sales price and the (2) median sales price for all single-family homes sold in the county within the prior 12 months. The in-lieu fee equals the difference between (1) the average rent of a two-bedroom



unit with a 1.5 bathroom and (2) annual affordable rent for the target household, calculated annually for 55 years. The County requires payment of in-lieu fees before issuing any permits to the developer. As of June 2022, the County had collected a total of \$946,000 paid by developers as in-lieu fees since 2015.

*Alternative compliance.* Developers may comply with the inclusionary housing ordinance in ways other than building the inclusionary housing on-site or paying an in-lieu fee. They may build off-site inclusionary housing units, convey land titles to the County, combine these two options, or use a crediting system with another housing developer to apply excess inclusionary housing units built at one development to help another developer meet their inclusionary housing requirements.

*Exemptions.* The following housing types are exempt from the inclusionary regulations: developments of one to four housing units; housing destroyed by natural disaster (i.e., fire, flood, earthquake, etc.) that is re-built within six months of the destruction date to the exact size and land use as the previous structure; residential developments that receive/complete discretionary approval and/or building permits or an unexpired vesting tentative map and/or a completed and submitted application for a tentative map before the ordinance took effect; a community care facility as defined in Health and Safety Code Section 1502; or a housing development proposed in an area of the unincorporated county that the County has deemed a redevelopment area, prior to the dissolution of redevelopment agencies statewide in 2012.

*Restrictions.* For rental inclusionary units, the monthly rent must remain in place for the target income level group for a minimum of 55 years. For-sale inclusionary unit qualifying households must not have owned their prior home within three years prior to their application and may have no more

than \$200,000 in assets. Occupants of for-sale inclusionary units must agree to live in the unit for a minimum of three years unless an emergency occurs. For-sale inclusionary units may be sold at a market rate to above-moderate income households only (1) after its first sale to the target income group and (2) if the sale allows the County to recapture the sum of both (a) the difference between the initial affordable sales price and the appraised market value of the unit at the time of the initial sale and (b) the proportionate share by the County of any appreciation since the time of the unit's first sale.

*Standards.* All inclusionary housing units must include and have access to the same amenities provided for market-rate units. They cannot be segregated from the market-rate units and must be dispersed throughout the development. Bedroom count should be the same as the average number of bedrooms provided for market-rate units. The developer must place occupants in the inclusionary units at the same rate/time as the market-rate units.

*Review.* The inclusionary housing developer must submit a housing plan to the County for their review. This plan must contain or address:

- Brief description of the residential development, which includes the number of inclusionary housing units compared to the market rate and how the developer determined these numbers;
- The mix, location, type, and number of bedrooms for the market and inclusionary units;
- Intended income levels for the inclusionary units;
- Phasing plan (for phased developments) that will bring the inclusionary units online with each phase of the overall project;





- Description of any incentives requested from the County by the developer;
- Statement and calculation of intended in-lieu payments for developers who intend to pay in-lieu fees to meet their requirements; and
- Description and analysis for developers seeking alternative compliance showing that on-site construction of inclusionary units is not possible or that alternative compliance will provide greater benefits than the conventional compliance.

The County has a maximum of 45 days from the submission of the inclusionary housing plan to either approve or reject it. Inclusionary housing plans are required for any applications seeking discretionary approval.

*Inclusionary Housing Agreements.* All developers not exempt from the County's inclusionary housing ordinance and who opt not to pay in-lieu fees must sign and enter into an inclusionary housing agreement with the County. The agreement must contain or address:


- The number of for-sale versus rental units;
- The number, size, location, and square footage of inclusionary units;
- The market value and sales or rental prices of the inclusionary units;
- Any incentives used;
- Provisions enforcing the "Restrictions" and "Standards" (Sections 410 and 412(d) of the inclusionary housing ordinance), such as deed restrictions, that the County must approve;
- Provisions for determining income eligibility and to maintain ongoing affordability in the future; and

- Provisions for the enforcement and implementation of alternative compliance methods, as appropriate.

*Incentives.* Developers of inclusionary housing may apply for and receive a density bonus for no more than 15 percent of the total units developed. If the developer reserves any of the proposed units in excess of the minimum amounts of lower-income or senior housing units required by the County, then the developer may apply for a density bonus, as outlined by Cal. Govt. Code Section 65915(d)(2). At its discretion, the County may also grant fee deferral, waivers, tax-exempt financing, or modification of the land use controls and development standards to help otherwise incentivize the developer in building the inclusionary housing units.

In general, the requirements and standards of the County's inclusionary housing ordinance are similar to other jurisdictions, use existing state incentives, and therefore do not act as a constraint to the development of affordable housing. In Contra Costa County, the overriding constraint to affordable housing development is the high land costs, availability of financing, neighborhood opposition or NIMBYism, and other market factors. To mitigate this constraint, the County has been proactively pursuing affordable housing opportunities through the use of subsidies. As demonstrated later in Section 6.6, Housing Plan, the County will continue to work with both for-profit and non-profit developers to actively encourage affordable housing development.

**Short-Term Rentals:** In 2020, the Contra Costa County Board of Supervisors adopted ordinance 2020-12 and incorporated it as Chapter 88-32 into the County's Ordinance Code to provide the regulations for short-term rental housing in the unincorporated county. The County's short-term rental ordinance includes the following provisions:



*Siting.* Short-term rentals can exist in any single-family district, planned unit district for residential uses, water recreational district, multiple-family residential district, or agricultural district (except if the agricultural lot is under the jurisdiction of the Williamson Act).

*Term.* The County permits short-term rental uses through (1) ministerial short-term rental permits, which last for one year from the permit approval date, and (2) discretionary short-term rental permits, which last until the date specified by the County but not more than five years from the permit date.

*Use.* The County establishes use regulations for short-term rental units in Division 88-32.602 of the Ordinance Code. The County forbids short-term rentals from being located in buildings with five or more dwelling units, from being in use more than 180 days per year, and from being used by more than two persons per bedroom plus two additional persons elsewhere in the unit. Each short-term rental unit with three bedrooms or less must have at least one off-street parking space for guests, and each unit with four or more bedrooms must have two or more off-street parking spaces for guests. Accessory dwelling units are not allowed locations for hosting short-term rentals.

The County's regulations and standards for short-term rental uses do not pose a significant constraint to new development. The short-term rental regulations were updated recently and balance housing needs of long-term residents while providing options for property owners to have a short-term rental. The County will continue to monitor the impacts of short-term rentals on long-term housing options.

## 2. Provisions for a Variety of Housing

Housing element law specifies that jurisdictions must identify adequate sites to be made available through appropriate zoning and development standards to encourage the development of various housing types for all economic segments of the population. This includes single-family housing, multi-family housing, factory-built housing, mobile homes, emergency shelters, and transitional housing. Table 6-45 summarizes the housing types permitted within the primary residential zones in the county's unincorporated areas.

In addition to the residential districts identified in the Land Use Element, several other zone districts permit limited residential development. These include the less-intensive agricultural districts (A-2), which permit one single-family dwelling unit per lot. Residential development is also permitted in the Interchange Transitional District and in most commercial/business and industrial districts (N-B, CM, C-B, L-I, and H-I) subject to a land use permit. In the Retail Business (RB) District and the General Commercial (GC) District, single-family homes and duplexes are permitted by right; however, multi-family developments require a land use permit.

The County offers a diversity of housing types that are available for all economic segments of the community as well as more vulnerable members of the community, including those earning lower income, seniors, disabled households, farm workers, and persons experiencing homelessness, among others. These include multi-family units, accessory dwelling units, mobile homes, and other more affordable housing opportunities.



**TABLE 6-45 HOUSING TYPES PERMITTED BY ZONE DISTRICT**

Housing Types Permitted	Single-Family Zone Districts									
	R-100	R-65	R-40	R-20	R-15	R-12	R-10	R-7	R-6	D-1
Single-family detached	P	P	P	P	P	P	P	P	P	P
Duplex/Townhomes										
Accessory/Junior Accessory Dwelling Units	P	P	P	P	P	P	P	P	P	P
Mobile/Manufactured homes	P	P	P	P	P	P	P	P	P	P
<b>Special Needs Housing</b>										
Transitional housing (7 or more persons)	c	c	c	c	c	c	c	c	c	c
Supportive housing (7 or more persons)	c	c	c	c	c	c	c	c	c	c
Transitional housing (6 people or less)	-	-	-	-	P	P	P	P	P	P
Supportive housing (6 people or less)	-	-	-	-	P	P	P	P	P	P
Emergency shelter <sup>2</sup>	-	-	-	-	-	-	-	-	-	-
Residential care (≤6 beds)	P	P	P	P	P	P	P	P	P	P
Residential care (>6 beds)	c	c	c	c	c	c	c	c	c	c
Single-Room Occupancy (SRO) <sup>4</sup>	-	-	-	-	-	-	-	-	-	-
Employee/Farmworker Housing <sup>3</sup>	P	P	P	P	P	P	P	P	P	P
Second Residence	C	C	C	C	C	C	C	C	C	C
Housing Types Permitted	Multi-family Zone Districts <sup>1</sup>									
	M-29	M-17	M-12	M-9	M-6	P-1 <sup>5</sup>	T-1			
<b>Residential Uses</b>										
Single-family detached				P	P	P	P	P	P	-
Multi-family (3 or more)				P	P	P	P	P	P	-
Duplex/Townhomes				P	P	P	P	P	P	-
Mobile/Mfg. homes				-	-	-	-	-	-	P
Mobile home parks				-	-	-	-	-	-	c
Accessory Dwelling Units				P	P	P	P	P	P	-



Housing Types Permitted	Multi-family Zone Districts <sup>1</sup>									
	M-29	M-17	M-12	M-9	M-6	P-1	T-1			
<b>Special-Needs Housing</b>										
Transitional housing (7 or more persons)				c	c	c	c	c	-	-
Supportive housing (7 or more persons)				c	c	c	c	c	-	-
Transitional housing (6 people or less)				P	P	P	P	P	P	-
Supportive housing (6 people or less)				P	P	P	P	P	P	-
Emergency shelter <sup>2</sup>				-	-	-	-	-	-	-
Residential care (≤6 beds)				P	P	P	P	P	C	-
Residential care (>6 beds)				c	c	c	c	c	C	-
Single-Room Occupancy (SRO)				-	-	-	-	-	P <sup>4</sup>	-
Employee/Farmworker Housing <sup>3</sup>				P	P	P	P	P	P	-

- Notes:
1. Single-family attached and detached units are also permitted in the lower-density multi-family zones (M-6, M-9, and M-12)
  2. Emergency shelters not allowed in any residential districts. Only permitted in General Commercial (C) zoning district.
  3. Refers only to Farmworker Dwellings as defined by Ordinance No. 2017-14, not Farmworker Housing Complexes or Farmworker Housing Centers.
  4. Permitted with Administrative Review only if the development complies with all the County’s standards for the underlying zones. Non-compliant developments subject to land use permit. Also permitted in R-B (Retail-Business) zoning district.
  5. The P-1 zone allows both multifamily and single-family development

Source: Contra Costa County Zoning Code, November 2021. P = Permitted c = subject to a Land Use Permit

**Multi-family Units:** The Zoning Code permits multi-family housing opportunities (projects with 3 or more units) in the multi-family zones (M-29, M-17, M-12, M-9, and M-6) by right. Note that other zones allow more than one unit including duplexes and ADUs. Densities range from 6 units per acre to 29 units per acre. Densities of up to 99 units per acre are permitted in the Planned Unit District (P-1). Approximately 16 percent of the County housing stock consists of multi-family residences. Contra Costa County offers a wide variety of affordable multi-family units for lower-income households and

persons with special needs, such as seniors, people with disabilities, and those with HIV/AIDS.

**Licensed Care Facilities:** The Zoning Code permits licensed residential or community care facilities with six or fewer beds in all residential zones by right. Those facilities with more than six beds require a land use permit. Although proposals for residential care facilities with more than six residents are not common in Contra Costa County, they have nonetheless occurred in the past and the County has upheld its regulatory process of requiring




administrative review before issuing a development permit. When these proposals have emerged, the use has required compliance with conditions of approval for the land use permit including verification that the residential care facility was licensed by an appropriate state or local agency, and that public services (police and fire protection) and utilities (water, sewer, etc.) were adequate to serve the location and size of the facility. In each case, there were certain conditions relating to the approval of a site plan for the facility and maximum number of employees working in the facility at one time.

**Accessory Dwelling Units:** Accessory dwelling units are designed to provide an opportunity for the development of small rental units as one way of providing affordable housing for low- and moderate-income individuals and families as well as seniors and people with disabilities. Accessory dwelling units are permitted ministerially with an approved ADU permit (Administrative Permit) in all districts that allow single-family and multi-family residential uses. The accessory dwelling unit must not exceed 1,200 square feet (any size if it is an internal conversion) and must provide complete independent living facilities for one or more persons. Accessory dwelling units may be rented or leased, but they must conform to the standards that are applicable to residential construction in the zone in which the unit is located. Action HE-A5.4 is proposed to continue to update the County's accessory dwelling unit regulations as changes to state law are made, to publicize this housing option and to create pre-approved accessory dwelling unit plans to assist homeowners who are interested in building an accessory dwelling unit.

**Mobile/Manufactured Homes:** Mobile homes and manufactured housing offer an affordable housing option to many low- and moderate-income households and are permitted in all residential and agricultural zoning districts. In addition, mobile homes are permitted in several commercial, and industrial districts (i.e., H-I, L-I, C, F-R, F-1, C-M, and W-3) subject to a land use permit. The Contra Costa County Planning and Zoning Code also permits mobile home parks in the T-1 district. Mobile homes are permitted for caretaker use in the H-I, L-I, A-80, A-40, A-20, A-4, A-3, A-2, A-1, C, F-R, F-1, C-M and W-3 districts, subject to a land use permit. Currently, approximately 2,816 mobile homes are in mobile home parks in the County's unincorporated area .

**Farmworker Housing:** The county is home to a variety of agricultural uses, many of which are located in the southern and eastern areas of the county. According to the 2017 Agricultural Census, 1,310 workers were employed on farms in Contra Costa County. Currently, the Zoning Code permits farm worker housing in the agricultural districts (A-2, A-3, A-4, A-20, A-40, and A-80) by right. The County amended the Zoning Code in 2017 to be consistent with the State Employee Housing Act with respect to farm labor housing. This action removed the requirement to secure a land use permit for farmworker housing in agricultural zoning districts, though the County requires that all persons operating farmworker housing apply for and receive a farmworker housing permit for the three types of allowable farmworker housing (i.e., (1) farmworker dwelling, (2) farmworker housing complex, or (3) farmworker housing center) per County Ordinance Code 82-52.602. Action HE-A6.1 is proposed to ensure the County updates their code to comply with the portion of the Employee Housing Act that requires the County to allow employee housing for six persons or fewer anywhere single-family residential uses are allowed (Health and Safety Code Section 17021.5).



As stated in the Land Use Element, approximately 26,720 acres within the ULL are zoned for agricultural use and an additional 312,000 acres outside the ULL are designated for agriculture, open space, wetlands, parks, and other non-urban uses. The majority of agricultural land is in the eastern portion of the county and has a General Plan designation of Agricultural Lands (AL) or Agricultural Core (AC).

**Emergency Shelters, Transitional, and Permanent Supportive Housing:**

Supportive housing and transitional housing designed to meet the needs of those who are experiencing homelessness and formerly experiencing homelessness are permitted, as shown in Table 6-45. Currently, the County treats both transitional and supportive housing facilities that serve six or fewer clients as different from those serving above this amount. These facilities with six or fewer clients are permitted by right in all single-family zoning districts from R-6 to R-15 as well as zone D-1. Any facilities serving more than six clients require a land use permit in all single-family zones. In multi-family zones, the County allows these facilities by right as well as in land zoned for planned unit development. Facilities serving more than six clients require a land use permit in all multi-family zones and are prohibited in planned unit developments. Transitional and supportive housing of any kind is forbidden in mobile home parks. Action HE-A6.1 calls for the County to allow transitional and supportive housing in all zones where residential is allowed in the same way other residential uses are allowed per Senate Bill (SB) 2 (2007) and to allow supportive housing per Assembly Bill (AB) 2162 (2018) without discretionary review in areas zoned for residential use where multi-family and mixed uses are permitted.

In addition, these facilities are permitted in most commercial and industrial districts with a land use permit. Emergency shelters are only currently permitted in commercial zoning districts. The purpose of the land use permit

is to ensure compatibility with surrounding land uses, and not to constrain their development. The land use permit for an emergency shelter, supportive housing, or a transitional housing facility requires only an administrative review unless the decision is appealed. If the administrative decision is appealed, a hearing on the permit may be held before the Zoning Administrator or the County Planning Commission, as necessary.

The County allows emergency shelters 'by-right' in the C: General Commercial District. The C: General Commercial District has three vacant parcels totaling 6.6 acres within this zoning district with both appropriate distance from schools and proximity to transit. In addition, emergency shelters may be allowed in other zoning districts with a conditional use permit. The unincorporated county has approximately 570 persons without nighttime shelter as of the 2020 Point-in-Time Count. Shelters will be no larger than 75 beds. The County's existing 75 bed emergency shelter in Concord is approximately 16,000 square feet and has a capacity for 160 year-round beds. The County requires that an emergency shelter maintain a minimum floor area of 125 square feet for each bed. For a 75-bed shelter, this would be a minimum of 9,375 square feet. To address the current unmet need of unsheltered people in the county, the county would need an additional seven to eight emergency shelters totaling approximately 66,000 or 75,000 square feet, respectively. There are sufficient sites in the unincorporated area of Contra Costa County zoned under the C: General Commercial District to address the potential need for emergency shelters to accommodate 570 unsheltered persons experiencing homelessness.

The ordinance includes specific requirements to provide certainty to the applicant and maintain compatibility with the surrounding neighborhood. Following are the general development standards:




- Security features, including doors with locking deadbolts for individual rooms, interior locks on and emergency call alarms within common shower stalls, night-lighting for parking areas that are resistant to vandalism and graffiti, locking windows that cannot be opened from outside, and a client registry denoting their names and dates of stays;
- Design guidelines, including a minimum of one telephone, lockers for personal property, lavatories in the amounts required by the California Plumbing Code, and compliance with Americans with Disabilities Act (ADA) design and accessibility requirements;
- Common facilities for the exclusive use of the clients that include a central kitchen and one dining room, private intake area, and counseling center;
- Additional standards apply but may be modified at the discretion of the County:
  - Siting within a half mile of an existing transit amenity (i.e., bus stop, BART station, Amtrak station, or ferry terminal) or written agreement to the County the shelter will provide transportation to the nearest transit amenity if sited more than a half mile away;
  - A minimum of 125 square feet of gross floor area per bed/client but a maximum of no more than 75 beds per shelter; and
  - Off-street parking for the shelter’s staff at a minimum of 2 spaces plus 1 space for every 10 beds;

In 2019, the California Legislature adopted AB 101, which requires all local governments, including Contra Costa County, to permit Low-Barrier Navigation Centers for people needing housing as a by-right use in areas

that the local government has zoned for mixed uses as well as non-residential zones that permit multi-family land uses. These centers must provide access to permanent housing options as well as case manager support to connect clients with public benefits (e.g., income, healthcare, shelter, and housing assistance). Local governments may not subject proposed centers within their planning area authority to conditional use permits or discretionary review. Action HE-A6.1 is proposed to comply with AB 101.

**Single-Room Occupancy Facilities:** The County revised the Zoning Code in 2014 to include single-room occupancy (SROs) facilities. Development standards and permit procedures allow SROs that comply with all the County’s design and development standards for the underlying zones within the P-1 and R-B zoning districts with administrative review from the County’s zoning administrator. Similar to the emergency shelter permitting process, the administrative review process ensures that the SRO is supportive of surrounding existing land uses and development standards, rather than to restrict their development. If the proposal for an SRO development does not comply with the underlying zone’s existing development standards, then the developer must apply for a land use permit to ensure compliance with the County’s Ordinance Code. The County specifies the minimum development and operational standards for SROs, which include:

- Minimum cooking and dining facilities, including a range and oven, refrigerator, and sink with garbage disposal;
- Bathroom facilities, including a flushing toilet and sink in each unit as well as one shower for every seven units or a shower or bathtub in each unit;

- 
- Compliance with the County's Building Code and Fire Code regulations that relate to hotels;
  - Design and accessibility compliance with the ADA;
  - A manager's office for SRO complexes consisting of 15 or more units;
  - Security features (night lighting, locking windows and doors, occupant registration);

In addition to the mandatory development standards listed, the following development standards may be modified upon issuance of a land use permit:

- Off-street parking in the amount of one space for every four units plus one space for the SRO manager;
- Common areas consisting of 10 square feet for every unit or 150 square feet of common space, whichever is greater.

In general, emergency shelters, transitional and supportive housing, and SROs should be accessible to the population in need and near public transit, employment and job training opportunities, community facilities, and services. Typically, people on public assistance are most vulnerable to becoming homeless in the case of an economic recession or cuts in public assistance. Areas with concentrations of CalWORKS participants and good access to transit, employment, and services would be appropriate for the siting of emergency and permanent supportive housing. In siting such facilities, the County will pay special attention to issues of neighborhood impacts.

Several emergency shelters and transitional housing facilities for persons experiencing homelessness are in Contra Costa County. Table 6-28 in the previous section identifies the major temporary, transitional, and permanent housing facilities for persons experiencing homelessness and formerly experiencing homelessness in the county.

### 3. Growth Management Program

Growth management programs facilitate well-planned development and ensure that the necessary services and facilities for residents are provided. Furthermore, the planning and land use decisions associated with growth management intend to enhance housing opportunities by concentrating housing in urban areas close to jobs and services, rather than in sprawling developments that may threaten agricultural land and open space. However, a growth management program may act as a constraint if it prevents a jurisdiction from addressing its housing needs.

In 1988, Contra Costa County residents approved Measure C, which increased sales tax by one half cent to fund transportation projects. In response to growing concerns about traffic impacts of new development and the lack of necessary funding for infrastructure development and improvements, the measure also included a growth management component. Measure C-1988 requires each jurisdiction to adopt a Growth Management Element as part of its General Plan.

In 1990, Contra Costa residents expressed their concerns regarding new development threats to the environment by approving Measure C-1990. This measure applies to the unincorporated county and restricts urban development to 35 percent of the land in the county. The remaining 65 percent of the land is preserved for agriculture and open space.





## **Growth Management Element – Measure C-1988**

As part of the 1990-2010 General Plan, the County developed the Growth Management Element to address the requirements of Measure C-1988. The Element includes adopted level of service (LOS) standards for traffic for particular types of land uses and performance standards to be maintained through capital projects for fire protection, police, parks, sanitary facilities, water, and flood control. These performance standards are designed to ensure that new developments provide their fair share of the cost of infrastructure, public facilities, and services. As a result, new developments must demonstrate that the LOS and performance standards identified in the Element will be met.

## **65/35 Land Preservation Plan and Urban Limit Line – Measure C-1990**


The 65/35 Land Preservation Plan and the ULL, adopted in 1990 under Measure C, was intended to concentrate development in areas most suitable for urban development. As mentioned previously, urban uses are permitted on 35 percent of the land in the county. Certain types of land are identified in the measure as not being appropriate for urban development, such as prime agricultural land, open space, wetlands, or other areas unsuitable for urban development because of environmental or other physical constraints.

The ULL established a boundary setting apart land that is suitable for urban development from that which is not. The purpose of the ULL is to limit potential urban encroachment by prohibiting the County from designating any land located outside the ULL for an urban land use. Voters in Contra

Costa County approved Measure L in November 2006 establishing an updated ULL, extending the term of the ULL to 2026, and enacting new procedures requiring voter approval to expand the ULL by greater than 30 acres.

Implementation of Measure C 1988 and 1990 has not prevented the County from meeting its housing obligations. Instead, the Growth Management Program has led to a coordinated planning effort that has provided a mechanism to support and enhance housing development throughout the county. This has been achieved through pro-rata fees and the concentration of development, which has enabled the County to provide the needed services, facilities, and infrastructure at a lower cost to residents and developers than could be achieved through unmanaged and sprawling development. Section 4 of this Housing Element demonstrates the County's ability to accommodate its share of regional housing growth on residentially designated land within the ULL.

In 2016, County staff conducted an analysis of future growth to determine if the ULL could pose a severe constraint to housing growth and production in the future. The County determined that if the ULL remained unchanged in the future and development patterns used the lowest land use densities and intensities as allowed in the land use elements of the county and the incorporated cities that were in effect at the time, there could be an approximate shortage of 500 housing units across the entire county. County staff determined that this deficit in housing would be negligible because assumptions proposed an exceptionally conservative scenario. In this scenario, most new development centered on the remaining vacant parcels within the ULL at the absolute lowest density. Furthermore, staff projected that each jurisdiction in Contra Costa County could erase the potential deficit under this scenario if they increased their housing production by less than 2



percent each year. Comparing this conservative scenario to a high-density and -intensity scenario, County staff determined that there would be a surplus of 43,000 housing units in excess of what all the jurisdictions in the county would need to produce to keep pace with housing needs for projected growth patterns. Housing affordability is also a concern with the ULL, but County staff research shows that homes continue to be sold at all price levels, with the highest number of homes sold in 2016 at a sales price value between \$450,000 and \$750,000. Therefore, the ULL, while being an explicit constraint on urban sprawl overall, is not a direct constraint to the production of housing to serve all income levels in Contra Costa County, provided that the jurisdictions in the county pursue infill growth patterns and work to upzone existing vacant parcels. Action HE-A5.1 calls for rezoning to higher densities to address the current Regional Housing Needs Allocation (RHNA), which will increase the development capacity inside the ULL.

## 4. Site Improvements and Development Fees

### Site Improvements

Site improvements are an important component of new development and include water, sewer, circulation, and other infrastructure needed to serve the new development. Contra Costa County requires the construction of reasonable on-site and off-site public improvements as a condition of approval for residential (major) subdivisions as permitted by the Subdivision Map Act. Typical improvements required include:

- Grading and improvement of public and private streets serving the subdivision according to adopted design standards (see Table 6-46 for a summary of roadway design standards);
- Storm drainage and flood control facilities within and outside the subdivision (when necessary) to carry stormwater runoff both tributary to and originating within the subdivision;
- Stormwater management infrastructure to treat runoff from new impervious surfaces originating within the subdivision before discharge to off-site receiving waters;
- Public sewage system improvements according to sewer service district standards and direct sewage system connection to each lot;
- Public water supply system improvements according to water service district standards to provide adequate water supply and direct water system connection to each lot;
- Fire hydrants and connection of the type and location as specified by the relevant fire service district;
- Public utility distribution facilities, including gas, electric, telephone, and cable television necessary to serve each lot;
- Local transit facilities, such as shelters, benches, bus turnouts, park-n-ride lots for larger residential subdivisions.

Specific standards for a residential subdivision's on-site and off-site improvements must be in accordance with the County's General Plan, Zoning Ordinance Code, Flood Control and Drainage Ordinance Code, and Subdivision Ordinance Code. Additionally, the County may require dedication



of land for public use, such as roadways and parks. Dedicated rights-of-way for roadways must be designed, developed, and improved according to the County's Roadway Design Criteria, as summarized in Table 6-46.

and facilities may be required as conditions for project approval. Development impact fees, such as capital facility fees (e.g., charges for schools and parks), and service connection fees (e.g., sewer and water connections), are identified in Table 6-47.

**TABLE 6-46 ROADWAY DESIGN STANDARDS**

Roadway Type	Right-of-Way*	Curb to Curb	Median	Sidewalk Area
Parkways	136 ft.	106 ft.	14 ft.	n/a
Major Arterial	126 ft./136 ft.	106 ft.	14 ft.	8 ft.
Arterial / Industrial Collector	84 ft.	64 ft.	n/a	8 ft.
Industrial Collector	68 ft.	48 ft.	n/a	n/a
Minor Arterial / Major Collector	60 ft.	40 ft.	n/a	8 ft.
Minor Collector	56 ft.	36 ft.	n/a	n/a

Source: Contra Costa County staff, personal communication, 2021.

\*Right-of-way width excludes areas that may be necessary to accommodate stormwater management infrastructure appurtenant to new public streets for treatment of related stormwater runoff.

It can be reasonably inferred that the costs for the construction of on-site and off-site improvements under the County's residential subdivision process does have an impact on housing supply and affordability.

## Development Fees

The County requires the payment of fees for off-site extension of water, sewer, and storm drain systems and transportation improvements. The developer is also required to construct all internal streets, sidewalks, curb, gutter, and affected portions of off-street arterials. New residential construction will either occur as infill, where infrastructure is already in place, or in planned unit districts, where the provision of adequate public services



**TABLE 6-47 DEVELOPMENT IMPACT FEES UNINCORPORATED AREAS**

Single-Family Home Fees	West		Central		East <sup>1</sup>	
	North Richmond	Rodeo	Pacheco	Alamo	Bay Point	Discovery Bay
Permit/Plan Processing Fees	\$22,205	\$22,205	\$19,205	\$19,205	\$22,205	\$19,205
Capital Facilities Fees	\$8,160	\$8,160	\$8,160	\$7,580	\$8,160	\$8,160
Service Connection Fees	\$19,773	\$14,329	\$22,701	\$10,189	\$26,970	\$200
<b>Total</b>	<b>\$50,138</b>	<b>\$44,694</b>	<b>\$50,066</b>	<b>\$36,974</b>	<b>\$57,335</b>	<b>\$27,565</b>

1. When a residential development project falls within the boundaries of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), additional fees may apply. These fees are paid for a project impacting potential habitat and are one option for mitigating impacts to, or takings of, state and federally listed threatened and endangered species (under the Endangered Species Act and California Endangered Species Act.) The East Contra Costa County Habitat Conservancy, Contra Costa County, and the cities of Brentwood, Clayton, Oakley, and Pittsburg oversee the permit program and issue permits on behalf of the California Department Fish and Wildlife and U.S. Fish and Wildlife Service. For more information, see: [www.cocohcp.org](http://www.cocohcp.org).

Assumptions: Single-family 2,000 sq. ft. home with 400 sq. ft. attached garage, and wood frame construction. Source: Contra Costa County- Dept. of Conservation and Development, Building Insp. Div. Fee Estimator Program and information provided by Special Districts, November 2021.

Multi-family Apartment Fees	West		Central		East	
	North Richmond	Rodeo	Pacheco	Alamo	Bay Point	Discovery Bay
Permits/Processing Fees	\$752,942	\$752,942	\$749,942	\$749,942	\$752,942	\$749,942
Capital Facilities Fees	\$81,600	\$81,600	\$81,600	\$75,800	\$81,600	\$81,600
Service Connection Fees	\$41,404	\$154,054	\$566,650	\$49,679	\$555,954	\$5,000
<b>Total</b>	<b>\$875,946</b>	<b>\$988,596</b>	<b>\$1,398,192</b>	<b>\$875,421</b>	<b>\$1,390,497</b>	<b>\$836,542</b>
<b>Total Per Unit Fees</b>	<b>\$35,038</b>	<b>\$39,544</b>	<b>\$55,928</b>	<b>\$35,017</b>	<b>\$55,620</b>	<b>\$33,462</b>

Assumptions: Prototypical multi-family residence. Assume a 20,000 sq. ft. apartment building with 25 units. Five 3-bedroom units, 10 2-bedroom units, 10 1-bedroom units.

One structure, 2-story, and wood frame construction.

Source: Contra Costa County- Dept. of Conservation and Development, Building Insp. Div. Fee Estimator Program and information provided by Special Districts, November 2021.



The County also collects fees from developments to cover the costs of planning and processing permits. Processing fees and deposits are calculated based on average staff time and material costs required to process a particular type of application. The average cost of planning and processing fees for single-family and multi-family residential development are summarized in Table 6-47.

Planning and processing fees, combined with costs for the required site improvements, add to the cost of housing. The average planning and processing fees for a typical single-family home and typical 25-unit multi-family complex have been calculated.<sup>1</sup> The overall development impact fees for site improvements and processing fees range from \$27,565 to \$57,974 for the typical single-family home built in the unincorporated area of the county and from \$33,462 to \$55,928 per apartment unit. These costs vary by unincorporated region of the county, as shown in Table 6-47, and are representative of the development fees for new residential development within the unincorporated area. Table 6-48 shows the development impact fee costs as a proportion of the total development costs (including construction and land acquisition costs). The development impact fees make up the highest proportion of residential development costs in Pacheco, where they consist of a total 5.5 percent of an estimated hypothetical multi-family development. Most development impact fees consist of between 3

and 6 percent of the total development cost for single- and multi-family scenarios and therefore are not overly burdensome on their construction.

Requiring developers to construct site improvements and/or pay fees toward the provision of infrastructure, public facilities, services, and processing will increase the cost of housing.<sup>2</sup> While these costs may impact housing affordability, these requirements are deemed necessary to maintain the quality of life desired by county residents, and are consistent with the goals and policies of the General Plan.

If a developer owns the property, then either the developer's profit and/or the price of the housing will be adjusted depending on the cost of fees and site improvements. To cover increasing costs, the developer might have to reduce its profit. Or, if the market supports higher prices, the developer might raise the rents or sales prices of the new housing. If the cost of fees and improvements are excessive, and the market does not support higher prices, then the development will not be feasible. If the developer is seeking to purchase land, then the purchase negotiations will be impacted by the total cost of development. The developer will try to pay less for the land to keep a higher profit and/or lower housing costs.

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<sup>1</sup> A typical single-family residence consists of a 2,000-square-foot wood frame residence with an attached 400-square-foot garage. A typical multi-family apartment complex consists of one 20,000-square-foot apartment building with 25 units and includes 5 three-bedroom units, 10 two-bedroom units, and 10 one-bedroom units.

<sup>2</sup> A substantial and growing portion of development fees assessed on new residential development is related to capital facilities and service connection fees collected at the building permit stage by the County for Special Districts. Special District governing bodies establish and set these fees. The County is not involved in determining the fee amount; it only collects the fee for the Special District at issuance of building permits and then passes on the fee revenue to the Special District.



**TABLE 6-48 PROPORTION OF FEES OF TOTAL RESIDENTIAL DEVELOPMENT COSTS**

Development Cost for a Typical Single-Family Unit	West		Central		East	
	North Richmond	Rodeo	Pacheco	Alamo	Bay Point	Discovery Bay
Total Estimated Fees Per Unit	\$50,138	\$44,694	\$50,066	\$36,974	\$57,335	\$27,565
Estimated Development Cost Per Unit	\$872,343	\$866,899	\$872,271	\$859,179	\$879,540	\$849,770
Estimated Proportion of Fee Cost to Overall Development Cost Per Unit	5.7%	5.2%	5.7%	4.3%	6.5%	3.2%

Assumptions: Single-family 2,000 sq. ft. home with 400 sq. ft. attached garage, and wood frame construction. References a median vacant lot price of \$395,000 and assumes a single-family construction cost of \$427,205. Source: Contra Costa County- Dept. of Conservation and Development, Building Insp. Div. Fee Estimator Program and information provided by Special Districts, November 2021.

Development Cost for a Typical Multi-family Unit	West		Central		East	
	North Richmond	Rodeo	Pacheco	Alamo	Bay Point	Discovery Bay
Total Estimated Fees Per Unit	\$35,038	\$39,544	\$55,928	\$35,017	\$55,620	\$33,462
Estimated Development Cost Per Unit	\$1,001,826	\$1,006,	\$1,022,716	\$1,001,805	\$1,022,408	\$1,000,250
Estimated Proportion of Fee Cost to Overall Development Cost Per Unit	3.5%	3.9%	5.5%	3.5%	5.4%	3.3%

Assumptions: Prototypical multi-family residence. Fee estimates assume a 20,000 sq. ft. apartment building with 25 units. Five 3-bedroom units, 10 2-bedroom units, 10 1-bedroom units. Construction cost estimate references Legacy development costs per unit of \$571,788.

One structure, 2-story, and wood frame construction.

Source: Contra Costa County Department of Conservation and Development, Building Insp. Div. Fee Estimator Program and information provided by Special Districts, November 2021.



## 5. Development Permit Process

Development review and permit processing are necessary steps to ensure that residential construction proceeds in an orderly manner, despite the cost and time involved.


The County can encourage needed investment in the housing stock by reducing the time and uncertainty involved in obtaining development permits. Pursuant to the State Permit Streamlining Act, governmental delays can be reduced by: (1) limiting processing time in most cases to one year, and (2) by requiring agencies to specify the information needed to complete an acceptable application.

Approval of residential development may require review and approval of one or more discretionary applications depending on the housing type proposed and the proposed site's zoning. Table 6-45 describes the residential uses that require discretionary approval by zoning district. Specifically, it details that the following uses require discretionary approval: Transitional and supportive housing serving more than six clients in all single-family and multi-family zoning districts except in the P-1 zoning district; SROs in the P-1 zoning district that is non-compliant with their underlying zoning districts' development standards; mobile home parks in the T-1 zoning district; residential care facilities with more than six beds in the M-29, M-17, M-12, M-9, M-6, and P-1 zoning districts; and residential care facilities with six or fewer beds in the P-1 district. Action HE-A6.1 calls for the removal of discretionary review for some of these uses. Discretionary applications are often subject to the California Environmental Quality Act (CEQA) provisions. In some cases, in addition to discretionary approvals, some projects require approval of legislative actions by the County Board of Supervisors. Almost all

discretionary applications require public notification and a public hearing before the County Zoning Administrator, Planning Commission, or Board of Supervisors. The processing time for residential development projects can vary significantly. Physical constraints, environmental impacts, the response time of applicants, and public opposition to projects all play a major role in the processing time.

As established by County Ordinance Code Chapter 82-6, the County may grant a land use permit to a qualified applicant seeking to develop on lands according to their permitted land uses. Land use permits are required for a limited number of residential projects including second residential dwellings and some residential projects in commercial and industrial zoning districts. Applicants must submit an application to the County's planning personnel. As established by Ordinance No. 85-56, incorporated as County Ordinance Code 26-2.2002, the County requires the following for applicants seeking a conditional use or special permit:

- A plot plan drawn to scale indicating dimensions and area of the subject property;
- Locations of existing and proposed improvements on the subject property;
- Names of adjoining property owners;
- Names of adjoining streets;
- Locations of existing improvements on adjacent properties;
- A statement of how the request is consistent with, and will further the goals and objectives of the General Plan, including, but not limited to, its community facilities element; and

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- Where extreme grades exist, the direction of slope and other facts necessary to accurately depict the request except in relation to the subject and adjacent properties. The planning department may adopt a form that will be used for applications.

Once submitted, the County's Zoning Administrator has the following authorities and discretions to act on the applicant's proposal, as provided by County Ordinance Code 26-2.1204:

- Hear and decide all applications for variance permits, including off-street parking and loading requirements, highway setback requirements, and sign requirements. Further, the zoning administrator shall review and decide all site, development, elevations, off-street parking, and loading and landscaping plans and drawings, and plans and drawings for location, size, and design of signs. Where matters covered by this paragraph are requested with the filing of a tentative minor subdivision map, the entire application shall be considered by the division charged with reviewing the map;
- Hear and decide all requests for conditional use permits (also referred to as land use permits);
- Be part of the advisory agency for the purpose of passing on minor subdivision and tentative maps, as specified in Title 9 of this code;
- Hear and decide all applications or requests for proposed entitlements estimated to generate less than 100 peak-hour trips;
- Hear and make recommendations regarding proposed development agreements when such agreements are processed separately from the development project applications; and

- Hear and act on such other matters as specifically assigned by ordinance or board resolution or order.

Required findings for a land use permit are that the proposed land use will not cause the following:

- be detrimental to the health, safety and general welfare of the county;
- adversely affect the orderly development of property within the county;
- adversely affect the preservation of property values and the protection of the tax base within the county;
- adversely affect the policy and goals as set by the general plan;
- create a nuisance and/or enforcement problem within the neighborhood or community;
- encourage marginal development within the neighborhood;

The above findings have not posed a constraint to approval of residential projects that require a land use permit.

Apart from the County's provisions to protect and preserve trees as well as requiring stormwater control plans, respectively established in Section 4010 of Chapter 816-6 and Section 004 of Chapter 1014-4 of the County's Ordinance Code, there is no mandated design review process or body that reviews developments proposed in the county's unincorporated areas.

Two levels of review are involved with residential development. The first level involves the review of conformance with the County General Plan and state environmental requirements. If the site is not designated for residential development under the General Plan, an amendment to the General Plan is





required. The second level of review requires that the site have the appropriate zoning for the type and amount of residential development identified in the project; otherwise a zone change is needed. Changing a site to a Planned Unit District includes both rezoning and a preliminary development plan. Single-family developments often require subdivision map approval while multi-family developments require a development plan. Depending on the size, scope, and location, the application and processing times for a residential development project vary (see Table 6-49).

**TABLE 6-49 ESTIMATED DEVELOPMENT REVIEW TIME FRAMES**

Development Permit/Review Process	Time Frame
Rezoning	6 to 12 months
Use Permits	4 to 6 months
Development Plans	3 to 4 months
Minor Subdivisions	4 to 6 months
Major Subdivisions	6 to 12 months*
Variances	3 to 4 months

Source: Contra Costa County Department of Conservation and Development (August 2021).


Note: \* It should be noted that approval of larger residential subdivisions (100 units or more) often take a year or more. This is because such applications for residential development proposals invariably require an Environmental Impact Report (EIR).

It should be noted that it is the experience of Contra Costa County that larger residential subdivisions (100 units or more) often take up to 12 months or more to complete approvals and processing. This is because such applications for residential development proposals invariably require an environmental impact report. The length of time to finalize the environmental impact report depends greatly on the size, scope, and location of the residential development project, environmental issues under

review, and the extent of public comment received on the draft environmental impact report. The amount of time between the entitlement approval and when the application is approved for a building permit depends on several factors, including, and not limited to, the number of units and the developer’s financial and funding sources.

Overall, the County has taken several steps to expedite processing, reduce costs, and clarify the process to developers and homeowners. The County has rezoned many of the parcels in its formerly designated redevelopment project areas as P-1 or Planned Unit Development districts to facilitate a faster, more streamlined permit process. Furthermore, in August 1990, the County established the Application and Permit Center. The Center is designed to make permit processing quicker and easier by enhancing the coordination of permitting services. The review and submittal of new applications have been available online since 2019, with this capacity increasing in 2020. This process has eliminated the extra time to submit applications in person and has been very well-received by customers. The County also offers a voluntary Pre-application Review. Developers and homeowners can meet with staff to determine the permits necessary and the cost and review time involved. More importantly, residential developments under 100 units that are allowed by zoning need not be reviewed by the Planning Commission or Board of Supervisors; rather they are reviewed by the Zoning Administrator. The County makes all efforts to process applications in an expedient manner.

The County will comply with SB 330 (Government Code Section 65589.5), relying on regulations set forth in the law for processing preliminary applications for housing development projects, conducting no more than five hearings for housing projects that comply with objective General Plan and development standards, and making a decision on a residential project



within 90 days after certification of an environmental impact report or 60 days after adoption of a mitigated negative declaration or an environmental report for an affordable housing project. The County is proposing Action HE-A6.1 to establish a process in compliance with SB 35 to streamline the review of eligible affordable housing projects.

## 6. Building Codes and Enforcement

Contra Costa County has adopted the 2019 California Building Code (CBC), with local amendments as deemed necessary, and the Uniform Housing Code as Title 7 within the County's Ordinance Code, which establish standards and require inspections at various stages of construction to ensure code compliance. Chapter 74-4 within Title 7 contains the local amendments to the adopted CBC. These amendments include provisions related to fire-suppression systems, retaining wall requirements, seismic safety design, electric vehicle charging facilities, among others. Specifically, the County's local amendments require the following:

- Permit exemptions for retaining walls below three feet in height and that have a downward ground slope with a maximum rise and run of 1:10 unless supporting surcharge or ground slope more than 1:2.
- Construction plans must be submitted on suitable materials and drawn to scale. Electronic submissions are permissible with advanced approval. Plans must show existing property lines, elevations, and existing structures as well as the contact information of the landowner and the people who prepare the plans.
- Any newly-built group R-1, R-2, R-3 buildings should include infrastructure to support future installation of chargers for use by

electric vehicles and newly-built group R-2 must include fully-functioning charging stations.

- Smoke detectors must be installed on existing flat-roof buildings when a pitched roof is constructed on top of the existing structure with the existing roof sheeting in place.
- Exterior wall cover using wood shakes or shingles must be treated for fires unless there is a 10-foot minimum easement between the property line and the exterior wall facing the street.
- Isolated spread concrete footings of buildings three stories or less above grade that are fully supported on earth or rock where the structural design of the footing is based on a specified compressive strength of no greater than 2,500 pounds per square inch.
- Structures in Seismic Design Category C, D, E, or F shall not have elements of structural plain concrete except when (1) isolated footings of plain concrete supporting pedestals or concrete have the projection of the footing beyond the face of the supporting member not in excess of the footing thickness or (2) when plain concrete footings have at minimum two continuous longitudinal reinforcing bars.
- Slabs shall have a reinforcement of at least 6-inch by 10-gauge wire mesh or equal at mid-height.
- Gypsum board may be used provided it is opposite of the studs from other types of braced wall panel sheathing and Method PCP is limited to one-story dwellings and accessory structures.



- Chapter 4 provisions shall apply to additions and alterations of existing residential buildings when: (1) Projects that increase the total combined conditioned and unconditioned area by 5,000 square feet or more; (2) alterations to existing structures impacting 5,000 square feet or more of total combined conditioned and unconditioned building area; (3) demolition projects when a demolition permit is required.
- Application of Section 5.408's requirements to additions, alterations, and demolitions whenever a permit is required for the work except when a demolition has been declared necessary for public health reasons.
- New multi-family buildings apart from those in Section 4.106.4.1 must feature electric vehicle charging spaces at a minimum of 10 percent of the total number of parking spaces at the dwelling site, and half of these, but not less than one, shall have fully-operational electric vehicle supply equipment (EVSE) with the remainder supporting future EVSE.
- A minimum of 65 percent of nonhazardous construction and demolition waste must be recycled or reused except for (1) soil excavations and land-clearing debris and (2) if the enforcing agency identifies alternate waste-reduction requirements.
- Submission of a construction waste management plan with updates as necessary and must fulfill certain requirements, including identification of the materials to be diverted from the site, statement as to whether waste materials will be sorted on-site, identification of where the waste materials will go, identification of construction methods to reduce waste generated, weighing and measuring the waste in accordance with the enforcement agency's standards, and a final document outlining the compliance with this requirement.


On January 18, 2022, the County Board of Supervisors adopted Ordinance 2022-02, an All-Electric (New Construction) Ordinance, to amend the 2019 California Energy Code to require the following building types to be all-electric:

- Residential (including single-family and multi-family buildings)
- Detached Accessory Dwelling Units

These local amendments were made to address multiple vulnerabilities in Contra Costa County, including seismic risk, fire hazards, and communities subject to environmental inequity. The County's building code also requires new residential construction to comply with the federal ADA, which specifies a minimum percentage of dwelling units in new developments that must be fully accessible to the physically disabled. Although these standards and the time required for inspections increase housing production costs and may impact the viability of rehabilitation of older properties that are required to be brought up to current code standards, the intent of the codes is to provide structurally sound, safe, and energy-efficient housing.

The County's Code Enforcement Section is responsible for enforcing both state and County regulations governing the maintenance of all buildings and properties. Code Enforcement handles complaints and inspections in the unincorporated areas of the County and also provides services to several cities and towns, including Lafayette, Moraga, Orinda, Pittsburg, and Clayton, and a portion of the City of Richmond.

Most of the complaints submitted to Code Enforcement deal with property maintenance, substandard housing issues, and abandoned vehicles. To facilitate the correction of code violations or deficiencies, Code Enforcement works closely with other County agencies. Code Enforcement staff routinely refer homeowners to the County's rehabilitation loan and grant programs,



including the Neighborhood Preservation Program. The Division also refers homeowners, mobile home owners, and apartment owners to the County's Weatherization Program. This program offers minor home repairs, water heaters, stoves, insulation, and other improvements for housing units in the county.

## C. ENVIRONMENTAL, INFRASTRUCTURE, AND PUBLIC SERVICE CONSTRAINTS

Environmental factors and a lack of necessary infrastructure or public services can constrain residential development in a community by increasing costs and reducing the amount of land suitable for housing construction. This section summarizes and analyzes the most pertinent constraints to housing in Contra Costa County.

### 1. Environmental Constraints

Environmental constraints related to seismic activity, geology/topographical, flooding potential, or other environmental issues can impact the cost associated with the maintenance, improvement, and development of housing. A more detailed discussion is contained in the Safety Element of the County General Plan. The discussion below summarizes the most pertinent environmental constraints.

## Seismic Constraints

Contra Costa County is divided by several fault systems that divide the county into several large blocks of rock. These faults include the San Andreas, Hayward, Calaveras, Franklin, Concord, Antioch, Mount Diablo, and Greenville Faults. Based on estimates from geologists, these faults have a probable earthquake magnitude of between 5.0 and 8.5 on the Richter scale. The area has experienced a number of major earthquakes originating on faults both in the county and in the broader region, including most recently the Loma Prieta Earthquake in 1989.

Seismic activity associated with faults can also cause hazards such as liquefaction and soil settlement, slope failure, deformation of sidehill fills, ridgetop fissuring and shattering, and seiches,<sup>3</sup> among others. Typically, structures on bedrock experience less groundshaking and earthquake-related impacts than structures on recent sedimentary deposits.

Since housing in the region will likely be subject to a damaging earthquake, it must be designed to withstand the event and protect its occupants. Without proper mitigation, earthquakes and other seismic-related activity can have a major impact on housing development. For development proposed in areas with potential earthquake-induced hazards, special mitigation measures must be included as conditions of development approval. As described in the Safety Element, these measures may include:

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<sup>3</sup> An earthquake-generated wave in an enclosed body of water such as a lake, reservoir, or bay.



- **Environmental review:** Through the environmental review process, the County requires geologic, seismic, and/or soils studies as necessary to evaluate proposed development in areas subject to ground-shaking, fault displacement, or liquefaction.
- **Improved construction design:** Staff review of applications may require modified seismic strengthening and detailing to meet the latest adopted seismic design criteria.
- **Setbacks:** Require that structures are adequately setback from active and potentially active fault traces.

## Fire Hazard Constraints

Fire hazards, particularly wildland fires, can represent a considerable constraint to residential development without appropriate mitigation measures and the availability of firefighting services.<sup>4</sup> However, this constraint is primarily limited to development that is adjacent to the ULL where there is more open space and typically a greater amount of vegetation. Areas of the county outside the ULL that are covered with natural vegetation and dry-farmed grained areas are extremely flammable during the late summer and fall. These types of wildland or brush fires are a particular threat to home sites with large areas of non-irrigated vegetation.

Most of the county is identified as susceptible to moderate wildland fire hazards, while isolated areas in the western and central areas of the county


have a high or very high susceptibility. Another special hazard in the East County is peat fires. Once peat fires occur, they are extremely difficult to extinguish. Any area east of the high-water line may have peaty soil conditions. However, most of these areas with a moderate to high susceptibility to fire hazards are located beyond the ULL boundary where development is limited and the areas are primarily used as open space and for agricultural operations. Identified Very High Fire Hazard Severity Zones occur mainly along communities on the eastern side of Berkeley Hills, especially near El Sobrante as well as further east in Mt. ? Diablo.

The Safety Element and the Public Facilities and Services Element of the County General Plan contain policies and measures designed to protect the public and housing from these fire hazards, particularly beyond the ULL. Some of these policies are identified below.

- Projects that encroach into areas that have a high or extreme fire hazard must be reviewed by the appropriate Fire Bureau to determine if special fire prevention measures are advisable.
- Major developments will not be approved if fire-fighting services are not available or are not adequate for the area.
- New development will pay for its fair share of costs for new fire protection facilities and services.

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<sup>4</sup> Pursuant to SB 1241 (Kehoe, Statutes of 2012), concurrent with the 2023 - 2031 Housing Element Update, the Safety Element will be reviewed and updated as necessary to address the risk of fire hazard in state responsibility areas and very high fire hazard severity zones.

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- Needed upgrades to fire facilities and equipment will be identified as part of project environmental review and area planning activities to reduce fire risk and improve emergency response in the county.

Additionally, the state legislature adopted SB 99 (2019) in response to the destruction observed with the 2018 Camp Fire that razed Paradise, California. To ensure public safety and ability to evacuate quickly, the state requires all new residential developments in a fire hazard severity zone to have a minimum of two entry/exit points to access emergency evacuation routes. The Draft Safety Element will contain an analysis of the residential developments in the unincorporated county that comply with this law.

## Flood Hazard Constraints

Substantial areas within Contra Costa County are subject to flooding, with most of the county's creeks and shoreline areas lying in the 100-year flood plain.<sup>5</sup> The land inventory for residential sites includes an analysis of flood hazard constraints, and sites lying in the 100-year flood plain. A substantial portion of East County near the Sacramento-San Joaquin Delta is subject to flooding. The most serious flood hazards are associated with the system of levees that protect the islands and adjacent mainland in the Delta area. As with fire hazards, the majority of the area subject to flooding, particularly in the eastern part of the county, is beyond the ULL boundary in areas where development is restricted. Nonetheless, the County's 2018 Local Hazard Mitigation Plan identifies that approximately 66 percent of the potentially

developable land in the dam/levee failure inundation zone of the county could become residential uses (1,730.7 acres) and approximately 4 percent (113.3 acres) could become mixed-use (including housing) under the currently adopted Land Use Element. Some areas with land uses permitting housing in the inundation zone may be updated as part of the General Plan Update to protect the health, safety, and well-being of county inhabitants.

General policies and specific measures in the existing Safety Element are designed to protect persons and structures from hazards related to flooding. These include:

- Intensive urban and suburban development is not permitted in reclaimed areas unless flood protection in such areas is constructed, at a minimum, to the standards of the Flood Disaster Protection Act of 1973.
- The creek setback ordinance requires appropriate setbacks for residential and commercial structures to prevent property damage from bank failure along natural water courses.
- The environmental review process ensures that potential flooding impacts are adequately addressed through appropriate mitigation measures, such as flood-proofing, levee protection, and Delta reclamation.

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<sup>5</sup> Pursuant to AB 162 (Wolk, Statutes of 2007) and SB 5 (Machado, Statutes of 2007), concurrent with the 2023 - 2031 Housing Element Update, the flood hazard map, and related flood hazard policies and measures, contained in the Safety Element will be reviewed and updated as necessary to reflect new information regarding flood hazard risks, including the best available maps that identify the risks associated with a 200-year flood event.



## Geologic/Topographical Constraints

The presence of steep hillsides and the risk of landslides and erosion can restrict housing development in certain areas of the county and may require specific mitigation measures to ensure the safety of structures and their inhabitants. Much of the topography of the county includes hilly terrain and it also has a high proportion of recent, poorly consolidated geologic formations that are prone to slope failure. As a result, many of these areas have been placed outside the ULL to restrict development in these areas and ensure public safety.

Apart from earthquakes, unstable hill slopes, reclaimed wetlands, and marsh fill areas, which may suffer landslides, slumping, soil slips, and rockslides are considered a major geologic hazard in these areas of Contra Costa County. Liquefaction is also a concern in areas of the county near major bodies of water, especially on the county's western section along San Pablo Bay; the north section along Suisun Bay; and the eastern section along the Sacramento River, Old River, and Discovery Bay.

To protect persons and property from these types of geologic/topographical hazards, the County has recognized that major slope areas in excess of 26 percent may be unsuitable for development. In addition, the County has adopted a Hillside Preservation Ordinance to prevent development in areas that are hazardous for persons or structures. Additional measures and policies affecting housing development identified in the Safety Element include:

- Slope stability is a primary consideration in the ability of land to be developed or designated for urban uses.

- Slope stability is given careful scrutiny in the design of developments and structures, and in the adoption of conditions of approval and required mitigation measures.
- Residential density shall decrease as slope increases, especially above a 15-percent slope.
- Subdivisions approved on hillsides that include individual lots to be resold at a later time will be large enough to provide flexibility in finding suitable building site and driveway location.

In general, the County has taken important measures to ensure that the areas designated for urban development (i.e., those areas lying within the ULL boundary) are safe and suitable for residential development. Major areas subject to flooding and fire hazards, as well as areas with particularly steep hillsides have been placed outside the ULL to restrict inappropriate and unsafe development there. While earthquakes affect the entire region, adequate measures identified both in the Safety Element and contained in the Uniform Building and Housing Codes are incorporated into developments to ensure that structures are designed to withstand these events and protect their inhabitants.

The updated Safety Element, which is being prepared as part of the Comprehensive General Plan Update in progress, will include additional new policies to further promote hazard reduction. Those policies will enhance public safety without significantly augmenting the cost of development.



## 6.4 Housing Resources

This section analyzes the resources available for the development, rehabilitation, and preservation of housing in the unincorporated areas of Contra Costa County. This analysis includes an evaluation of the availability of land resources for future housing development, the County's ability to satisfy its share of the region's future housing needs, the financial resources available to support housing activities, and the administrative resources available to assist in implementing the County's housing programs. Additionally, this section examines opportunities for energy conservation.

### A. AVAILABILITY OF SITES FOR HOUSING

The Association of Bay Area Governments (ABAG) is responsible for developing the Regional Housing Needs Allocation (RHNA), which assigns a share of the region's future housing need to each jurisdiction in the ABAG region. State law requires communities to demonstrate that they have sufficient land to accommodate their share of the region's need for housing from June 30, 2022, through December 15, 2030, the County's RHNA projection period. This timeframe differs from the timeframe of the Housing Element document itself of January 31, 2023 through January 31, 2031. The RHNA projection period is the timeframe which residential units can be counted towards the County's 6<sup>th</sup> cycle RHNA. For the 6<sup>th</sup> cycle RHNA projection period, ABAG has determined that the County's share of the RHNA is 7,610 new housing units (see Table 6-32 for the County's RHNA share.) This section identifies the development potential through projected accessory dwelling units and on suitable land throughout the unincorporated areas of Contra Costa County.

### 1. Site Inventory

An important component of the Housing Element required by State Housing Element law (Government Code Section 65583.2) is the identification of sites for future housing development, and evaluation of the adequacy of these sites in fulfilling the County's share of regional housing needs as determined by ABAG. As part of the 2023-2031 Housing Element update, an analysis of the residential development potential in each of the unincorporated communities of Contra Costa County was conducted. In addition, a parcel-specific vacant and underutilized site analysis was performed using the County's Geographic Information System (GIS) and up-to-date information from the County Assessor's records.

The analysis takes into consideration a range of factors, including permitted density, parcel size, potential for lot consolidation, development constraints relating to topography, potential hazards, and other physical and environmental issues, location and housing demand, as well as available development tools and incentives such as planned unit development. Factors related to fair housing were also considered based on the Assessment of Fair Housing in Section 6.2.

In addition to identifying vacant or underutilized land resources, local governments can address a portion of their adequate sites requirement through the provision of accessory dwelling units (ADUs). Action HE-A2.5 is included in Section 6.7, Housing Plan, to commit the County to supporting ADU development.





## Accessory Dwelling Unit Potential

In 2018, 2019, 2020, and 2021, County permit records indicate that an average of 64 ADUs received building permits per year.

- 2018 - 47 ADUs received building permits
- 2019 - 62 ADUs received building permits
- 2020 - 48 ADUs received building permits
- 2021 - 100 ADUs received building permits

Based on the average of 64 ADUs per year, an additional 546 ADUs can be projected for the 2022-2030 6th cycle projection period. The Association of Bay Area Governments (ABAG) prepared a Draft Affordability of Accessory Dwelling Units report for the entire ABAG region in early 2022. The analysis made findings for the affordability of ADUs based on data gathered on current rents and occupancy of ADUs, in addition to industry research about affordability levels of ADUs, including those that do not reach the rental market. In addition, ADU research conducted by the University of California, Berkeley's (UC Berkeley's) Center for Community Innovation indicates that 40 percent of ADUs are typically rented to family members or friends at either no cost or below-market rental rates.<sup>1</sup> Table 6-55 shows the projected 546 ADUs broken into income categories based on the ABAG analysis. The

County's ADU regulations encourage this housing type and allow flexibility in their development.

## Housing Units Constructed or Approved

Some units the County proposes to count toward meeting the RHNA are on sites with approved projects. The units on these sites are shown in Table 6-50. The County anticipates that these approved units will be completed within the 2023-2031 planning period.

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<sup>1</sup> Chapple et al., 2017, UC Berkeley's Center for Community Innovation. *Jumpstarting the Market for Accessory Dwelling Units: Lessons Learned from Portland, Seattle, and Vancouver.*



**TABLE 6-50 RESIDENTIAL PROJECTS APPROVED OR UNDER CONSTRUCTION**

County File No. Project Name	APN(s)	Acreage	Community	Current General Plan Land Use & Density (units/acre)	Proposed General Plan Land Use & Density (units/acre)	Status	Units	Affordability Level
SD13-9338 "Ball Estates"	198170006, 198262002, 198262003, 198262004 and 198170008	61.7	Alamo	SL (1-2.9 du/ac) OS (Open Space)	RL (1-3 du/ac) RC (Resource Conservation)	Approved	35	Above Moderate: 35 Total: 35
SD18-9504	201010007	3.52	Alamo	SL (1-2.9 du/ac)	RL (1-3 du/ac)	Approved	6	Above Moderate: 6 Total: 6
BIMR19-011850	197010029	0.23	Alamo	MM (12- 20.9 du/ac)	RMH (17- 30 du/ac)	Under Construction	3	Above Moderate: 3 Total: 3
GP13-0001, SD13-9340, DP13-3027 "Habitat for Humanity Pacifica Landing"	098210001	2.35	Bay Point	SM (3-4.9 du/ac)	RMH (17- 30 du/ac)	Approved	29	Above Moderate: 22 Moderate: 3 Lower: 4 Total: 29 Subject to Inclusionary Ordinance
DP20-3011 "Alves Lane"	093100059 and 093100060	3.85	Bay Point	MM (12- 20.9 du/ac)	RMH (17- 30 du/ac)	Under Construction	100	Above Moderate: 87 Lower : 13 Total: 100
DSD17-09467, DP17-03017	096020081	0.62	Bay Point	ML (7.3-11.9 du/ac)	RMH (17- 30 du/ac)	Under Construction	7	Above Moderate: 7 Total: 7
SD60-013CC, DP82-03024CC	Large number of APNs, not all individually listed	n/a	Bethel Island	SL (1-2.9 du/ac)	RM (7-17 du/ac)	Under Construction	329	Above Moderate: 329 Total: 329
SD60-013CC, DP82-03024CC, LL22-0011, ZZ22-0198, BIGS22-003758	031010012	14.29	Bethel Island	SL (1-2.9 du/ac)	RM (7-17 du/ac)	Under Construction	55	Above Moderate: 55 Total: 55



County File No. Project Name	APN(s)	Acreage	Community	Current General Plan Land Use & Density (units/acre)	Proposed General Plan Land Use & Density (units/acre)	Status	Units	Affordability Level
GP07-00009, DP10-03008 "Tassajara Parks"	220100023	154.89	Camino Tassajara	SH (5-7.2 du/ac) PR (Parks and Recreation)	RLM (3-7 du/ac) PR (Park and Recreation)	Approved	125	Above Moderate: 125 Total: 125
DP21-3001, SD21-9559, RZ21-3258	172012008, 172012020, 172012021, 172012023, 172012020, 172012025 and 172012028	5.4	Contra Costa Centre	MH (21- 29.9 du/ac)	RMH (17- 30 du/ac)	Approved	125	Above Moderate: 115 Moderate : 10 Total: 125
DP18-3031 "Del Hombre Apartments"	148170051	2.36	Contra Costa Centre	MS (50-125 du/ac)	RVH (70-125 du/ac)	Under Construction	284	Above Moderate: 248 Moderate: 24 Lower: 12 Total: 284 Subject to Inclusionary Ordinance
GP 19-0002 "Pantages"	011230007, 011230006, 011220010, 011220017 and 011220018	157.06	Discovery Bay	SH (5-7.2 du/ac) OS (Open Space) PR (Parks and Recreation)	RLM (3-7 du/ac) RC (Resource Conservation) PR (Park and Recreation)	Approved	277	Above Moderate: 236 Moderate: 33 Lower: 8 Total: 277 Subject to Inclusionary Ordinance
GP08-0002 "Newport Pointe"	011220013 and 011220014	20.8	Discovery Bay	SM (3-4.9 du/ac) SH (5-7.2 du/ac) OS (Open Space) PR (Parks and Recreation)	RLM (3-7 du/ac) RC (Resource Conservation) PR (Park and Recreation)	Approved	67	Above Moderate: 67 Total: 67
SD05-08986, DP05- 03038 , BIGS19-010697	425110027	1.17	El Sobrante	ML (7.3-11.9 du/ac)	MUL (0- 30 du/ac)	Approved	10	Above Moderate: 10 Total: 10
DP16-03011 SD15-09407	430152092 thru 430152095	1.12	El Sobrante	M-12 (check)	MUL (0- 30 du/ac)	Approved	8	Above Moderate: 8 Total: 8
SD18-9491	403202011	2.76	Montalvin Manor	M-9 (7.3-11.9 du/ac)	RM (7-17 du/ac)	Approved	33	Above Moderate: 33 Total: 33



County File No. Project Name	APN(s)	Acreage	Community	Current General Plan Land Use & Density (units/acre)	Proposed General Plan Land Use & Density (units/acre)	Status	Units	Affordability Level
SD05-9065 DP05-03095, BIPRJ22-00007	375311001 and 375311003	1.45	Mountain View	MH (21- 29.9 du/ac)	RMH (17- 30 du/ac)	Under Construction	30	Above Moderate: 30 Total: 30
BIR19-012635	409172019	0.23	North Richmond	SH (5-7.2 du/ac)	RMH (17- 30 du/ac)	Under Construction	2	Above Moderate: 2 Total: 2
DP21-3019 "Rodeo II Senior Housing"	357120074	0.99	Rodeo	MS (50-125 du/ac)	RVH (70-125 du/ac)	Approved	67	Lower: 67 Total: 67
SD14-09367	357140058, 357140059 and 357140060	0.33	Rodeo	M-1 ( ? du/ac)	MUM (30- 75 du/ac)	Under Construction	6	Above Moderate: 6 Total: 6
RD20-00001 BIR21-004148	357042008	0.07	Rodeo	M-2 ( ? du/ac)	MUM (30- 75 du/ac)	Under Construction	1	Above Moderate: 1 Total: 1
MS16-00009	357140062 thru 357140064	0.42	Rodeo	M-1 ( ? du/ac)	MUM (30- 75 du/ac)	Approved	3	Above Moderate: 3 Total: 3
DP18-3021, BICO21-009177, CV21-0065	357151002	0.56	Rodeo	M-2 ( ? du/ac)	MUM (30- 75 du/ac)	Approved	22	Above Moderate: 19 Lower : 3 Total: 22
GP13-0003, RZ13-3224, SD13-9359, DP13-3035 "Saranap Village"	184010035, 184010046, 184450025, 185370010, 185370012, 185370018 and 185370033	3.44	Saranap	M-15 (53.5 du/ac)	MUM (30- 75 du/ac)	Approved	198	Above Moderate: 198 Total: 198
GP04-0013, DP04-3080, RZ04-3148, SD04-8809 "Bayview Estates"	380030046	78.65	Vine Hill	SH (5-7.2 du/ac) OS (Open Space)	RM (7-17 du/ac) RC (Resource Conservation)	Approved	144	Above Moderate: 144 Total: 144
SD20-9545	161150009	9.89	Vine Hill	SH (5-7.2 du/ac)	RLM (3-7 du/ac)	Approved	38	Above Moderate: 38 Total: 38
MS14-00009	380231020	0.31	Vine Hill	SH (5-7.2 du/ac)	RM (7-17 du/ac)	Approved	2	Above Moderate: 2 Total: 2
CDDP15-03004	426261050	0.2	El Sobrante	M-12	MUL (0- 30 du/ac)	Approved	3	Above Moderate: 3 Total: 3



County File No. Project Name	APN(s)	Acreage	Community	Current General Plan Land Use & Density (units/acre)	Proposed General Plan Land Use & Density (units/acre)	Status	Units	Affordability Level
CDSD21-09573	161280005	1.98	Vine Hill	SH (5-7.2 du/ac)	RLM (3-7 du/ac)	Approved	7	Above Moderate: 7 Total: 7
SD16-9442	169150012, 169150013, 169150014, 169150015	9.59	Reliez Valley	SL (1-2.9 du/ac)	RL (1-3 du/ac)	Approved	4	Above Moderate: 4 Total: 4
SD16-9429	166210018, 166210019, 166210020, 166210021, 166210022, 166210023, 166210024, 166210025, 166210026	7.64	Reliez Valley	SL (1-2.9 du/ac)	RL (1-3 du/ac)	Approved	9	Above Moderate :9 Total: 9
MS15-0008	166240037, 166240038, 166240039	2.23	Reliez Valley	SL (1-2.9 du/ac)	RL (1-3 du/ac)	Approved	3	Above Moderate: 3 Total: 3
<b>TOTALS</b>							<b>2,032</b>	<b>Above Moderate: 1,855 Moderate: 60 Lower: 107 Total: 2,032</b>

Source: Contra Costa County, 2022

## Sites Inventory

The County's land inventory for the 2023 – 2031 Housing Element timeframe is included in Appendix A. The majority of the sites are proposed to receive a change in land use designation and allowed density as part of the comprehensive General Plan update currently underway. If the current

allowed density and General Plan designations and zoning will remain, the site is listed in Table A of Appendix A. If a change to General Plan land use and/or zoning is needed, the site is listed in Table B of Appendix A.



## Realistic Development Capacity

The assumed realistic capacity for housing development for all parcels in the land inventory is a proportional share of the maximum densities allowed. Realistic units are rounded down to the next-lowest whole number. However, all of the parcels in the land inventory can accommodate at least one unit per parcel, so parcels that would round down to zero units are instead rounded up to allow one unit on the parcel. This section looks at historic development trends for lower- and higher-density residential projects in the unincorporated county to determine realistic percentages of maximum allowable density to calculate units shown in Appendix A on the sites. If a parcel listed in Appendix A is already part of an approved project, the realistic units are based on that approved project.

Sites that allow higher-density housing types at 30 units per acre and above are considered suitable for lower-income households in Contra Costa County, per state set default densities. In addition, also per state law, sites in land use designations and zoning districts that allow a minimum density of 30 dwelling units per acre can calculate realistic development capacity based on the size of the site multiplied by the minimum allowed density. There are sites in the sites inventory that are proposed to receive minimum densities of either 30 or 75 dwelling units per acre that propose to accommodate lower-income units. This method of calculating realistic capacity is used on those sites. The supporting trends and proposed realistic development capacity for the remaining sites in the inventory are discussed below.

Parcels that allow lower densities (0-17 du/ac) are what is most typically included in this inventory to address the above moderate RHNA numbers. All of the sites that address the moderate income RHNA allow 30 du/ac or higher but are smaller sized sites than most sites addressing lower income RHNA units. Because developing greater density on smaller sites can be

more difficult, these sites are considered more suitable for addressing the moderate income RHNA.

To estimate reasonable residential potential on individual parcels in the land inventory that could accommodate more than one unit per parcel, a realistic assumption of 80 percent of maximum allowed density was used to estimate a realistic number of dwelling units that would likely develop on each parcel. Table 6-51 presents recent projects in medium- and lower-density areas of the county that support an assumption 80 percent of maximum allowed density. The average percent of allowed density of the listed projects exceeded 80 percent of allowed unit capacity.

To estimate reasonable residential potential on individual parcels in the land inventory that could accommodate higher density multifamily projects, a realistic assumption of 85 percent of the maximum allowed density was used to estimate a realistic number of dwelling units that would likely develop on each parcel. This is based on the development standards and historic development trends on sites that allow higher-density multifamily development. Multiple residential or mixed-use projects containing multifamily housing have been constructed or recently approved in unincorporated Contra Costa County (see Table 6-52 for representative projects). Representative approved and built projects in Table 6-52 support realistic capacity assumptions of 85 percent. The average built density for projects in Table 6-52 is 114 percent of the maximum allowed density.



**TABLE 6-51 REPRESENTATIVE MEDIUM- AND LOWER-DENSITY PROJECTS IN UNINCORPORATED CONTRA COSTA COUNTY**

County File No. Project Name	APN(s)	Acreage	Entitled, Under Construction, or Completed?	Zone	Previously Developed with/ Existing Uses	Project Description	Total Number of Dwelling Units	Built Density	Percentage of Allowed Capacity
SD07-09174, 'Summer Hills Park'	166010042 thru 166010050	6	Completed in 2015	SL/R-20 1-2.9 du/ac	No	Single Family Houses	9	2 du/ac	66%
DP13-03022 SD13-09352 GP13-00002 "Driftwood Dr"	098590001 thru 098590050	7.8	Completed in 2018	SH/P-1 5-7.2 du/ac	No	Single Family Houses	50	8.25 du/ac	115%
DP07-03035 DP04-03031 SD04-08830 "Sea Breeze II"	098580001 thru 098580017	3.51	Completed in 2014	SH/P-1 5-7.2 du/ac	No	Single Family Houses	17	6.4 du/ac	89%
SD04-08902	095060017 thru 095060024	1.53	Completed in 2014	SH/P-1 5-7.2 du/ac	No	Single Family Houses	8	7.0 du/ac	97%
DP04-03048	161570001 thru 161570020	2.47	Completed in 2018	ML/P-1 7.3-11.9 du/ac	No	Single Family Houses	20	10.8 du/ac	90%
SD-6844, CV15-00075	166420001 thru 166420006, 166420014 thru 166420019, 166420028, 166420029, 166010034 and 166010056 thru 166010058	13.25	Completed in 2020	SL/R-20 1-2.9 du/ac	No	Single Family Houses	16	1.6 du/ac	57%
SD18-09495, RZ18-03244	117040023 thru 117040030	3.4	Completed in 2021	SL/R-15 1-2.9 du/ac	No	Single Family Houses	8	3.1 du/ac	106%
MS00-00003, CV16-00055, CV14-00041	192210028 thru 192210030	3.3	Completed in 2019	SV/R-40 0.2-0.9 du/ac	No	Single Family Houses	3	0.82 du/ac	91%
AVERAGE PERCENT OF ALLOWED CAPACITY									89%

Source: Contra Costa County, 2022

**TABLE 6-52 REPRESENTATIVE MULTIFAMILY HIGHER-DENSITY PROJECTS IN UNINCORPORATED CONTRA COSTA COUNTY**

Address/ Project Name	APN(s)	Acreage	Entitled, Under Construction, or Completed?	Zone	Previously Developed With/ Existing Uses	Project Description	Total Number of Dwelling Units	Maximum Allowed Density	Built Density	Percentage of Allowed Capacity
Heritage Point 1500/1540 Fred Jackson Way, North Richmond DP14-0326	409080028, 40908001, 409080014, 409080015, 409080016, 409080020, 409080026	0.69	Completed in 2019	P-1	Single-family, vacant commercial, and vacant underutilized parcels	Rental project owned by CHDC of North Richmond	42 (41 affordable)	50 du/ac	60 du/ac	117%
Del Hombre Apartments 3010 thru 3070 Del Hombre Ln and 112 Roble Rd, Pleasant Hill BART project, Unincorporated Walnut Creek DP18-03031	148170041, 148170037, 148170001, 148170022, 148170042	2.37	Under construction	P-1	Four Single family residences	Rental project owned by Hanover/Del Hombre Walnut Creek holdings	284 (12 very low and 24 moderate)	100 du/ac	119 du/ac	119%
214 Center Ave., Pacheco	125120017	0.41 small site	Under construction	P-1	Vacant lot	Ownership project	8 (1 moderate)	19	19.5	102%
Willow View Apartments 3600 – 3628 Willow Pass Road, Bay Point	098240064	7.34	Completed in 2021	P-1	Vacant lot	Rental project owned by Meta Housing Corporation	193 (19 affordable)	21.99	26	119%
AVERAGE PERCENT OF ALLOWED CAPACITY										114%

Source: Contra Costa County, 2022

### Inventory of Sites

Sites in addition to those with approved projects listed in Table 6-50 are identified to address the County's RHNA. These are summarized in Table 6-53 by community. Details about each site are included in the tables and maps in Appendix A. Tables with additional details are also included in Appendix A for sites that include units to address the lower-income RHNA.





**TABLE 6-53 VACANT AND UNDERUTILIZED RESIDENTIAL SITES ANALYSIS**

Community	Total No. of Parcels	Potential No. of Units
Alamo	15	351
Bay Point	142	2,965
Bay View	5	969
Byron	2	184
Clyde	1	1
Contra Costa Centre	6	458
Crockett	17	21
Discovery Bay	4	494
East Richmond Heights	5	50
El Sobrante	103	1,184
Montalvin Manor	3	410
North Richmond	134	554
Pacheco	7	113
Pleasant Hill (unincorporated)	2	8
Reliez Valley	1	1
Rodeo	26	275
San Pablo	1	18
Saranap	1	1
Tara Hills	2	20
Vine Hill	30	430
Walnut Creek (unincorporated)	22	978
<b>Total:</b>	<b>529</b>	<b>9,485</b>

Source: Contra Costa County 2022

Note:


1. The two APNs in Mountain View are part of a submitted application. Other parcels are not included for Mountain View due to constraints related to water and wastewater service.

## Small Sites

Some of the sites included in the sites inventory to address the lower-income RHNA consist of multiple parcels, some of which are smaller than 0.5 acres, and some sites included are one parcel that is smaller than 0.5 acres. Only sites that correspond to a similar track record of development under the same owner or those with strong potential for parcel assemblage or consolidation due to owner interest and/or common ownership have been included in the inventory to address the lower-income RHNA. (see Appendix A sites exhibits). A successful example of projects containing multifamily housing on a parcel smaller than 0.5 acres has been included in Table 6-52. The County has also included Action HE-A5.5 to encourage and facilitate parcel assemblage.

## Potential Hazards

Some residential neighborhoods and sites listed in the Sites Inventory are vulnerable to fire, flooding and other hazards risks in unincorporated Contra Costa County. Some potential housing sites have been eliminated from the sites inventory due to their location in hazard zones. Hazards are discussed in more detail in Section 6.3.C of this element. The existing Safety Element includes policies that minimize risk to existing homes and sites identified in the Sites Inventory related to hazards. The updated Safety Element, which is being prepared currently as part of the Comprehensive General Plan Update, will include additional new policies to further promote hazard reduction. Those policies will enhance public safety without significantly augmenting the cost of development.



## Infrastructure and Public Service Constraints

A lack of adequate infrastructure or public services and facilities can be a substantial constraint to residential development if it is to avoid impacting existing residents. In fact, according to the National Association of Home Builders, ensuring that the construction of schools, roads and other infrastructure keeps pace with the anticipated growth in population and economic activity is one of the biggest challenges facing local and regional governments.<sup>2</sup>

As part of the Growth Management Program, the County conducts an evaluation of the remaining infrastructure capacity. This includes an analysis of areas not adequately served by infrastructure. This process enables the County to identify constraints to the provision of services and facilities in a given area and better plan for cost-effective and efficient growth.

The General Plan, as the principal document regulating growth and development in the county, contains service standards that establish a linkage between new development accommodated in the Plan and new facilities and/or services required to meet demands created by new development. The Growth Management Element contains the implementing programs and service standard requirements that facilitate the attainment of goals and objectives of the Land Use, Public Facilities and Services, and Housing Elements of the General Plan.

These standards ensure that the infrastructure and public services and facilities are in place to serve that development within the ULL. The standards are implemented through payment of fees and exaction and site improvements discussed earlier in this section. However, it is important to note that intensive residential development on infill sites can create additional challenges to existing infrastructure and public services. This is particularly true in areas with aging infrastructure or public facilities that are already strained in serving the needs of current residents.

Many of the County's affordable housing developments are located in infill locations in areas already served by existing infrastructure. While such infill sites are beneficial in that they don't require the extension of services, provide housing near public transit and jobs, encourage economic growth in urban areas, and thus promote "smart growth" development principles<sup>3</sup>, they may face other challenges to development. Infill sites in the County's older communities may require upgrading existing infrastructure systems to support more intense development, such as roadway improvements and replacement of undersized sewer and water lines. Other constraints to the development of infill sites include site assembly and clean-up; relocation; compatibility with surrounding land uses; and potential neighborhood opposition.

There are 34 unincorporated communities (defined as Census designated places) in Contra Costa County, which are within the county's ULL, that receive water and sanitary sewer services from multiple providers, including single purpose agencies, special districts, community service districts, county service areas, and private companies. The water and sanitary service

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<sup>2</sup> National Association of Home Builders, Smart Growth: Building Better Places to Live, Work and Play. May 2000.

<sup>3</sup> Judy Corbett and Joe Velasquez. "The Ahwahnee Principles: Toward More Livable Communities," *Western City*. September 1994.



providers for the unincorporated communities is detailed further in the next section. Government Code Section 65589.7 requires water and sewer providers to establish specific procedures and grant priority water and sewer service to residential developments with units affordable to lower-income households. The statute also requires local governments to immediately deliver the Housing Element to water and sewer providers.

The adequacy of the public infrastructure to serve new residential development is central to the County's planning process. The Growth Management and Public Facilities/Services Elements to the General Plan establish performance measures for infrastructure, including water and sewer. New residential development must receive written verification for both water and sewer services prior to the final subdivision map or issuance of a building permit. Additionally, Senate Bill 610 and Senate Bill 211 (which both took effect as of January 1, 2002) require that extensive, specific information about water availability be presented and considered by cities and counties in connection with residential subdivisions of a certain size. Cities and counties are required to contact the responsible water agency proposed to serve the residential subdivision to determine whether water supplies are sufficient to serve the project. Information from water and sewer agencies about supply and system capacity is also presented in a residential project's environmental review analysis prepared under CEQA.


## Water and Wastewater Services

All of the sites identified in the inventory are likely to be able to access water and wastewater services from a Special District. This section describes these Special Districts, including the availability of water and wastewater services and recent or planned infrastructure improvement projects related to storage, treatment, collection, and distribution that may affect development in the respective areas. Figures 6-26 through 6-29 display the water and

wastewater service provider service areas in the county. Table 6-54 lists unincorporated communities where sites in the Housing Element's land inventory are located and identifies which district could provide the following services: source water, water delivery, wastewater collection, and wastewater treatment to the sites.

## Priority Water and Sewer Services for Affordable Housing

Government Code Section 65589.7 requires public agencies and private entities providing water or sewer services to adopt written policies and procedures with objective standards for provision of services in compliance with the law. For example, a public agency or private entity that provides water or sewer services shall not deny or condition the approval of an application for services to, or reduce the amount of services applied for by, a proposed residential development with affordable housing units unless the agency or entity makes specific written findings per Government Code Section 65589.7. In accordance with California Government Code, Section 65589.7, Central Contra Costa Sanitation District and East Bay Municipal Utility District have adopted policies that prioritize connections for affordable housing. On December 4, 2008, the Board of Directors for Central Contra Costa Sanitation District (CCCSD) adopted Resolution 2008-114. The resolution identified that developments with housing units affordable to lower-income households will be given priority for wastewater connection services. The resolution requires the district to prepare a wastewater utility service capacity report every five years for Board acceptance. The report will identify CCCSD's available wastewater collection capacity and help anticipate sewer services demands for lower-income households as well as formulate approaches to address capacity shortfalls. Another district that specifically prioritizes connections to affordable housing is East Bay Municipal Utility



District (EBMUD). On April 26, 2016, EBMUD's Board of Directors approved Policy 3.07, which gives priority for new water service connections during restrictive periods to proposed developments within EBMUD's existing service area that include housing units affordable to lower-income households.

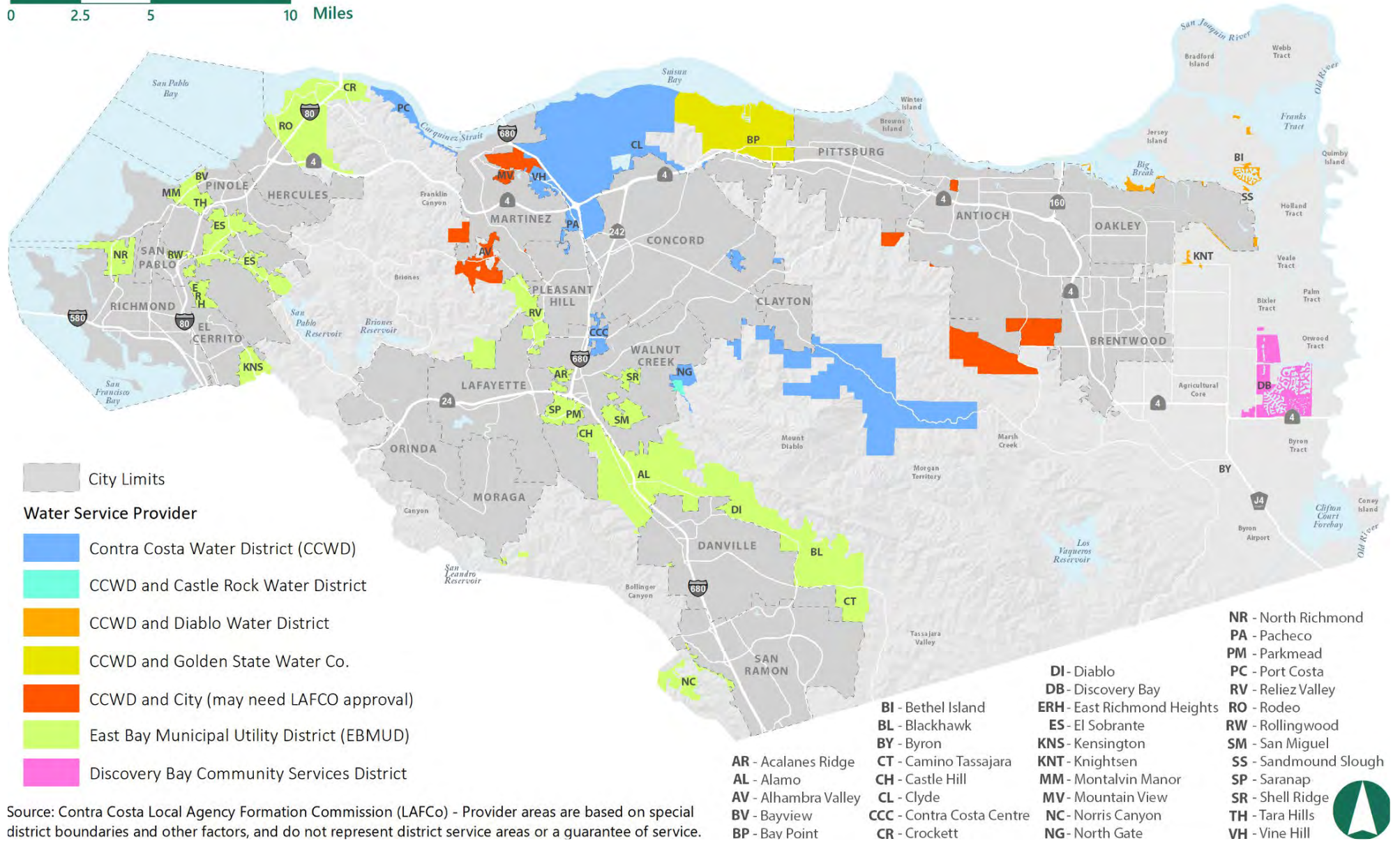
## Urban Water Management Plans

In accordance with California Water Code, Sections 10610-10656 and 10608, every urban water supplier that either provides over 3,000 acre-feet of water annually or serves more than 3,000 urban connections is required to submit an Urban Water Management Plan (UWMP). The plan is prepared by urban water suppliers every five years to support the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs.



FIGURE 6-26 CONTRA COSTA COUNTY WATER AND WASTEWATER SERVICE DISTRICTS

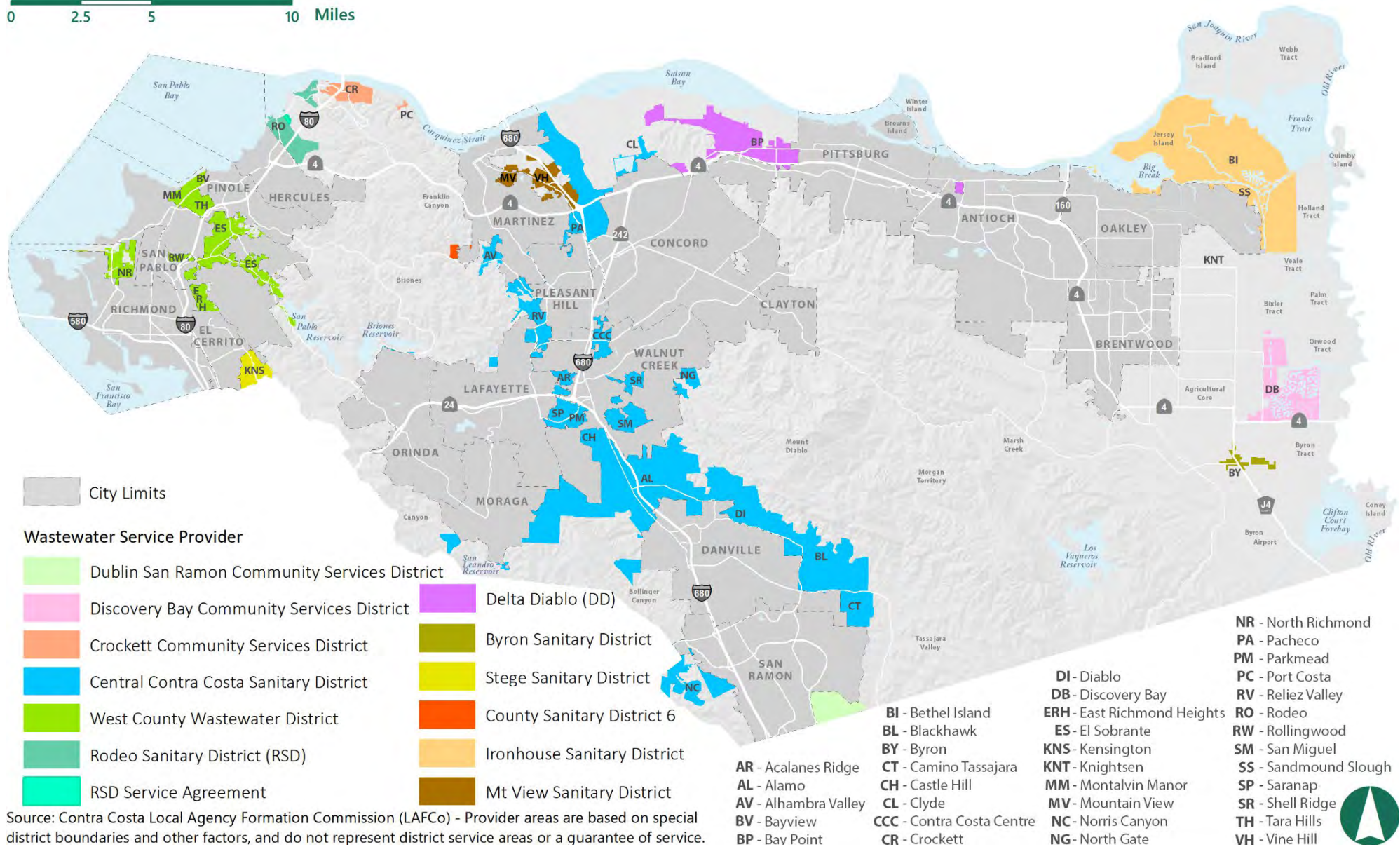
0 2.5 5 10 Miles



Source: Contra Costa Local Agency Formation Commission (LAFCo) - Provider areas are based on special district boundaries and other factors, and do not represent district service areas or a guarantee of service.

FIGURE 6-27 CONTRA COSTA COUNTY WATER AND WASTEWATER SERVICE DISTRICTS

0 2.5 5 10 Miles



Source: Contra Costa Local Agency Formation Commission (LAFCo) - Provider areas are based on special district boundaries and other factors, and do not represent district service areas or a guarantee of service.



**TABLE 6-54 COMMUNITIES AND SERVICE DISTRICTS**

Community	Number of Parcels in the Inventory	Dwelling Units in Inventory of Sites	Central Contra Costa Sanitary District	Contra Costa Water District	Crockett Community Services District	Delta Diablo Sanitation District	Diablo Water District	Discovery Bay Community Services District	East Bay Municipal Utility District	Mountain View Sanitary District	Rodeo Sanitary District*	Stege Sanitary District	West County Wastewater District
Alamo	15	351	Wastewater						Water				
Bay Point	142	2,965		Water Source		Wastewater							
Bayview	5	969							Water				Wastewater
Byron	2	184	The two parcels in Byron make up one site with a pending project that has its water and wastewater service worked out with the County. See Appendix A for more information on this site.										
Clyde	1	1	Wastewater	Water									
Contra Costa Centre	6	458	Wastewater	Water									
Crockett*	17	21			Wastewater				Water				
Discovery Bay	4	494						Water and Wastewater					
East Richmond Heights	5	50							Water				Wastewater
El Sobrante	103	1,184							Water				Wastewater
Montalvin Manor	3	410							Water				Wastewater
North Richmond	134	554							Water				Wastewater
Pacheco	7	113	Wastewater	Water									
Pleasant Hill (unincorporated)	2	8	Wastewater						Water				
Reliez Valley	1	1	Wastewater						Water				
Rodeo	26	306							Water		Wastewater		
San Pablo	1	18							Water				Wastewater
Saranap	1	1	Wastewater						Water				
Tara Hills	2	20							Water				Wastewater
Vine Hill	30	430		Water						Wastewater			
Walnut Creek (unincorporated)	22	978	Wastewater	Water									

\*One site in Crockett



## Summary of Districts' Services

### Central Contra Costa Sanitation District

Central Contra Costa Sanitary District (CCCSD) provides wastewater collection. CCCSD serves nearly half a million customers and more than 3,000 businesses within a 145-square-mile service area, which includes unincorporated communities within central Contra Costa County. For collection, CCCSD services approximately 344,600 customers in the communities of Alamo, Danville, Lafayette, Martinez, Moraga, Orinda, Pacheco, Pleasant Hill, San Ramon, and Walnut Creek. CCCSD also treats wastewater for an additional 139,600 customers of the Concord/Clayton area under a 1974 contract with the City of Concord. For treatment and disposal, CCCSD services a total population of approximately 484,200.

In December 2008, CCCSD's District Board approved the 2008 Wastewater Utility Service Capacity/Demand Report. This report describes the district's capacity for providing wastewater collection and treatment services. CCCSD uses a capacity modeling program called InfoWorks to assess the impacts of proposals for development in areas of known or anticipated capacity deficiencies or current, high-maintenance facilities. The anticipated demand is discussed in the 2017 Comprehensive Wastewater Master Plan (CWWMP), which estimates that affordable units would have an added burden of 0.46 MGD (million gallons per day), market-rate units would have an added burden of an extra 1.01 MGD, and nonresidential uses would have an added burden of an added 0.59 MGD. In combination with the 2017 average daily sanitary flow (ADWF) of 33.3 MGD, the effluent discharge capacity total is below the 53.8 MGD limit for 2022. Using this data, CCCSD concludes it can provide adequate collection and treatment services for anticipated demand through 2035.

CCCSD prioritizes new wastewater connections for affordable housing (CCCSD Resolution 2008-114). An entire proposed development that has at least one affordable housing unit will receive priority. To accurately account for these units, CCCSD uses the RHNA developed by ABAG for lower-income units when measuring future demand for capacity collection and treatment services.

When shortfalls in collection system capacity are identified, CCCSD has a combined approach to addressing them. According to its 2008 Wastewater Utility Service Capacity/Demand Report, CCCSD requires that improvements be made by developers, and if "too far downstream from an active project site to be considered a direct impact of a development project," then the district may incorporate funding for improvements of this nature in its Capital Improvement Plan (CIP). As demonstrated by the 2008 Wastewater Utility Service Capacity/Demand Report and the 2017 CWWMP, the district has demonstrated sufficient capacity to provide collection and treatment services for the sites identified in the land inventory in the unincorporated communities. There are no current or projected barriers that would limit CCCSD's ability to serve the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive wastewater collection and treatment services from CCCSD are in the following communities: Acalanes Ridge, Alamo, Blackhawk, Camino Tassajara, Castle Hill, Clyde, Contra Costa Centre, Diablo, La Casa Via, Norris Canyon, North Gate, Pacheco, Pleasant Hill (unincorporated), Reliez Valley, San Miguel, San Ramon (Unincorporated), Saranap, Shell Ridge, Walnut Creek (Unincorporated)*





## Contra Costa Water District

Contra Costa Water District (CCWD) serves approximately 500,000 customers throughout north, central, and east Contra Costa County. CCWD operates and maintains a complex system of water transmission, treatment, and storage facilities to supply both treated and untreated water to its customers. CCWD's service area encompasses most of central and northeastern Contra Costa County, a total area of more than 140,000 acres (including the Los Vaqueros watershed area of approximately 19,100 acres). Water is provided to a combination of municipal, residential, commercial, industrial, landscape irrigation, and agricultural customers. Treated water is distributed to individual customers living in the following communities: Clayton, Clyde, Concord, Pacheco, Port Costa, and parts of Martinez, Pleasant Hill, and Walnut Creek. In addition, CCWD treats and delivers water to the City of Brentwood, Golden State Water Company (Bay Point), and the City of Antioch. CCWD provides wholesale treated water service to the cities of Antioch and Brentwood as well as the Golden State Water Company in Bay Point. CCWD is also a retail provider of treated water to Clayton, Clyde, Concord, Pacheco, Port Costa, and portions of Martinez, Pleasant Hill, and Walnut Creek, referred to as the Treated Water Service Area (TWSA).

CCWD does not have an accounting for the number of connections where they provide wholesale of either treated or untreated water. However, the TWSA has a total of approximately 61,000 connections servicing about 90,700 dwellings. Every 5 years, in accordance with the UWMP, urban water suppliers that serve over 3,000 customers or supply 3,000 acre-feet of water must annually prepare and adopt a water management plan. The most recent update for CCWD was completed in 2020. The UWMP describes the district's capacity for providing water services. CCWD's currently available and planned supplies are sufficient to meet the district's reliability goal and estimated water demands during average, single-dry, and multiple-dry year


conditions during the next 25 years. One of the methodologies relied upon is based on long-term planning documents, such as General Plans that have been vetted by local and regional land use agencies. The district also relies on the Future Water Supply Study (FWSS), which is the district's long-term water supply plan. The plan includes an econometric that relies on historical data and factors that impact water use, such as population, economy, and weather.

To address shortfalls during dry-year conditions, a combined approach of short-term conservation programs and short-term water purchases continues to be instituted consistent with the CCWD's FWSS. CCWD provides services as requested. The district provides water source and delivery to customers within their service boundaries. Thus, CCWD only issues Intent to Serve letters as developers approach CCWD with development projects. There are no current or projected barriers that would limit CCWD's ability to serve the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive both source water and delivery services from CCWD are in the following communities: Clyde, Contra Costa Centre, North Gate, Pacheco, Port Costa, Vine Hill, and Walnut Creek (unincorporated). Sites in the inventory in Bay Point could receive source water from CCWD; however, in Bay Point water is delivered by Golden State Water Company.*

## Crockett Community Services District

The unincorporated communities of Crockett and Port Costa, separated by the hills of the East Bay Regional Park District (EBRPD), are in the northwest corner of the county. The two communities are bound together by their location along the Carquinez Strait. Crockett Community Services District (CCSD) serves two communities – Crockett and Port Costa – and is authorized to provide the following services: wastewater collection,



treatment, and disposal. CCSD uses two small wastewater treatment plants with capacity at the Port Costa wastewater treatment plant (WWTP) of 0.033 MGD and at the joint C&H Sugar-Crockett Phillip F. Meads wastewater treatment plan (WWTP) of 1.78 MGD. Sewage effluent is collected through 81,000 lineal feet of sewer main and two pump stations in Crockett, and 7,100 lineal feet of sewer main in Port Costa. Secondary treated effluent is disposed of into the Carquinez Strait tributary to the San Francisco Bay.

According to the most recent Sewer System Management Plan (2020), CCSD has not had any capacity-related Sanitary Sewer Overflow (SSO) since 2007 and has not required a Capital Improvement Plan (CIP). The District has collected flow data over time and plans on using this data from existing CCSD sanitary departments to inform the capacity analysis that is planned for realization in the next five years from 2020. Thus, with no capacity issues related to Sanitary Sewer Overflow (SSO) since 2007 and plans to use flow data to inform future capacity analysis, there are no current or projected barriers that have not already been addressed or would limit CSD's ability to serve the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive wastewater collection and treatment services from CCSD are in the communities of Crockett and Port Costa.*

## Delta Diablo Sanitation District

The Delta Diablo Sanitation District (DDSD) provides water resource recovery (wastewater collection) services for the unincorporated community of Bay Point and the Cities of Antioch and Pittsburg. DDSD is south of the San Joaquin River, north of an open space area that includes the Black Diamond

Mines Regional Preserve, west of the Ironhouse Sanitary District, and east of the CCCSD. All flows come to the pump stations before they are conveyed to the treatment plant for treatment. According to the Contra Costa County Water and Wastewater Agencies Combined Municipal Service Review and Sphere of Influence Study (second round), as of 2015, DDSD operates a WWTP with 16.5 MGD capacity, five pump stations, and a collection and conveyance system of 71 miles of sewer pipeline.

For current wastewater collection and treatment services, DDSD has over 70,000 customers representing approximately 214,000 customers within its service area. The DDSD Conveyance System and Master Plan Update (2010) describes the conveyance system that is made up of 23 miles of interceptor pipelines, pump stations, and equalization storage facilities that convey wastewater flows from the District's three service zones (Cities of Pittsburg and Antioch and the community of Bay Point) to the DDSD's WWTP.

The Conveyance System and Master Plan Update (2010) outlined recommended projects to address deficiencies in the conveyance system according to priority and flow checkpoints. These projects will be implemented under the Capacity Improvement Project program as the average dry weather flow (ADWF) is tracked to predict the timing to make the necessary improvements.

According to Thanh Vo, Senior Engineer, DDSD has sufficient capacity to treat wastewater from future development in Bay Point.<sup>4</sup> Vo also noted that, collection capacity is limited due to the conveyance infrastructure (connection points); however, a property owner or developer can make necessary improvements to the sewer system in the immediate area to accommodate the additional flow. DDSD provides will-serve letters based on

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<sup>4</sup> Thanh Vo, Senior Engineer, DDSD, 2021, personal communication, 2021.



requirements such as Local Agency Formation Commission (LAFCO) approval of inclusion of the project site into the DDS's sphere of influence (SOI), compliance with requirements of appropriate regulatory agencies, project drawings and sewer studies along with related documents and paying all necessary DDS fees and charges. As of 2021, the district does not prioritize connections for affordable housing.


*Sites in the inventory that could receive wastewater collection and treatment services from DDS are in the community of Bay Point.*

## Town of Discovery Bay Community Services District (TDBCSD)

The Town of Discovery Bay Community Services District (TDBCSD) is in the eastern portion of the county, north of Highway 4, approximately one mile east of the Byron Highway. The service area encompasses the developed and developing unincorporated community of Discovery Bay of approximately 5,760 acres. Today, Discovery Bay has evolved into a year-round home for over 13,500 customers. TDBCSD was formed in 1998 as an independent district pursuant to the Community Services District Act (Government Code Section 61000 et seq.). TDBCSD is authorized to provide water and wastewater services. TDBCSD provides a variety of services, including water and wastewater for the community of nine square miles. The water operations function provides potable treatment capacity of approximately 2 MGD; storage in 4 reservoirs; and distribution through several booster pumps and 46 miles of pipeline. TDBCSD operates six active wells for pumping groundwater to provide for treatment. Wastewater operations functions include two relatively small but environmentally sensitive WWTPs with capacity of 2.1 MGD and average flow of 1.8 MGD. A system of 15 pump stations takes collected effluent to the WWTP for treatment and disposal.

The TDBCSD WWTP is a combination of two plants, referred to as Plant 1 and Plant 2. All influent sewage goes to the Influent Pump Station within Plant 1, which is then transferred to separate oxidation ditch secondary treatment systems at Plants 1 and 2. The secondary treatment effluents from the two plants meet in Plant 2 for further filtration, UV disinfection, and export pumping to Old River. Biosolids handling facilities for both plants are at Plant 2 and include an aerobic digester, belt filter presses, active solar dryers, and sludge lagoons. According to the most recent Wastewater Treatment Plant Master Plan Update (2019), based on future land use buildout, the capacity of Plant 2 alone will not be sufficient to sustain peak design flow and loads. Therefore, Plant 1 will need to undergo improvements so it will be available as a backup for Plant 2, even though it will not be operated frequently. The 2019 Master Plan describes improvements to Plant 1 that could be implemented between 2019 and 2023. It prioritizes them from essential to nonessential. The Master Plan states that the improvements will need to be made, according to level of priority, as the TDBCSD determines these improvements to Plant 1 to be cost-effective to implement. At current capacity, the district's hydraulic capacity for collection and treatment is adequate for development projections. This is due to recent improvement projects to accommodate flows greater than the ones projected for buildout capacity conditions.

According to the Urban Water Management Plan (2021), TDBCSD relies on groundwater to operate six facilities and service customers. The report determines the district's capacity to meet projected demands through groundwater wells. This conclusion is based on the reliability analysis to operate the 6 wells for 12 hours per day, 365 days per year. For the fiscal year of July 2019 to June 2020, the water demand for Discovery Bay was 1,050 million gallons. The district's 2020 Urban Water Management Plan projected water demand for 1,941 million gallons per year in 2045. The report concludes that the existing capacity of the wells can reliably meet



current and future annual water demands based on current growth projections. Additionally, Discovery Bay is participating in the East Contra Costa Groundwater Sustainability Working Group to develop a Groundwater Sustainability Plan to ensure the continued reliability of groundwater to meet the water demands of the basin. The district also plans to implement water storage levels so it's able to identify and respond to water supply shortages. There are no current or projected barriers that would limit TDBCSD's ability to serve the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive source water, water delivery services, wastewater collection, and wastewater treatment services from TDBCSD are in the community of Discovery Bay.*

## East Bay Municipal Utility District

The East Bay Municipal Utility District (EBMUD) supplies water and provides wastewater treatment for parts of Alameda and Contra Costa Counties. EBMUD is a California special district formed under the Municipal Utility District Act. The EBMUD water service area now includes 20 cities and 15 unincorporated East Bay communities and serves 1.4 million customers. Water supply is received from the Mokelumne River Watershed of the Sierra Nevada Mountains and supplied by an aqueduct to EBMUD's system of 2 water storage reservoirs, 6 water treatment plants, and 4,100 miles of transmission/distribution pipelines. A network of pump stations supply water to a system of 170 neighborhood reservoirs for both untreated and treated water service. EBMUD routes wastewater through 29 miles of interceptor sewer pipe from seven satellite collection systems to the main WWTP in

Oakland for treatment. Treated effluent is discharged more than one mile offshore into the San Francisco Bay. A portion of the treated effluent is also used for recycled water supply within EBMUD and other water agencies' recycled water programs. EBMUD maintains an aggressive Capital Improvement Program (CIP) for expansion and rehabilitation of its infrastructure with over \$234 million budgeted in 2013-2014. EBMUD provides water through their infrastructure to customers within its service area and wastewater treatment to those customers within their smaller wastewater treatment area. EBMUD's water service area provides service to approximately 1.4 million customers in Alameda and Contra Costa Counties. In addition, EBMUD's wastewater treatment system serves approximately 740,000 customers within their wastewater service area. Every 10 years, EBMUD performs a comprehensive demand projections study to understand water demand and supply projections for a 30-year horizon. The most recent update was completed in 2020. It projected demand and required supply for 2050.

As reported in EBMUD's 2020 Urban Water Management Plan, the water demand forecasting methodology relied on long-term planning documents approved and adopted by the local and regional land use agencies. Specifically, "Growth projections in EBMUD's future water demand is a reflection of planned land-use changes and redevelopment projects forecasted by the local and regional land use agencies."<sup>5</sup> As demonstrated in the Urban Water Management Plan, EBMUD shows adequate capacity to accommodate demand through 2050 through a diversified and resilient portfolio that includes recycled water and conservation programs. There are

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<sup>5</sup> EBMUD 2020, *Urban Water Management Plan*.



no current or projected barriers that would limit EBMUD's ability to serve the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive source water and delivery services from EBMUD are in the following communities: Acalanes Ridge, Alamo, Bayview, Blackhawk, Camino Tassajara, Castle Hill, Crockett, Diablo, East Richmond Heights, El Sobrante, La Casa Via, Montalvin Manor, Norris Canyon, North Richmond, Pleasant Hill (unincorporated), Reliez Valley, Rodeo, Rollingwood, San Miguel, San Pablo, San Ramon (Unincorporated), Saranap, Shell Ridge, Tara Hills, and Walnut Creek (Unincorporated). Sites in the inventory in the community of Kensington could receive source water and delivery services, as well as wastewater treatment services from EBMUD; however, wastewater collection services in the community of Kensington are provided by Stege Sanitary District (SSD), which is described later in this section.*

## Golden State Water Company

Golden State Water Company Bay Point (GSWC Bay Point) is in northern Contra Costa County along the south shore of the Suisun Bay. The GSWC Bay Point service area is 3.3 square miles in the unincorporated Contra Costa County community of Bay Point and a small part of the City of Pittsburg. GSWC Bay Point serves the mostly unincorporated community's residential and commercial connections. GSWC Bay Point's primary water supply consists of purchased supplies from CCWD. It also has appropriate groundwater supplies derived from the Pittsburg Plain groundwater basin, which serve mostly as a peaking water supply and backup water source. Bay Point also maintains an emergency connection with the City of Pittsburg that allow it to access additional sources of water in emergency conditions. GSWC

Bay Point works cooperatively with CCWD in augmenting and managing water supplies for use in Bay Point's service area.

GSWC Bay Point obtains its water supply from a combination of imported water and local groundwater. As of November 2021, the agency has a total of 5,042 municipal connections. The most recent update was adopted in July 2020 with projected demand and required supply for 2045. This document describes the district's capacity for providing water delivery service. According to the report, GSWC has reliable supplies to meet its retail customer demands in normal, single-dry years, and five consecutive dry year conditions through 2045. This is determined by GSWC's reliable water purchase agreement with CCWD where water supplies are not heavily impacted and demonstrate that GSWC has enough water supply to meet future demand for water delivery. In addition, with recent restrictions placed on CCWD's surface water rights, improvements by CCWD have led to more long-term storage for drought periods and significant conservation savings. Thus, according to the UWMP 2020 report from GSWC, "no shortage in single dry or multiple dry year periods is expected and thus no curtailment is anticipated to apply to wholesale customers."<sup>6</sup>


*Sites in the inventory that could receive water delivery services from GSWC are in the community of Bay Point.*

## Mountain View Sanitary District

According to the Contra Costa County Water and Wastewater Agencies Combined Municipal Service Review and Sphere of Influence Study (second round), as of 2015, MVSD serves approximately 18,253 customers, treating an average daily flow of 1.25 million gallons of wastewater per day. The

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<sup>6</sup> Golden State Water Company, 2020, *GSWC Urban Water Management Plan*.



MVSD service area comprises approximately 4.7 square miles and is contiguous on all sides with the CCCSD. MVSD is an “island” within CCCSD’s service area. MVSD operates a 2.1 MGD designed flow WWTP. The WWTP averages 1.007 MGD as measured in 2012 as part of the district’s System Reliability Evaluation study. MVSD’s collection system consists of 72.5 miles of main sewer lines and 4 pump stations. Effluent disposal is accomplished by disposal in the Peyton Slough and Moorhen Marsh area adjacent to MVSD’s WWTP facilities.

The Fiscal Year 2021-2022 update of MVSD’s 10-year CIP describes planned improvements, repairs, rehabilitation, and replacement of the MVSD’s plant, collection system and pump station, and marsh assets. As noted in the update, funding for capital improvements is expected to come from a combination of sources, including sewer service charges, ad valorem property tax, debt, and possibly grants. During Fiscal Year 2019-2020, the Board adopted a three-year schedule of sewer service charge increases, primarily to fund the CIP. The update notes that as of 2021, several residential projects are in various stages of development, which potentially would make significant funding contributions in the future.

According to Chris Elliott, MVSD District Engineer,<sup>7</sup> all proposed developments are subject to hydraulic modeling and analysis before final district approval. He also noted that, capacity impacts precipitated by proposed developments will be rectified by developers at their own expense. Therefore, for the purposes of this analysis, there are no known impediments that Housing Element sites in MVSD’s district would face in connecting to the MVSD system.

According to the Water and Wastewater Municipal Service Review and Sphere of Influence Study (MSR), as of 2014, Vine Hill is part of MVSD’s sphere of influence. Vine Hill is north of the City of Martinez and west of Interstate (I-) 680.

*Sites in the inventory that could receive wastewater collection and treatment services from MVSD are in the community of Vine Hill.*

## Rodeo Sanitary District

The Rodeo Sanitary District (RSD) serves the unincorporated communities of Rodeo and Tormey adjacent to San Pablo Bay. The district provides wastewater collection, treatment, and disposal services, and contracts for solid waste collection service for Rodeo with the Richmond Sanitary Service. According to RSD’s website, as of 2019, RSD operates and maintains 25 miles of pipeline with two force mains and two pump stations. The district’s Water Pollution Control Plant (WPCP) has a design capacity of 1.14 MGD and average dry-weather flow of 0.60 MGD. RSD, the City of Pinole, and the City of Hercules share discharge facilities to San Pablo Bay through a Joint Powers Agreement.

RSD provides wastewater collection and treatment services to customers within its district boundary. According to the Contra Costa County Water and Wastewater Agencies Combined Municipal Service Review and Sphere of Influence Study (second round), RSD serves approximately 2,500 connections for water collection and treatment. The Comprehensive Wastewater Master Plan (CWWMP), which was last updated in 2013, is an executive report that assesses the feasibility of current facilities to provide reliable wastewater collection and treatment, including a calculated CIP that

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<sup>7</sup> Chris Elliott, MVSD District Engineer, 2021, personal communication.



scopes RSD's current and future needs. In the 20 years from 2013, the CWWMP estimates \$37.2 million future wastewater-treatment improvements and future collection-system capital improvements. The district aims to fund these improvements through debt using Clean Water State Revolving Fund (CWSRF) loans and traditional municipal bonds. RSD has planned for anticipated growth through identified resources and can provide new residences with service collection. There are no current or projected barriers that would limit RSD's ability to serve the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive wastewater collection and treatment services from RSD are in the community of Rodeo. Additionally, one site in the inventory in Crockett is in the RSD service area, while the other sites in Crockett would receive wastewater collection and treatment services from CCSD, which was described earlier in this section.*

## Stege Sanitary District

The Stege Sanitary District (SSD) provides sanitary sewer services to Kensington, El Cerrito, and a portion of Richmond known as the Richmond Annex. As of 2019, the district operates and maintains 148 miles of sanitary sewers and two pumping stations serving over 35,000 customers residing within the district boundaries. Wastewater treatment and disposal services are provided by EBMUD, Special District No. 1.

SSD provides wastewater collection services throughout its district, including 12,127 residential connections and 591 commercial connections, as of 2021. According to Paul Soo, Senior Engineer, the district has a policy to not deny

any new developments of 10 or more residential dwelling units from being built and connected to sanitary sewer services in Kensington.<sup>8</sup> For developments of 10 or more residential dwelling units, SSD requires developers to perform a sanitary sewer study to prove SSD's facilities are adequate for the proposed development and if they are not, the developer is responsible for constructing the needed increased capacity. SSD does not implement policies that prioritize affordable housing connections to wastewater and has no plans to preemptively make any capacity improvements in Kensington. As demonstrated by the policy to service future development in Kensington, the district has demonstrated sufficient capacity to provide collection services for the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive wastewater collection services from SSD are in the community of Kensington.*

## West County Water District

According to Armondo Hodge, Engineer III, West County Wastewater District (WCWD) provides wastewater collection and treatment services to approximately 34,000 residences and 2,450 commercial and industrial businesses, serving a total population of nearly 100,000.<sup>9</sup> All parcels connected to WCWD collection system are serviced. The wastewater from serviced properties is transported and treated at the WCWD Water Quality & Resource Recovery Plant (WQRRP) in Richmond.

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<sup>8</sup> Paul Soo, Senior Engineer, Stege Sanitary District, December 2021, personal communication.

<sup>9</sup> Armondo Hodge, Engineer III, West County Wastewater District (WCWD), 2021, personal communication.

WCWD provides wastewater collection and treatment services for all customers within its service boundaries. The most recent Master Plan (2014) was created with future buildout in mind and projects planned in a timeline coordinated with the expected buildout timelines. The Capital Portfolio Division uses the 2014 Master Plan to inform the scope of work for their projects (in this case, pipe repairs and/or replacements). According to the Master Plan, the district has planned to address anticipated needs and accommodate buildout throughout a 20-year planning period through 2034. The growth projections indicate that flows to the WPCP will not surpass the permitted capacity within the 20-year planning period. Through the course of these 20 years, the district has identified necessary funding opportunities such as low-interest loans and special incentives for recycled water projects offered through the CWSRF.

WCWD does not prioritize connections for affordable housing, nor does the district reserve specific wastewater capacity for lower-income housing. WCWD provides Intent to Serve letters depending on the proposed areas of buildout after a site analysis is conducted by WCWD's consultant. Specific system improvements will be made as proposed in the Master Plan. However, if system improvements are necessary before a planned capital project can be completed, the developer is responsible for financing the adequate upgrades. As demonstrated by the Master Plan, the district has sufficient capacity to provide collection and treatment services for the sites identified in the land inventory in the unincorporated communities.

*Sites in the inventory that could receive wastewater collection and treatment services from WCWD are in the communities of Bayview, East Richmond Heights, El Sobrante, Montalvin Manor, North Richmond, Rollingwood, San Pablo and Tara Hills.*

### 3. Progress Toward RHNA

The Regional Housing Needs Allocation (RHNA) was prepared by ABAG for the period of June 30, 2022, through December 15, 2030. As part of this process, ABAG requires each jurisdiction to plan for a certain number of housing units for this period. This requirement is satisfied by identifying adequate sites that could accommodate housing affordable to very low-, low-, moderate-, and above moderate-income households. ABAG has determined that the unincorporated county's share of regional housing needs is 7,610 new housing units. Table 6-55 shows that the County has enough units identified to address and exceed the RHNA.

**TABLE 6-55 REMAINING RHNA BY INCOME GROUP**

Income Group	RHNA	Approved Projects (as of November 2022) [Table 6-50]	Remaining RHNA	Projected ADUs	Potential Units on Vacant/ Under-utilized Sites	Surplus
Very Low	2,072	107	3,159	164	5,380	2,549
Low	1,194			164		
Moderate	1,211	70	1,141	164	1,767	790
Above Moderate	3,133	1,855	1,278	54	2,369	1,145
<b>Total</b>	<b>7,610</b>	<b>2,032</b>	<b>5,578</b>	<b>546</b>	<b>9,516</b>	

Source: Contra Costa County Department of Conservation and Development, 2022





## B. FINANCIAL RESOURCES

Contra Costa County has access to existing and potential funding sources for affordable housing activities. These include programs from federal, state, local, and private resources. The following section describes the key housing funding sources currently used in the county: Community Development Block Grant (CDBG), HOME Investment Partnership Act Funds (HOME), Mortgage Credit Certificates (MCC), Housing Opportunities for Persons with AIDS (HOPWA), as well as tax-exempt bond financing, tax credits, and Section 8. Table 6-56 provides a complete inventory of the key financial resources available for housing in the County's unincorporated areas..

**TABLE 6-56 FINANCIAL RESOURCES FOR HOUSING ACTIVITIES**

Program Name	Description	Eligible Activities	
<b>1. Federal Programs</b>			
Community Development Block Grant (CDBG)	Annual grants awarded to the County on a formula basis for housing and community development activities in the Urban County.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>Rehabilitation</li> <li>Homebuyer Assistance</li> <li>Economic Development</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure Improvements</li> <li>Homeless Assistance</li> <li>Public Services</li> </ul>
HOME Investment Partnership Act Funds (HOME)	Flexible grant program awarded to County on a formula basis for affordable housing activities in the Contra Costa Consortium area.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> <li>New Construction</li> </ul>
Emergency Shelter Grants	Competitive grants awarded to County for use by County and nonprofits to implement a broad range of activities and housing that serve homeless persons in Urban County.	<ul style="list-style-type: none"> <li>Shelter Construction</li> <li>Shelter Operation</li> </ul>	<ul style="list-style-type: none"> <li>Social Services</li> <li>Homeless Prevention and assistance</li> </ul>
Housing Opportunities for Persons with AIDS (HOPWA)	Funds for housing development and related support services for low-income persons with HIV/AIDS and their families.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>New Construction</li> <li>Housing-related Services</li> </ul>
Housing Choice Voucher Program (Section 8)	Direct rental assistance payments to owners of private market rate units on behalf of very low-income tenants.	<ul style="list-style-type: none"> <li>Rental Assistance</li> </ul>	
Section 108 Loan	Provides loan guarantee to CDBG entitlement jurisdictions for large-scale projects. Maximum loan amount can be up to five times the jurisdiction’s recent annual allocation.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>Rehabilitation</li> <li>Homebuyer Assistance</li> </ul>	<ul style="list-style-type: none"> <li>Economic Development</li> <li>Homeless Assistance</li> <li>Public Services</li> </ul>
Mortgage Credit Certificate Program	Income tax credits available to first-time homebuyers to buy new or existing single-family housing. Local agencies (County) make certificates available.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	
Low-income Housing Tax Credit (LIHTC)	Annual tax credits that help owners of rental units develop affordable housing.	<ul style="list-style-type: none"> <li>New Construction</li> <li>Acquisition</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation</li> <li>Historic Preservation</li> </ul>
Capital Funds Financing Program (CFFP)	Funds are available to public housing authority for public housing modernization and rehabilitation.	<ul style="list-style-type: none"> <li>Rehabilitation</li> <li>Modernization</li> </ul>	
Supportive Housing Program (SHP)	Grants for development of supportive housing and support services to assist homeless persons in the transition from homelessness.	<ul style="list-style-type: none"> <li>Transitional Housing</li> <li>Housing for the Disabled</li> </ul>	<ul style="list-style-type: none"> <li>Supportive Housing</li> <li>Support Services</li> </ul>
Continuum of Care/Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH)	Funding through the HEARTH Act of 2009 to provide necessary resources for development of programs to assist homeless individuals and families.	<ul style="list-style-type: none"> <li>Homeless Assistance</li> </ul>	<ul style="list-style-type: none"> <li>New Construction</li> </ul>




Program Name	Description	Eligible Activities	
Section 811	Grants to nonprofit developers of supportive housing for persons with disabilities, including group homes, independent living facilities, and intermediate care facilities.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>New Construction</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation</li> <li>Rental Assistance</li> </ul>
<b>2. State Programs</b>			
Affordable Housing and Sustainable Communities	To encourage and support sustainable communities pursuant to SB 375.	<ul style="list-style-type: none"> <li>Construction, rehabilitation, or acquisition</li> </ul>	<ul style="list-style-type: none"> <li>Development or preservation of affordable housing</li> </ul>
CalHome	Grants awarded to jurisdictions for owner-occupied housing rehabilitation and first-time home buyer assistance.	<ul style="list-style-type: none"> <li>Predevelopment, site acquisition, and development</li> <li>Acquisition and rehabilitation of site-built housing</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation and repair of manufactured housing</li> <li>Down payment assistance, mortgage financing, homebuyer counseling, and technical assistance for self-help projects</li> </ul>
Infill Infrastructure Grant Program	Assist in the new construction and rehabilitation of infrastructure that supports higher-density affordable housing.	<ul style="list-style-type: none"> <li>New construction, rehabilitation, and acquisition of infrastructure</li> </ul>	
California Housing Finance Agency (CalHFA) Rental Housing Programs	Below-market rate financing offered to builders and developers of multiple-family and elderly rental housing. Tax-exempt bonds provide below-market mortgages. Funds may also be used to acquire properties.	<ul style="list-style-type: none"> <li>New construction</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Acquisition</li> </ul>
California Housing Finance Agency (CalHFA) Home Mortgage Purchase Program	CalHFA sells tax-exempt bonds to make below market loans to first-time homebuyers. Program operates through participating lenders who originate loans for CalHFA.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	
Local Housing Trust Fund Matching Grant Program	Provides matching grants to local housing trust funds that are funded on an ongoing basis from private contributions or public sources that are not otherwise restricted in use for housing programs.	<ul style="list-style-type: none"> <li>New Construction</li> </ul>	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>
Single-Family Housing Bond Program (Mortgage Revenue Bonds)	Bonds issued to local lenders and developers so that below market-interest rate loans can be issued to first-time homebuyers.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	
Prop 63 Mental Health Services Act Funds	Funding for capital improvements and operating subsidies for supportive housing for formerly homeless or at-risk individuals with mental disabilities.	<ul style="list-style-type: none"> <li>Special-Needs Programs</li> </ul>	<ul style="list-style-type: none"> <li>New Construction</li> </ul>
Affordable Housing Partnership Program (AHPP)	Provides lower-interest-rate CHFA loans to home buyers who receive local secondary financing.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	

Program Name	Description	Eligible Activities	
Permanent Local Housing Allocation (PLHA)	PLHA provides a permanent source of funding for all local governments in California to help cities and counties implement plans to increase the affordable housing stock. The two types of assistance are: formula grants to entitlement and non-entitlement jurisdictions, and competitive grants to non-entitlement jurisdictions.	<ul style="list-style-type: none"> <li>• Predevelopment</li> <li>• Development</li> <li>• Acquisition</li> <li>• Rehabilitation</li> <li>• Preservation</li> </ul>	<ul style="list-style-type: none"> <li>• Matching Funds</li> <li>• Homelessness Assistance</li> <li>• Accessibility Modifications</li> <li>• Homeownership Assistance</li> <li>• Fiscal Incentives</li> </ul>
Local Early Action Planning (LEAP) Grants	The Local Early Action Planning Grants (LEAP) provide over-the-counter grants complemented with technical assistance to local governments for the preparation and adoption of planning documents, and process improvements that accelerates housing production. Facilitate compliance to implement the sixth-cycle Regional Housing Needs Assessment.	<ul style="list-style-type: none"> <li>• Housing Element Updates</li> <li>• Updates to Zoning, Plans or Procedures to Increase or Accelerate Housing Production</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-Approved Architectural and Site Plans</li> <li>• Establishing State-Defined Pro-Housing Policies</li> <li>• See Complete List in Program Materials</li> </ul>
SB 2 Technical Assistance Grants	Financial and technical assistance to local governments to update planning documents and the Development Code to streamline housing production, including but not limited to general plans, community plans, specific plans, implementation of sustainable communities' strategies, and local coastal programs.	<ul style="list-style-type: none"> <li>• Technical Assistance</li> </ul>	<ul style="list-style-type: none"> <li>• Planning Document Updates</li> </ul>
Housing and Disability Advocacy Program (HDAP)	Services to assist disabled individuals who are experiencing homelessness apply for disability benefit programs while also providing housing assistance. HDAP has four core requirements: outreach, case management, disability advocacy, and housing assistance.	<ul style="list-style-type: none"> <li>• Rental Assistance</li> </ul>	
No Place Like Home	Loans to counties or developers in counties for permanent supportive housing for those with mental illness who are homeless or at risk of homelessness.	<ul style="list-style-type: none"> <li>• New Construction</li> </ul>	
Homeless Emergency Aid Program (HEAP)	A block grant program designed to provide direct assistance to cities, counties, and Continuums of Care to address the homelessness crisis throughout California.	<ul style="list-style-type: none"> <li>• Identified Homelessness Needs</li> <li>• Capital Improvements Related to Homelessness</li> </ul>	<ul style="list-style-type: none"> <li>• Rental Assistance</li> </ul>
California Emergency Solutions and Housing (CESH)	Provides funds for activities to assist persons experiencing or at risk of homelessness. Program funds are granted in the form of five-year grants to eligible applicants.	<ul style="list-style-type: none"> <li>• Homelessness Service System Administration</li> <li>• New Construction</li> </ul>	<ul style="list-style-type: none"> <li>• Rental Assistance</li> </ul>



Program Name	Description	Eligible Activities	
<b>3. Local Programs</b>			
Single-Family Mortgage Revenue Bond	Issue mortgage revenue bonds to support the development and improvement of affordable single-family homes to qualified households.	<ul style="list-style-type: none"> <li>New Construction</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Acquisition</li> </ul>
Tax Exempt Housing Revenue Bond	Support low-income housing development by issuing housing tax-exempt bonds requiring the developer to lease a fixed percentage of the units to low-income families at specified rental rates.	<ul style="list-style-type: none"> <li>New Construction</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Acquisition</li> </ul>
Measure X Local Housing Fund	Measure X is a dedicated source of revenue to fund the building of permanent housing for people earning less than 50% of the Area Median Income. Provides complementary ongoing funding for supportive services and homelessness prevention to support and maintain housing.	<ul style="list-style-type: none"> <li>Predevelopment</li> <li>New Construction, Acquisition, Rehabilitation, Dedicated Homelessness Prevention, Supportive Services</li> </ul>	
Housing Successor (Former Redevelopment Low-Moderate Income Housing Fund)	The County is the Housing Successor to the former Redevelopment Agency. The Housing Successor has land assets in Bay Point, Rodeo and North Richmond that are available for affordable housing development. The Housing Successor has limited funds available to assist in the development of those housing properties.	<ul style="list-style-type: none"> <li>New Construction</li> </ul>	
<b>4. Private Resources/Financing Programs</b>			
Federal National Mortgage Association (Fannie Mae)	Fixed rate mortgages issued by private mortgage insurers.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	
	Mortgages which fund the purchase and rehabilitation of a home.		
	Low down-payment mortgages for single-family homes in underserved low-income and minority cities.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation</li> </ul>
Freddie Mac Home Works	Provides first and second mortgages that include rehabilitation loan. County provides gap financing for rehabilitation component. Households earning up to 80 percent Median Family Income qualify.	<ul style="list-style-type: none"> <li>Homebuyer Assistance</li> </ul>	
California Community Reinvestment Corporation (CCRC)	Nonprofit mortgage banking consortium designed to provide long term debt financing for affordable rental housing. Nonprofit and for-profit developers contact member banks.	<ul style="list-style-type: none"> <li>New Construction</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>Acquisition</li> </ul>
Federal Home Loan Bank Affordable Housing Program	Loans (and some grants) to public agencies and private entities for a wide variety of housing projects and programs. Participation is by FHLB participating lenders.	<ul style="list-style-type: none"> <li>New Construction</li> <li>Homebuyer Assistance</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation</li> <li>Housing Supportive Services</li> </ul>



Program Name	Description	Eligible Activities	
Community Vision	Offers low-interest loans for the revitalization of low-income communities and affordable housing development.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>Pre-Development</li> </ul>	<ul style="list-style-type: none"> <li>New Construction</li> </ul>
Bay Area Local Initiatives Support Corporation (LISC)	Bay Area LISC provides recoverable grants and debt financing on favorable terms to support a variety of community development activities, including affordable housing.	<ul style="list-style-type: none"> <li>Acquisition</li> </ul>	<ul style="list-style-type: none"> <li>New Construction</li> </ul>
Low-Income Investment Fund (LIIF)	LIIF provides loan financing for all phases of affordable housing development and/or rehabilitation.	<ul style="list-style-type: none"> <li>Acquisition</li> <li>Rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>New Construction</li> </ul>

## 1. Community Development Block Grant Program Funds

Through the CDBG program, the federal Department of Housing and Urban Development (HUD) provides funds to local governments for funding a wide range of housing and community development activities for low-income persons.

The County administers the CDBG Program for all Contra Costa jurisdictions except the cities of Antioch, Concord, Pittsburg, and Walnut Creek. These four cities have populations over 50,000 and are entitled to receive funding from HUD directly. The remaining 15 cities and the unincorporated areas participate in the CDBG program through the County, and are collectively referred to as the Contra Costa Urban County.

Based on previous allocations, the County anticipates receiving an annual allocation of approximately \$4.5 million annually in CDBG funds during the 2023-2031 planning period. In accordance with policies established by the Board of Supervisors, 45 percent of the annual CDBG allocation (approximately \$2.02 million) is reserved for programs and projects to

increase and maintain the supply of affordable housing in the Urban County. Program priorities include projects to:

- increase the supply of multifamily rental housing affordable to and occupied by very low- and low-income households;
- maintain the existing affordable housing stock through the rehabilitation of owner-occupied and rental housing;
- increase the supply of appropriate and supportive housing for special needs populations;
- assist the homeless and those at risk of becoming homeless by providing emergency and transitional housing; and
- alleviate problems of housing discrimination.

CDBG funds are used for site acquisition, rehabilitation, first-time homebuyer assistance, development of emergency and transitional shelters, and fair housing/housing counseling activities. Additional activities in support of the new construction of affordable housing include site acquisition, site clearance, and the financing of related infrastructure and public facility improvements.



## 2. HOME Investment Partnership Act Program Funds

The purpose of the HOME Program is to improve and/or expand the supply of affordable housing opportunities for low-income households. Contra Costa as the Urban County and the cities of Antioch, Concord, Pittsburg and Walnut Creek formed the Contra Costa Consortium for purposes of participating in the HOME Program. The County administers the program on behalf of the Consortium.

Approximately \$3.6 million in HOME funds are allocated to the Consortium on an annual basis through HUD.

Consortium HOME Program priorities include the following:

- acquisition, rehabilitation and new construction of affordable multifamily rental housing;
- owner-occupied housing rehabilitation programs for low-income households;
- first-time homebuyer's assistance for low-income households.


All projects funded with HOME funds must be targeted to very low and low-income households and must have permanent matching funds from non-federal resources equal to 25 percent of the requested funds. In addition, the Board of Supervisors has established a priority for the allocation of HOME and CDBG funds to projects that include a portion of the units affordable to extremely low-income households.

## 3. Housing Opportunities for Persons with AIDS (HOPWA)

The Housing Opportunities for Persons with AIDS (HOPWA) program provides funding for housing development and related support services for low-income persons with HIV/AIDS and their families. Funds are provided through HUD on an annual basis to the City of Oakland for the Alameda/Contra Costa eligible metropolitan area. Contra Costa County receives a formula share of HOPWA funds from the City of Oakland based on the number of reported AIDS cases. Contra Costa's share is approximately 25 percent of the total allocation, or approximately \$900,000. Funds had been used primarily for acquisition/rehabilitation, and new construction of permanent housing. Additional funds have been used by the County AIDS Program for housing advocacy. CCHS will be managing this program going forward. Future allocations will be used for HIV/AIDS services rather than housing development.

## 4. Mental Health Services Act

The Mental Health Services Act (MHSA) was established by the passage of Proposition 63 in November 2004 as is intended to "transform the public mental health system". The population to be helped under MHSA is defined as adults and older adults who have been diagnosed with or who may have a serious and persistent mental illness, and children and youth who have been diagnosed with or who may have serious emotional disorders, and their families. In 2008, the County assigned its MHSA housing funds to the California Housing Finance Agency (CalHFA) to administer on behalf of the County.



Until 2016, the County participated in a specially legislated state-run MHSA Housing Program through CalHFA. In collaboration with many community partners, the County embarked on several one-time capitalization projects to create 56 permanent housing units for individuals with serious mental illness. The individuals housed in these units receive their mental health support from CCBHS contract and county service providers. The sites include Villa Vasconcellos in Walnut Creek, Lillie Mae Jones Plaza in North Richmond, The Virginia Street Apartments in Richmond, Tabora Gardens in Antioch, Robin Lane apartments in Concord, Ohlone Garden apartments in El Cerrito, Third Avenue Apartments in Walnut Creek, Garden Park apartments in Concord, and scattered units throughout the County operated by Hope Solutions (formerly Contra Costa Interfaith Housing).

The state-run MHSA Housing Program ended in 2016 and was replaced by the Special Needs Housing Program (SNHP). Under SNHP, the County received and distributed \$1.73 million in state level MHSA funds to preserve, acquire or rehabilitate housing units, and added 5 additional units of permanent supportive housing at the St. Paul Commons housing development in Walnut Creek. Effective January 3, 2020, CalHFA discontinued SNHP. The Department of Health Care Services (DHCS) notified county mental health plans that the deadline to use SNHP funds was June 30, 2023.

## 4. No Place Like Home

Although discontinued, the SNHP was intended to be a bridge between the MHSA Housing Program and the No Place Like Home (NPLH) Program. The NPLH Program was enacted on July 1, 2016 (via Assembly Bill 1618) to invest in the development of permanent supportive housing for persons who need mental health services and are experiencing homelessness or are at risk of

chronic homelessness. Since the inception of the NPLH Program, Contra Costa County has applied for both the competitive and non-competitive portions in all four rounds of the NPLH Program.

**Round 1** - Contra Costa was awarded competitive funding in partnership with Satellite Affordable Housing Association (SAHA) in the amount of \$1,804,920 for construction of 10 dedicated NPLH units for persons with serious mental illness at their Veteran's Square Project in the East region of the County.

**Round 2** - Contra Costa was awarded funds to construct permanent supportive housing units in the Central and West regions of the County. An award was granted to Resources for Community Development (RCD) in the amount of \$6,000,163 for 13 NPLH Units at their Galindo Terrace development. In 2020, CCBHS received a non-competitive allocation amount of \$2,231,574 which was awarded to RCD for a combination project (use of both competitive and non-competitive funds) for a total amount of NPLH financing in the amount of \$14,456,028.

**Round 3** - 8 units located at 699 Ygnacio Valley Rd in Walnut Creek via non-competitive funds.

**Round 4** - CCBHS submitted two competitive applications. If awarded, the first would result in 21 units located in Walnut Creek in partnership with RCD. The second application would result in 8 units located in Richmond in partnership with Community Housing Development Corporation (CHDC).





## 5. Housing Successor (former Redevelopment Set-Aside) Funds

The legislation eliminating redevelopment allowed housing assets to remain with the County. There is approximately \$8.3 million in housing funds which will be used in the former redevelopment areas. Housing developed with these funds must remain affordable to low- and moderate-income households for at least 55 years for rentals and 45 years for ownership housing. In addition, the Housing Successor has several vacant housing sites available for development of affordable housing in Bay Point, Rodeo, and North Richmond.

## 6. Bond Financing

The County has been very active in issuing tax-exempt mortgage revenue bonds to support the development of affordable housing. Under the Mortgage Revenue Bond (MRB) Program, the County provides mortgage financing for affordable housing projects through the sale of tax-exempt bonds. In particular, the Multi-family Residential Rental Housing Revenue Bond Program assists developers of multi-family rental housing in increasing the supply of affordable rental units available to qualified households. The proceeds from bond sales are used for new construction, acquisition, and/or rehabilitation of multi-family housing developments. A specified number of units are required to remain affordable to eligible, lower-income households for a specified number of years after the initial financing is provided. Numerous County affordable housing developments have been funded in part by proceeds from County-issued bonds, including Heritage Point in North Richmond. Through the refinancing of bonds, the County has also extended the affordability terms on assisted housing projects.

## 7. Mortgage Credit Certificates

The Mortgage Credit Certificate Program, authorized by Congress in the Tax Reform Act of 1984, provides financial assistance to "First-time homebuyers" to purchase new or existing single-family homes. In 1985, the State adopted legislation authorizing local agencies, such as Contra Costa County, to make Mortgage Credit Certificates (MCCs) available in California. Contra Costa County MCC authority can be used in all cities as well as the unincorporated areas of the County. As of 2019, the State, through CalHFA, has not provided additional funding to counties for the MCC Program; therefore, Contra Costa County currently does not have any additional funds to provide mortgage credit certificates to new first-time homebuyers in Contra Costa County. CalHFA has not officially discontinued the MCC Program and may provide funds again in the future.

## 8. Low Income Housing Tax Credits (LIHTC)

Created by the 1986 Tax Reform Act, the LIHTC program has been used in combination with County and other resources to encourage the construction and rehabilitation of rental housing for lower-income households. The program allows investors an annual tax credit over a ten-year period, provided that the housing meets minimum low-income occupancy requirements. The tax credit is typically sold to large investors at a syndication value. Several County affordable apartment projects have been funded in part by LIHTC proceeds.



## 9. Housing Choice Voucher (Section 8) Assistance

The Housing Authority of Contra Costa County administers the federal rental assistance program that provides rent subsidies to very-low income persons in need of affordable housing. The Housing Choice Voucher (Section 8) program offers a voucher that pays the difference between the current fair market rent and what a tenant can afford to pay (e.g., 30 percent of their income). The voucher allows a tenant to choose housing that may cost above the payment standard, but the tenant must pay the extra cost. Project-based vouchers help support new affordable housing developments. The County currently has approximately 8,640 households with various programs under the umbrella of the Housing Choice Voucher Program.

### C. COUNTY ADMINISTRATIVE RESOURCES

#### 1. Contra Costa County Department of Conservation and Development

The Department of Conservation and Development (DCD) maintains overall responsibility for the development of housing and community development plans, policies and strategies, including the County Housing Element and the Consolidated Plan. DCD implements programs designed to increase and maintain affordable housing, expand economic and social opportunities for lower income, homeless and special needs populations, and revitalize declining neighborhoods. Specific programs include the Community Development Block Grant (CDBG), the HOME Investment Partnership Act Program, the Housing Opportunities for Persons with AIDS (HOPWA)

Program, the tax-exempt and mortgage revenue bond, and Mortgage Credit Certificate (MCC) programs. DCD is also responsible for the review of projects applying to HUD for funding to determine their consistency with the Consortium's Consolidated Plan.

DCD also carries out building inspection and code enforcement activities that are designed to ensure the safety of the County's housing stock. DCD operates the Neighborhood Preservation Program, a housing rehabilitation loan program for low-income homeowners in the Urban County. In addition, DCD offers a weatherization and energy conservation program. This program helps lower income households to reduce monthly housing costs through the provision of resources for rehabilitation and other improvements designed to increase efficiency in energy use.

#### 2. Contra Costa County Health Services Department

The Health Services Department (HSD) is responsible for the development of plans and programs to assist homeless households and adults throughout the County by providing emergency and permanent supportive housing and supportive services designed to enable this population to achieve greater economic independence and a stable living environment. HSD coordinates the activities of and provides staff support to the Contra Costa Interagency Council on Homelessness (CCICH), appointed by the County Board of Supervisors and consisting of representatives of local jurisdictions, homeless service providers, advocacy and volunteer groups, the business and faith communities, citizens at large, and previously/currently homeless individuals. The CCICH works with the HSD to develop and refine the Ten Year Plan to End Homelessness, and to develop the County's annual Homeless



Emergency Assistance and Rapid Transition to Housing (HEARTH) Act application, educate the public with respect to homeless issues, and advocate for increased funding for homeless programs.

## D. LOCAL AFFORDABLE HOUSING DEVELOPER CAPACITY

Contra Costa County has several successful affordable housing developers with significant organizational capacity. Nonprofit agencies that are involved in housing development represent a substantial resource for the provision of affordable units in a community. These agencies/organizations play important roles in the production, improvement, preservation, and management of affordable housing. Nonprofit ownership helps assure that these housing units will remain as low-income housing. Following is an example of the most active housing non-profits and developers in the County.

### 1. BRIDGE Housing Corporation

Located in San Francisco, BRIDGE Housing Corporation develops and manages affordable housing for lower income households in the Bay Area and throughout California. Projects developed and managed by BRIDGE in Contra Costa County include affordable multifamily rental housing (e.g. Coggins Square Apartments, Grayson Creek) and rental housing for seniors (Pinole Grove, The Arbors).

### 2. Christian Church Homes

Christian Church Homes of Northern California (CCHNC), located in Oakland, was created to meet the housing needs of low-income seniors. The agency currently manages Sycamore Place I & II Apartments, Antioch Hillcrest Terrace and Carquinez Vista Manor.

### 3. Community Housing Development Corporation of North Richmond (CHDC)

CHDC is a nonprofit housing developer located in North Richmond that has been active in the development of affordable homeownership opportunities and multi-family rental housing in the West County area. Successfully completed projects include Parkway Estates and the Community Heritage Apartments.

### 4. Eden Housing, Inc.

Based in Hayward, Eden Housing assists communities through an array of affordable housing development and management activities as well as social services that meet the needs of lower income households. The agency serves low- and moderate-income families, seniors, disabled households and the formerly homeless. Projects include Brentwood Senior Commons, Belle Terre, Orinda Senior, Riverhouse, Rivertown Place, Samara Terrace, Victoria Family, Virginia Lane, and West Rivertown. An additional project in El Cerrito is in predevelopment.



## 5. EAH

EAH is a non-profit housing developer active throughout California. EAH develops and manages affordable housing projects in order to expand the supply of high quality affordable housing and to enable families to attain financial stability. The agency has completed a number of affordable developments in the County including The Oaks, Golden Oak Manor, Silver Oak, Casa Adobe, and Rodeo Gateway Apartments. EAH is also the developer of the proposed Phase 2 Senior Apartment project in Rodeo.

## 6. Mercy Housing California

Mercy Housing California is a nonprofit housing developer located in San Francisco and Sacramento that has been active in Contra Costa County developing homeownership and rental housing projects. Target populations include senior and farm worker families. Projects include Arroyo Seco, Marsh Creek Vista, Villa Amador, a multi-family rental housing project for low-income farmworker-households in East County. Mercy Housing, in partnership with Contra Costa Interfaith Housing, developed a permanent supportive housing project for homeless families called Garden Park.

## 7. Habitat for Humanity, East Bay/Silicon Valley

Habitat for Humanity is a nonprofit agency dedicated to building affordable housing and rehabilitating homes to provide affordable homeownership opportunities for lower income families. Habitat builds and repairs homes with the help of public funds, private donations, volunteers and partner families. Habitat homes are sold to partner families at no profit with

affordable, no-interest loans. Volunteers, churches, businesses, and other groups provide most of the labor for the homes. Habitat developed Ellis Street Townhomes, El Rincon, Herb White Way, Norcross, Montague and Rivertown homes. Additional projects in unincorporated Martinez (Muir Ridge) has been constructed and Bay Point (Pacifica Landing) has entitlements and building permits are pending.

## 8. Resources for Community Development (RCD)

Resources for Community Development (RCD) is a nonprofit housing developer located in Berkeley and active throughout Alameda and Contra Costa County. RCD develops housing for individuals, families, and special needs populations through acquisition/rehabilitation and new construction projects. Contra Costa projects include Terrace Glen, Aspen Court, Riley Court, Camara Circle, Bella Vista, Pinecrest Apartments, Caldera Place, Alvarez Court, Lakeside, Los Medanos, Villa Vasconcellos, and Berrellesa Palms. An additional project, Ohlone Gardens, is under construction.

## 9. SHELTER, Inc. of Contra Costa County

SHELTER, Inc. is a nonprofit community-based service organization and affordable housing provider located in Martinez that is active in Central and East Contra Costa County. SHELTER, Inc. provides homeless prevention services as well as transitional and special needs housing. Projects and programs include REACH Plus, Lyle Morris Center, Mt. View House, The Landings, and Victoria Apartments.



## 10. Satellite Affordable Housing Associates

Satellite Affordable Housing Associates (SAHA) is a nonprofit housing developer located in Berkeley and active throughout Alameda and Contra Costa County. SAHA develops housing for families, seniors, and special needs populations through acquisition/rehabilitation and new construction projects. Contra Costa projects include Acalanes Court, Hookston Manor, Montego Place, and Sierra Gardens. An additional project, Third Avenue Apartments, is under construction.

## 11. Richmond Land

Richmond LAND builds community capacity and grassroots power for a just transition by engaging Richmond residents in the advocacy, planning, and control of community-centered economic development projects and policies that repair the impacts of structural racism in housing and development.

### E. OPPORTUNITIES FOR ENERGY CONSERVATION AND REDUCING GREENHOUSE GAS EMISSIONS

Utility-related costs can directly impact the affordability of housing in Contra Costa County. Title 24 of the California Code of Regulations contains California's building standards for energy efficiency and is designed to reduce wasteful and unnecessary energy consumption in newly constructed and existing buildings. The California Energy Commission updates the Building Energy Efficiency Standards (Title 24, Parts 6 and 11) every three years by working with stakeholder in a public and transparent process.

These regulations set forth mandatory energy standards for new development and requires adoption of an “energy budget.” In turn, the home building industry must comply with these standards while localities are responsible for enforcing the energy conservation regulations. Buildings designed and constructed to optimize energy efficiency can result in lower energy costs to homeowners and renters.

There are many alternative ways to meet these energy standards including but not limited to:

- installation of rooftop solar energy systems,
- use of passive solar,
- high insulation levels,
- active solar water heating,
- locating the home on the northern portion of the sunniest location of the site,
- designing the structure to admit the maximum amount of sunlight into the building and to reduce exposure to extreme weather conditions,
- locating indoor areas of maximum usage along the south face of the building and placing corridors, closets, laundry rooms, power core, and garages along the north face making the main entrance a small, enclosed space that creates an air lock between the building and its exterior,
- orienting the entrance away from winds, or
- using a windbreak to reduce the wind velocity against the entrance.



## 1. Utility Incentive Programs

Utility companies serving Contra Costa County offer various programs to promote the efficient use of energy and other resources, and to assist lower income customers. These programs are discussed below.

MCE is the default electricity provider to residential customers within the unincorporated county and offers a variety of programs to help residential customers reduce their energy costs.

Pacific Gas & Electric (PG&E) provides natural gas to residential consumers in the county and electricity to residential customers that have opted out of MCE's services. PG&E provides a variety of energy efficiency rebates and energy conservation services for residents.

PG&E, MCE and Bay REN each offer several energy assistance programs for lower income households, which help qualified homeowners and renters conserve energy and control electricity costs. These programs are modified periodically and the County works with these providers to help County residents enroll. In addition, the State Department of Health and Human Services funds the Low-Income Home Energy Assistance Program (LIHEAP) Block Grant. Under this program, eligible low-income persons, via local governmental and nonprofit organizations, can receive financial assistance to offset the costs of heating and/or cooling dwellings and/or to have their dwellings weatherized to make them more energy efficient.

As energy is used in the treatment and transportation of water, water use efficiency translates to energy efficiency. CCWD delivers treated and untreated water to residential consumers in central and eastern Contra Costa County. The CCWD offers rebates and incentives to its customers for efficiency in home water use.

The East Bay Municipal Utility District (EBMUD), which also serves residents of Contra Costa County, offers many conservation services and incentives to its customers. To start, EBMUD offers complimentary on-site surveys of indoor and outdoor water use to its users, as well as conservation devices—including low-flow showerheads and faucet aerators. EBMUD offers rebates for water-efficient home landscaping and WaterSmart Garden Grants for public garden water conservation projects.

The County is also served by other smaller water service providers.

## 2. The County's Greenhouse Gas Emissions Inventory

Contra Costa County completed its most recent greenhouse gas (GHG) emissions inventory for 2019. The inventory found that approximately 19 percent of the County's GHG emissions came from residential energy use. Focusing on the County's unincorporated area, residential energy use represents 19 percent of total GHG emissions. While the County has already implemented energy efficiency and other GHG reduction programs, multiple opportunities to expand these programs and implement new programs remain.



### 3. The County's Efforts to Promote Energy Efficiency and Reduce GHG Emissions

The Contra Costa County Board of Supervisors formed the Climate Change Working Group in May 2005. The CCWG was comprised of the Agricultural Commissioner, the Director of General Services, the Director of Health Services, the Director of Public Works, the Director of the Department of Conservation and Development and the Deputy Directory for Building Inspection.

In December 2008, the Board of Supervisors adopted a Municipal Climate Action Plan (the "2008 Plan"), which established formal GHG reduction targets, GHG reduction measures, and methods for analysis and monitoring of GHG reduction measures for the County's government operations emissions. The County conducted an interim GHG inventory in 2013 in order to direct priorities toward achieving a target of reducing government operations GHG emissions 15 percent below 2005 levels by 2020.

On December 15, 2015, the Board of Supervisors adopted a Climate Action Plan (the "2015 CAP") to reduce community-wide GHG emissions in the unincorporated areas of Contra Costa County. The 2015 CAP included sections covering the scientific and regularly environment, an updated GHG inventory and forecast, a GHG reduction strategy for community-wide emissions, and implementation plan.

The County is currently preparing the 2022 Climate Action Plan Update to build on the legacy of these prior efforts by including an updated estimate of the County's energy use and GHG emissions, updated emissions reductions

and implementation and monitoring strategies, and a discussion of climate change impacts relevant to Contra Costa County. The 2022 CAP will identify energy efficiency and conservation and GHG reduction strategies that benefit residents through and beyond 2050, consistent with the State's goals and programs to achieve statewide net carbon neutrality and carbon free energy by 2045.

The County has already implemented many measures that have reduced its municipal GHG emissions. Some of the most effective municipal GHG reduction measures include compressed employee work weeks and remote work schedules, building lighting retrofits, building heating-ventilating-air conditioning (HVAC) improvements, direct digital control devices for building HVAC systems, installation of cogeneration plants for buildings that operate 24 hours per day, purchase of energy efficient computers and copiers, paper recycling, use of B20 biodiesel fuel for the County diesel fleet, purchase of hybrid vehicles for the County fleet, and the use of LEDs in traffic signals. The County is in the process of installing electric vehicle charging stations to facilitate a conversion of the County's fleet to zero-emission. The County's efforts to reduce municipal GHG emissions will continue to expand with the development and implementation of the 2022 Climate Action Plan.

The County has also implemented various community-wide measures that have targeted residential energy conservation or otherwise reduced GHG emissions. Some of the residential energy conservation measures include:

- offer density bonuses for development projects that include a specified number of affordable housing units,
- encourage mixed use development to limit travel distances,

- conduct a weatherization program to assist low- or fixed-income households in making their homes more energy efficient,
- actively participate and coordinate in regional and local energy efficiency incentive programs funded by the State through local utility providers and other energy efficiency implementors,
- adopt and encourage use of Green Building Guidelines for residential construction and remodeling projects
- Implement County's all-electric ordinance
- provide green building related information to the public (including custom-made green building materials display and free copies of above-mentioned Guidelines),
- require developers to provide information on commute alternatives available to their residents,
- require certain new developments to use drought-tolerant landscaping,
- require certain development projects to construct bicycle and pedestrian amenities, and
- require large development projects in designated transit areas to install features to support mass transit.

Other community-wide GHG reduction measures include efforts to adopt residential variable can rate structures to promote waste reduction and recycling, inform residents regarding the proper methods to manage their unwanted household chemicals and electronics, use methane from landfills

to generate electricity, and recognize businesses that adopt green business practices.

Property Assessed Clean Energy (PACE): To encourage more retrofitting of existing residences, the County developed a process to allow Property Assessed Clean Energy (PACE) financing providers to operate within unincorporated Contra Costa County. PACE financing allows individual property owners to voluntarily join an assessment district and borrow money (up to 100% of the project cost) for the purpose of making energy or water efficiency improvement to their property. This unique financing mechanism is tied to the property, rather than the individual, and eligibility is based primarily on property value and equity. The property assessment is paid back over time (usually over a 5 to 20 year term) on the property owner's property tax bill. The voluntary assessment is created when the property owner enters into a contract, known as a "contractual assessment," with a PACE financing provider. Currently, four (4) PACE financing providers are authorized to operate in unincorporated Contra Costa County. PACE financing also creates jobs, promotes economic development, and helps protect the environment.

The Weatherization Program provides free weatherization services to improve the energy efficiency of homes, including attic insulation, weather-stripping, minor home repairs, and related energy conservation measures.

The Home Energy Assistance Program (HEAP) provides financial assistance to eligible households to offset the costs of heating and/or cooling dwellings.

The Energy Crisis Intervention Program (ECIP) provides payments for weather-related or energy-related emergencies.





## 4. Regional Opportunities to Further Reduce Energy Use and GHG Emissions

Many residential energy conservation opportunities are closely inter-related with other regulations/standards currently being developed and adopted at the regional and state levels.

In July 2012, the County joined the Bay Area Regional Energy Network (BayREN), a collaborative partnership among the nine-county San Francisco Bay Area led by ABAG. BayREN implements effective energy saving programs on a regional level and draws on the expertise, experience, and proven track record of Bay Area local governments to develop and administer successful climate, resource, and sustainability programs. The program is funded by California utility ratepayers under the auspices of the California Public Utilities Commission. The program offers free technical services and financial incentives (rebates) to both Single-Family and Multi-Family units. To receive the most updated information regarding current programs, visit the BayREN website ([www.bayren.org](http://www.bayren.org)).

## 5. Local Opportunities to Further Reduce Energy Use and GHG Emissions

The County also has many opportunities to expand its existing efforts toward community-wide GHG reduction, including further reductions in residential energy use. As a starting point, the County will expand efforts to promote:

- Infill and transit-oriented development,

- Water- and energy-saving incentives/rebates offered to households,
- Use of water-efficient landscaping and energy efficient irrigation systems,
- Use of photovoltaic systems,
- Reduced reliance on private vehicles,
- Use of permeable paving materials for cooling and water conservation,
- Promote Location Efficient Mortgage and Energy Efficient Mortgage programs as available, and
- Seek or support applications for affordable housing funds from agencies that reward and offer incentives for affordable infill housing and affordable housing built close to jobs, transportation, and amenities (e.g., HCD's Multifamily Housing Program and California Tax Credit Allocation Committee).

As resources are available, the County will initiate process to review existing policies, standards or requirements in our County Code and General Plan to identify those that:

- Help reduce energy use from residential buildings and assess potential for expanding or enhancing them, and
- Serve as potential barriers to incorporating residential energy efficiency incentives or requirements and assess feasibility of modifying or eliminating them.



For example, the County’s parking standards could potentially be modified to allow for smaller parking spaces, establish maximum parking spaces per project type or facilitate use of permeable pavement surfaces and landscaping in parking lots without requiring variances.



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# 6.5 Housing Accomplishments

In order to craft an effective housing strategy for the 2023 to 2031 planning period, the County must assess the achievements of the existing housing programs. This assessment will allow the County to evaluate the effectiveness and continued appropriateness of the existing programs and make adjustments for the next eight years.

## A. EVALUATION OF ACCOMPLISHMENTS UNDER ADOPTED HOUSING ELEMENT

Contra Costa County's last Housing Element was adopted in late 2014. The Element sets forth a series of housing programs with related objectives for the following seven areas:

1. Housing and Neighborhood Conservation
2. Housing Production
3. Special Needs Housing
4. Housing Affordability
5. Provision of Adequate Residential Sites
6. Removal of Governmental Constraints
7. Equal Housing Opportunity
8. Energy Conservation and Sustainable Development

The following discussion summarizes the County's housing accomplishments in each of the eight areas from 2015 through 2022. Appendix B provides a more detailed assessment of each housing program established in the 2014 Housing Element. The County had mixed results in implementing its

programs. Contra Costa County, like other jurisdictions, was impacted by the national emergency declaration due to the COVID-19 pandemic, reducing contact with residents, restricting construction, extending permit and inspection timeframes, limiting materials, equipment, and contractor availability. Regardless of this setback, the County funded 35 projects under the Neighborhood Preservation Program, weatherized 1,400 units, resolved 1,632 code enforcement cases, provided nearly \$23.2 million to preserve affordable housing, awarded CDBG and HOME funds for various projects within the county and cities. In addition, the County updated the Inclusionary Housing Ordinance, approved numerous accessory dwelling units (ADUs), required accessible units in CDBG- and HOME-funded projects, administered the County's homeless Continuum of Care, adopted the agricultural worker housing ordinance, and supported additional housing efforts as described further in Appendix B. These efforts supported special needs populations including, but not limited to, low-income households, people with disabilities, farmworkers, and people experiencing homelessness.

### 1. Housing and Neighborhood Conservation

To maintain and improve the quality of the housing stock and residential neighborhoods, the County has been active in providing residential rehabilitation assistance through a variety of programs. These programs include County funded acquisition and rehabilitation of existing rental housing, preservation of affordable housing, owner-occupied housing rehabilitation, and small (one to eight unit) rental rehabilitation.



## Acquisition/Rehabilitation

The County funds the acquisition and/or rehabilitation of existing rental housing by affordable housing developers using CDBG, HOME, NSP, and HOPWA funds. These funds are offered countywide as low-interest deferred loans in exchange for long-term affordability. The rehabilitation of rental properties has been critical to preserving and increasing the supply of affordable housing in the County.

The County assisted in the acquisition and/or rehabilitation of 487 rental units in the Contra Costa Centre area, 56 rental units in the Antioch area, and 14 units in Bay Point. The County also awarded \$151,000 to Richmond Neighborhood Housing Services (RNHS) in CDBG funds for the rehabilitation of three single-family homes in Richmond affordable to and occupied by low-income families. An additional 158 households were assisted with Mortgage Credit Certificates (MCC) downpayment assistance loans for a total of over \$10 million in MCC assistance.

## Preservation of Existing Affordable Housing

To preserve the affordability of low-income use-restricted units, the County has refinanced various housing projects with new tax-exempt bond issues. .  
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## Owner-Occupied Rehab

Between 2015 and 2021, the County assisted in the rehabilitation of 54 ownership housing units throughout Contra Costa County.

## 2. Special Needs Housing

One of the major goals of the County is to meet the housing and supportive services needs of special needs groups, including people with disabilities, the elderly, the homeless, and farm workers. Since 2015, the County has made significant progress towards this goal. The County worked diligently to address the housing needs of special needs groups during the previous planning period. Some of the cumulative accomplishments are highlighted below.

### All Special Needs Groups

The County provided funding assistance for rehabilitation of 1,116 existing extremely low-income housing units. The County promoted construction of more accessible, naturally affordable units through the County's ADU Ordinance. The County supported (through funding or granting of density bonuses) a 42-unit rental project in North Richmond, a 193-unit multi-family project in Bay Point, and a 325-unit multi-family apartment project in the unincorporated Walnut Creek area that includes 12 very low-income units and 24 moderate-income units.

### Senior Housing

Recognizing the special needs of the elderly, the County has provided design flexibility in the development of senior housing. In addition, the County has provided financial assistance in the development of affordable housing for lower-income seniors. During the previous planning period, the County continued planning efforts to construct the Rodeo Senior Housing development.



## Housing for Persons with Disabilities

The County provided funding in North Richmond for four fully accessible units, three physically disabled units, and one vision/hearing impaired unit. The County also provided funding for projects located in the Cities of Antioch, Concord, El Cerrito, Pittsburg, and Walnut Creek that included a total of 19 fully accessible units, 14 units accessible to physically disabled, and 5 units accessible to vision/hearing-impaired . The County requires accessible units in all new construction projects that received HOME or CDBG funding and in rehabilitation projects, when feasible. Between 2015 and 2020, the County funded 18 projects countywide that included unit accessibility upgrades.

## Persons Experiencing Homelessness

The County has also played an active role in providing housing to homeless individuals and families. Contra Costa County has nine interim housing (or emergency shelters) for homeless individuals, families, and youth totaling 402 beds. Within the Central County shelter, Concord & Brookside Adult Interim Housing, there is a respite shelter for medically fragile adults.

## Female-Headed Households

The County provided NSP funds to support construction of two low-income rental housing units in North Richmond for women leaving prison.

## Farmworkers

The County updated the agricultural worker housing ordinance in 2017 to comply with State law and allowing for the permitting of farmworker housing by right and through a discretionary review process for larger projects.

### 3. Housing Affordability

#### Affordable Homeownership Opportunities

In addition to facilitating new construction of affordable housing (as described above), the County has also been active in promoting housing affordability by expanding homeownership opportunities. One homeownership assistance program is the Mortgage Credit Certificate (MCC) program administered by the County. Between 2015 and 2020, the County provided 158 households with Mortgage Credit Certificates (MCC) throughout the county and cities for a total of over \$10 million in MCC assistance.

Aside from the MCC, the County has implemented various programs to provide affordable homeownership opportunities to lower- and moderate-income households. The County's homebuyer assistance programs include the following: RDA (former Redevelopment Agency funds), NSP, HOME and CDBG funds have been used for new construction and rehabilitation of single-family homes. Following completion, these funds are rolled over into deferred equity share loans for low-income homebuyers. Through agreements with developers, homes affordable to low- and moderate-income homebuyers have been constructed as a component of market-rate housing developments.



## 4. Removal of Governmental Constraints

To stimulate housing development, the County updated the ADU Ordinance in 2017 to streamline internal conversions. The County recently administered the Contra Costa County Accessory Dwelling Unit (ADU) Incentive Program, which ran from 2019 through mid-2021. In addition, the County has been working on updating its code to include objective design standards. That work is expected to occur in 2022. In addition, the County prepared a revised ordinance to remove the minimum lot size requirements for Planned Unit Development projects. County staff identified potential amendments, such as eliminating the existing minimum acreage requirements for a P-1 district and granting the Zoning Administrator the ability to decide additional application types for properties within P-1 Districts, which will ease the entitlement process for housing developments. As of 2022, County staff is in the process of finalizing language for a formal ordinance amendment proposal. The County also administers the Quick Turn-around Program to expedite permit review.

The County recently administered the Contra Costa County Accessory Dwelling Unit (ADU) Incentive Program, which ran from 2019 through mid-2021, to facilitate the legalization of illegally built ADUs by waiving late filing fees for ADU Permit applications and waiving penalty fees for building permits.

## 5. Promotion of Equal Housing Opportunity

The County adopted its Analysis of Impediments to Fair Housing Choice (AI) in June 2019. The AI is a review of impediments or barriers that affect the rights of fair housing choice. It covers public and private policies, practices, and procedures affecting housing choice. The AI serves as the basis for fair

housing planning, provides essential information to policymakers, administrative staff, housing providers, lenders, and fair housing advocates, and assists in building public support for fair housing efforts

## 6. Provision of Adequate Residential Sites

As documented in the Land Inventory: Vacant & Underutilized Sites Analysis, the County had more than an adequate number of residential sites to meet the assigned 2015 – 2023 Regional Housing Need Allocation (RHNA). The inventory identified just over 3,318 new units on vacant and underutilized properties distributed among the unincorporated communities within the County's Urban Limit Line.

The most significant change to the inventory since the adoption of the 2014 Housing Element Update is that the County is comprehensively updating the General Plan and Zoning Code. The majority of the sites in this Housing Element are proposed to receive a change in land use designation and allowed density as part of the comprehensive General Plan update currently underway.

### B. HOUSING PRODUCTION IN PREVIOUS RHNA PERIOD

Between 2015 and 2021, 315 new affordable housing units were constructed in the County unincorporated areas. Using CDBG, HOME, HOPWA, Housing Successor (former redevelopment set-aside) funds, and bond financing, the County facilitated affordable housing development throughout the County. Table 6-38 summarizes building permit activity since 2015.

**TABLE 6-38 COUNTY-WIDE ASSISTED NEW CONSTRUCTION  
2015-2021**

	2015	2016	2017	2018	2019	2020	2021	TOTAL
Very-low	0	0	0	63	0	0	36	<b>99</b>
Low	8	0	3	171	1	0	33	<b>216</b>
Mod	65	28	31	1	4	0	36	<b>165</b>
Above Mod	276	201	244	434	214	137	422	<b>1,928</b>
<b>TOTAL</b>	<b>349</b>	<b>229</b>	<b>278</b>	<b>669</b>	<b>219</b>	<b>137</b>	<b>527</b>	<b>2,408</b>

This level of affordable housing production exhibited above is largely the result of the County's partnership with housing developers in the area. The County has been active in meeting with local developers, community groups, and other jurisdictions to review housing needs and develop effective strategies to meet those needs. The County also participates in various regional and local organizations concerned with housing issues. County staff provides ongoing technical assistance to non-profit and for-profit developers in the development and financing of affordable housing.





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# 6.6 Housing Plan

Sections 6.2 through 6.5 of the Housing Element present a housing needs assessment; an analysis of constraints to housing provision; an inventory of land, financial, and administrative resources; as well as an evaluation of past housing accomplishments. This section presents the County's eight-year Housing Plan, which sets forth goals, policies, and programs to address the identified housing needs and other important housing issues.

The County's housing plan for addressing the identified housing needs is detailed according to the following six areas:

- Provision of Adequate Residential Sites
- Assist in the Development of Adequate Housing to Meet the Needs of Low- and Moderate-Income Households, and Persons with Special Needs
- Conserve and Improve the Existing Housing Stock
- Preserve Units At Risk of Conversion to Market-Rate Units
- Address and Remove or Mitigate Governmental Constraints
- Equal Housing Opportunities

## A. HOUSING GOALS, POLICIES, AND ACTIONS

The following are the goals, policies, and actions the County intends to implement to address the community's identified housing needs and issues.

### Goal HE-1

Maintain and improve the quality of the existing housing stock and residential neighborhoods in Contra Costa County, including preserve the existing affordable housing stock.

### Policies

#### HE-P1.1

Assist low-income homeowners in maintaining and improving residential properties through housing rehabilitation and energy-efficiency assistance programs. Promote increased awareness among property owners and residents of the importance of property maintenance to neighborhood quality.

#### HE-P1.2

To the extent practicable, focus rehabilitation expenditures and code enforcement efforts in communities with a high concentration of older and/or substandard residential structures for continued reinvestment in established neighborhoods. The goal of the code enforcement efforts is to improve overall quality of life in these neighborhoods.



### HE-P1.3

Assist non-profit partners in acquiring and rehabilitating older residential structures and maintaining them as long-term affordable housing.

### HE-P1.4

Ensure that the County's condominium conversion ordinance (Chapter 926-2.202) mitigates impacts to displaced tenants and ensures the quality of units being sold to homeowners.

### HE-P1.5

Preserve existing affordable housing developments at risk of converting to market-rate housing through promotion of bond refinancing and other mechanisms.

## Actions

### HE-A1.1

Action: Continue to provide rehabilitation loans through the Neighborhood Preservation Program to extremely low-, very low- and low-income households and to promote the program.

Background: Through the Neighborhood Preservation Program, the County provides home rehabilitation loans to extremely low-, very low-, and low-income households to make necessary home repairs and improve their homes. Department of Conservation and Development (DCD) administers this program, which is available to income-qualified households throughout the urban county. Eligible residents may receive assistance for a variety of home improvement activities, including but not limited to, re-

roofing, plumbing/heating/electrical repairs, termite and dry-rot repair, modifications for disabled accessibility, security, exterior painting, and energy conservation. Specific loan terms are based on financial need and may be zero or 3 percent, deferred or amortized.

DCD has identified the following unincorporated areas for focused rehabilitation assistance: Bay Point, Bethel Island, Byron, Clyde, Crockett, El Sobrante, Montalvin Manor, North Richmond, Rodeo, Rollingwood, and the Vine Hill area near Martinez.

Eight-Year Objectives: Disseminate information on housing rehabilitation assistance through the County's website, public access cable channels, notices in the press, presentations, and distribution of brochures to public service agencies and community groups, and mailings to county residents. Rehabilitate a minimum of 5 units annually for a total of 40 units over 8 years.

Funding Source: NPP and Weatherization, Measure X housing funds


Responsible Agency/Department: DCD

Timeframe: Consider new applications annually

### HE-A1.2

Action: Continue to offer the free weatherization program for extremely-low, very-low and low-income homeowners.

Background: The County DCD offers a free weatherization program to assist extremely low-, very low-, and low-income homeowners and renters in improving residential energy efficiency and, as a result, reducing their energy bills. The program's energy saving improvements include minor home



repairs and appliance and fixture replacements, such as attic insulation, weather stripping, pipe wrapping, furnace filters, shower heads, heaters/ovens, ceiling fans, door bottoms, etc. |

Eight-Year Objectives: Assist 150 households annually for a total of 1200 households over 8 years. Provide education on energy conservation.

Funding Source: Low-Income Housing Energy Assistance Program (LIHEAP)

Responsible Agency/Department: DCD

Timeframe: Ongoing

### HE-A1.3

Action: Consider development of a vacant property registration ordinance to address issues on vacant properties in urban areas.

Background: If a vacant property registration ordinance were put in place it would include a fee to cover the costs for the County to address issues on vacant properties in urban areas. Issues addressed on these types of properties would include derelict buildings, illegal dumping, homeless encampments, overgrown vegetation, for reduction of reduce blight.

Eight-Year Objectives: If adopted, register and remediate any issues on at least 100 properties during the planning period.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Consider establishing a vacant property registration ordinance by 2025.

### HE-A1.4

Action: Continue code enforcement.

Background: Code Enforcement is responsible for enforcing both State and County regulations governing the maintenance of all buildings and properties in unincorporated areas through complaint-based inspections and ensuring remediation.

To facilitate correction of code violations or deficiencies, Code Enforcement works closely with other County agencies. Code enforcement staff routinely refers homeowners to the County's rehabilitation loan and grants programs, including the Neighborhood Preservation Program. The staff also refers homeowners, mobile home owners, and apartment owners to the County's Weatherization Program.

Eight-Year Objectives: Continue to carry out code enforcement activities as a means to maintain the quality of the housing stock and residential neighborhoods. Continue to refer eligible homeowners, mobile home owners, and apartment owners to County programs for assistance.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Ongoing



## HE-A1.5

Action: Prevent conversion of deed-restricted affordable housing units in multi-family developments to market-rate units through the following actions: Update and monitor the inventory of all dwelling units in the unincorporated county that include units subject to enforceable affordability requirements. The inventory will include, at a minimum, the number of units, the funding government program, and the date on which the units are at risk of conversion to market-rate.

- Monitor the status of affordable projects, rental projects, and mobile homes in unincorporated Contra Costa County. Should the property owners indicate the desire to convert properties, consider providing technical and financial assistance, when possible, to ensure long-term affordability.
- Work with local service providers to identify funding to subsidize at-risk units in a way mirroring the U.S. Department of Housing and Urban Development (HUD) Project Based Voucher (Section 8) program. Funding sources may include state or local funding sources.

### Background:

As of 2021, a total of 1,686 publicly assisted housing units in multifamily developments are in the unincorporated areas of the county. Of these units, 49 units in El Sobrante Silvercrest and 134 units in Park Regency are at risk of conversion to market-rate housing by 2033.

Pursuant to state law (Government Code Sections 65853.10, 65863.11, and 65863.13), owners of deed-restricted affordable projects are required to provide notice of restrictions that are expiring to all prospective tenants, existing tenants, and the County within 3 years, 12 months,


and 6 months before the scheduled expiration of rental restrictions. In addition, the County or owner will provide notice to HUD, the California Department of Housing and Community Development (HCD), the Contra Costa County Housing Authority, and the local legal aid organization. Owners shall also refer tenants of at-risk units to educational resources regarding:

- Tenant rights
- Conversion procedures
- Information regarding Section 8 rent subsidies
- Any other affordable housing opportunities in the county.

In addition, notice from the owner shall be required prior to conversion of any units to market rate for any additional deed-restricted lower-income units that were constructed with the aid of government funding, that were required by inclusionary ordinance requirements, that were part of a project granted a density bonus, or that were part of a project that received other incentives.

If a development is offered for sale, HCD must certify persons or entities that are eligible to purchase the development and to receive notice of the pending sale. Placement on the eligibility list will be based on experience with affordable housing.

When necessary, the County shall continue to work with property owners of deed-restricted affordable units who need to sell within 45 years of initial sale. When the seller is unable to sell to an eligible buyer within a specified time period, equity-sharing provisions are established (pursuant to the affordable housing agreement for the property), whereby the difference between the affordable and market value is paid to the County to eliminate any incentive to sell



the converted unit at market rate. Funds generated would be used to develop additional affordable housing in the county. The County shall continue tracking all residential projects that include affordable housing to ensure that the affordability is maintained for at least 45 years for owner-occupied units and 55 years (subject to program requirements) for rental units, and that any sale or change of ownership of these affordable units prior to satisfying the 45- or 55-year restriction shall be “rolled over” for another 45 or 55 years to protect “at-risk” units.

Eight-Year Objectives: Monitor all at-risk units as detailed in the program. As required by state law, provide information regarding tenant rights and conversion procedures should the property owner be uninterested in refinancing and offer tenants information regarding Section 8 rental subsidies and other available assistance through County agencies and non-profit organizations.

Funding Source: Measure X, CalHFA Help Program; Multifamily Housing Program; HOME, CalHFA (preservation acquisition financing); mortgage insurance for purchase/refinance (HUD).

Responsible Agency/Department: DCD (Housing Authority for Section 8)

Timeframe: Ongoing communication with owners, service providers, and eligible potential purchasers; work with owners of deed-restricted units on an ongoing basis—particularly at the time of change of ownership.

## Goal HE-2

Increase the supply of housing with a priority on the development of affordable housing, including housing affordable to extremely low-income households.

## Policies

### HE-P2.1

Support development of affordable housing by non-profit and for-profit developers through affordable housing funding sources, regulatory incentives such as density bonus, and/or flexible development standards through planned unit developments.

### HE-P2.2

Encourage and promote the production of housing in close proximity to public transportation and services.

### HE-P2.3

Increase the supply of affordable housing and mixed-income housing through the Inclusionary Housing Ordinance.

### HE-P2.4

Encourage accessory dwelling unit (ADU) and junior accessory dwelling unit (JADU) construction as a viable means of meeting affordable housing needs by design.



### HE-P2.5

Encourage innovative housing design and building types to lower housing costs and provide high quality options for affordable housing.

### HE-P2.6

Plan for a variety of housing types in the county. Encourage innovative, nontraditional designs and layouts in response to evolving housing needs. Provide housing opportunities for all economic segments of the community while ensuring compatibility with surrounding uses.

## Actions

### HE-A2.1

Action: Provide funding or financial incentives for new affordable housing development.

Background: Non-profit and for-profit housing developers play an important role in providing affordable housing in Contra Costa County. Over the years, the County has provided direct financial assistance, regulatory incentives, and land write-downs to many developers that construct ownership and/or rental housing to extremely low-, very low-, low-income, and special-needs households. Major sources of County financing include annual entitlement grants of CDBG, HOME, and HOPWA funds. The County reserves 45 percent of each year's CDBG allocation to acquire and maintain affordable housing in the urban county. The County also serves as an issuer of tax-exempt bond financing when developers seek tax-exempt financing. Projects have been completed with County resources in both unincorporated areas and the cities.

Funding is awarded annually on a competitive application basis to developers of multifamily rental housing and homeownership developments countywide for gap financing. A notice of funding availability is issued in the fall. Applications are due in late fall/early winter, with funding recommendations made prior to the first 9-percent tax credit round in the spring. Funding criteria include proposed target population and alleviation of affordable housing needs, cost-effectiveness, developer experience, and term of affordability. The County Board of Supervisors has adopted a funding priority for projects that reserve a portion of the units for extremely low-income households.

County staff maintains continuous contact with numerous affordable housing developers. County staff offers formal technical assistance and guidance as well as frequent consultations with interested developers.

The County awards of HOME and CDBG funds to affordable housing developers provide local funds, which help leverage other local, state, and federal funds.

#### Eight-Year Objectives:

- Continue to support affordable housing development through direct gap financial assistance. Sources of financial assistance available through the County include Measure X, HOME, CDBG, HOPWA, local inclusionary housing fees, state grants, and tax-exempt bond financing.
- Meet with the local development community, key leaders, and local civic and community groups to promote the County's interest in working cooperatively to increase housing development activity.



- Allow techniques such as smaller unit sizes, parking reduction, common dining facilities and fewer required amenities for senior projects.
- Continue to provide low-interest loans to non-profit organizations to develop housing affordable to extremely low- and very low-income households.
- Encourage applications by nonprofit organizations for affordable housing funds, including federal, state, and local public and private funds.
- Collaborate to the extent feasible with HACCC to explore the use of project-based Section 8 assistance as leverage to obtain additional private-sector funds for affordable housing development.
- Encourage the financing and development of 500 affordable units over 8 years.

Funding Source: CDBG, HOME, HOPWA, Measure X/Housing Trust Fund, local funds, Bond-financing

Responsible Agency/Department: DCD

Timeframe: Annually award HOME, CDBG, and HOPWA funds to experienced housing developers (federal funds are not limited to projects in the unincorporated county). Support the development of 100 lower-income unit to reduce displacement risk and provide housing mobility opportunities.

## HE-A2.2

Action: Pursue affordable housing development on County (Housing Successor)-owned land in North Richmond, Bay Point, and Rodeo.

Background: On February 1, 2012, redevelopment agencies throughout the State of California were eliminated. The statute eliminating redevelopment allowed housing assets to be retained by the redevelopment host jurisdiction (known as Housing Successors). Contra Costa County owns land designated for housing in Bay Point, North Richmond, and Rodeo. The Housing Successor provided pre-development and construction funds to Community Housing Development Corporation of North Richmond (CHDC). In addition, the Housing Successor approved predevelopment and construction funding to the Rodeo Senior (Phase 2) project..

Eight-Year Objectives: Continue to work on closing of escrow for approved .98 acre site in Rodeo Town Center and facilitate the construction of 67 senior lower income units and facilitate the construction of approved Bay Point Orbisonia Heights development in three phases for 384 lower income units. These sites and additional housing assets have been offered in a Surplus Property Notification.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: All sites have been offered through a Notice of Availability of Surplus Land in April 2022. Several sites continue to be available and will continue to be marketed during the 8-year cycle.

## HE-A2.3

Action: Increase the supply of affordable housing through implementation of the Inclusionary Housing Ordinance (IHO). Provide incentives for developers subject to IHO who provide affordable units with three or more bedrooms in areas of concentrated overcrowding.





Background: The County's Inclusionary Housing Ordinance (IHO) has been in place since 2006. All new residential developments of five or more units, as well as condominium conversions, are subject to the IHO, which requires fifteen percent of the project's residential units to be affordable.

- Rental Projects: 12 percent to lower-income households and 3 percent to very low-income households.
- For-Sale Projects: 12 percent to moderate-income households and 3 percent to low-income households.

Developers may comply with the IHO through several alternative approaches:

- On-site development
- Off-site development
- Land conveyance
- Payment of a fee in lieu of development
- Other – developers may propose another method of compliance that would have at least the same benefit as on-site construction.

During this Housing Element planning period, the County will conduct a policy review of the IHO and implement changes including an updated (self-adjusting) fee schedule for in-lieu fees and removing some alternative methods of compliance. The update will also include:

- Encouraging on-site affordable units (as opposed to in-lieu fees) through methods like proactive outreach with the community, assisting with funding through various tax incentives, streamlining entitlement processes, and revising County ordinance and fees, and

- Creating incentives for developers that build affordable units with three or more bedrooms in areas of concentrated overcrowding (i.e., Bay Point, North Richmond according to Section 6.2.G Assessment of Fair Housing).

Eight-Year Objectives: Continue to implement the IHO and encourage developers to provide affordable units on site. Provide the collected in-lieu fees as part of the annual NOFA to support the development of new affordable housing projects in the unincorporated area. Review and update the Inclusionary Housing Ordinance, as necessary. Facilitate the construction of 150 affordable units as a result of the IHO to increase housing mobility opportunities.

Funding Source: None required


Responsible Agency/Department: DCD

Timeframe: Ongoing and update ordinance, as practicable, by 2025.

## HE-A2.4

Action: Prioritize funding for affordable housing providers for acquisition and rehabilitation of rental housing to preserve units, facilitate place-based revitalization, and increase mobility options.

Background: The County offers financial assistance, including CDBG, HOME, and HOPWA funds to affordable housing developers for the acquisition and rehabilitation of existing rental housing. Offer these as low-interest deferred loans in exchange for long-term affordability restrictions on the rental units. Priority will be encouraged for projects that reserve a portion of the units for extremely low-income households.



Eight-Year Objectives: Assist in the acquisition and rehabilitation of 50 affordable units to encourage place-based revitalization and preserve opportunities for housing mobility for lower-income households. The County will prioritize acquisition of at least 25 of the target units in high-resource areas.

Funding Source: CDBG, HOME, HOPWA, Bond Financing

Responsible Agency/Department: DCD

Timeframe: Ongoing

## HE-A2.5

Action: Maintain consistency with ADU state law in the County Ordinance Code. Promote ADU construction in high-resource areas/areas of concentrated affluence.

Background: Accessory dwelling units (ADUs) are attached or detached dwelling units that provide complete, independent living facilities for one or more persons that are located on the same lot as or in the primary residence and includes permanent provisions for living, sleeping, cooking and sanitation. Integrating ADUs in existing neighborhoods is a means of increasing the supply of affordable by design rental housing. The development of ADUs is also effective in dispersing affordable housing throughout the unincorporated areas and can provide housing to lower- and moderate-income individuals and families, as well as seniors and persons with disabilities. The County is currently updating its ADU ordinance to allow for the sale of an ADU separate from the primary residence pursuant to Government Code Section 65852.26. The County will continue to update its ADU ordinance to comply with current state law as needed during the planning period. The County will continue to further promote accessory dwellings.

ADUs provide added housing without added land cost, and as such, are more likely to be affordable to low- and moderate-income households on the rental market when compared to a conventional single-family dwelling on the rental market. The County will monitor production of ADUs as the planning period progresses and will consider implementation of additional actions if numbers of ADUs are not meeting target numbers anticipated in this Housing Element. The County has promoted the application of ADUs by streamlining the process and making the application available on the website. To promote housing mobility opportunities, the County will prioritize promotion of ADUs in high resource areas, such as Alhambra Valley, Reliez Valley, Briones, Alamo, Diablo, and Castle Hill areas while also continuing to encourage ADU production in all communities where affordable housing is needed.

Eight-Year Objectives: Publicize the ADU Program to increase public awareness. Approve building permits for 312 ADUs over the 8-year period (39 per year), targeting 150 of these ADUs in high resource areas to encourage socioeconomic integration through housing mobility opportunities for lower-income households.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Ongoing. Complete ADU ordinance updated that is currently underway by 2023. Continue to review ADU ordinance for any needed updates for compliance with current state law starting in 2024 and every two years thereafter through the end of the planning period.



## HE-A2.6

Action: Explore development of new programs or policies to potentially fund or incentivize affordable housing development. Programs will include updating ADU regulations as needed to remain compliant with state law and implement other community goals. In addition, programs may include implementing urban housing development projects (as allowed under SB 9), and creating objective design standards.

Background: Facilitating and allowing certain housing types and streamlining processes can help facilitate more housing choices for county residents.

Eight-Year Objectives: Explore and evaluate new ideas for potential updates and implementation.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Staff is working on an updated ADU Ordinance and expects adoption in 2023 (658526.6)

## HE-A2.7

Action: Facilitate development of tiny homes and other innovative types of housing products as alternatives to accommodate people who are unhoused or face housing instability. Evaluate the availability of County-owned land for such housing.

Eight-Year Objectives: Study the viability of tiny homes and other innovative housing types during the planning period. If new housing types prove viable, facilitate development of at least 25 units.

Funding Source: DCD

Responsible Agency/Department: DCD; Public Works

Timeframe: Evaluate properties for potential inventory by 2025

## HE-A2.8

Action: Amend the County Ordinance Code to include an ordinance authorized pursuant to Senate Bill 10 unless determined infeasible or nonbeneficial.

Background: Senate Bill (SB) 10 (2021) creates a voluntary process for local governments to access a streamlined zoning process for new multi-unit housing near transit or in urban infill areas, with up to 10 units per parcel, without need for California Environmental Quality Act (CEQA) analysis. However, much more analysis, consideration, and public involvement would be required to determine if SB 10's provisions are appropriate for the County. The County will review the provisions of SB 10 to explore how it might be used to enhance housing construction in areas close to transit.

Eight-Year Objectives: Adoption of County Ordinance Code amendments pursuant to SB 10.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Review and consideration by December 2025.



### HE-A2.9

Action: Promote funding for innovation pilot programs and capacity building technical assistance for affordable housing activities (acquisition, predevelopment, construction, rehabilitation, and operating and reserve funds).

Background: Measure X provides opportunities to create more programs and dedicate more resources towards innovative housing solutions.

Eight-Year Objectives: Promote innovation grant program.

Funding Source: DCD (Measure X and State Local Housing Trust Fund)

Responsible Agency/Department: DCD

Timeframe: Post an annual NOFA to award new housing solution ideas.

### Goal HE-3

Increase the supply of appropriate and supportive housing for special-needs populations. social and economic resources among all communities in the county so that Impacted Communities are not disproportionately burdened by environmental pollution or other hazards.

## Policies

### HE-P3.1

Expand affordable housing opportunities for households with special needs, including but not limited to seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, persons with development disabilities, farmworkers, and persons experiencing homelessness.

### HE-P3.2

Continue to support non-profit service providers that help meet the diverse housing and supportive service needs of the community.

### HE-P3.3

Continue to require inclusion of ADA accessible units in all new construction projects receiving County financing.

### HE-P3.4

Encourage housing programs that provide wrap-around social and supportive services for residents in need of services.

## Actions

### HE-A3.1

Action: Work with housing developers and housing service providers to address the needs of those with special housing needs.



Background: In addition to the development of affordable housing in general, the County will work with housing developers to provide housing appropriate to the County's special-needs populations, including persons with intellectual, developmental, mental and physical disabilities, seniors, large households, persons with HIV/AIDS, and farmworkers. Work with the Regional Center of the East Bay to identify any outstanding housing needs for its clients within unincorporated Contra Costa County, assist in identifying available housing that meets those criteria, and consider a rental assistance program to fill the gap between income levels and the cost of housing for persons with developmental disabilities. Collaborate with the Center to the extent feasible to establish an outreach program that informs residents within the county on housing and services available for persons with developmental disabilities.

Eight-Year Objectives:

- Provide financial incentives for the development of 110 units of housing targeted to special-needs populations (HOME, CDBG, and HOPWA).
- Engage with developers to obtain additional required financing.
- Consider allowing techniques such as smaller unit sizes, parking reduction, common dining facilities, and fewer required amenities for senior projects.
- Continue to fund housing developments appropriate for persons with developmental disabilities, including housing with wrap-around services.
- Collaborate with Regional Center of the East Bay to establish needs of those with developmental disabilities.

Funding Source: CDBG, HOME, ESG

Responsible Agency/Department: DCD

Timeframe: Annually: Include a priority for special-needs housing in the Notice of Funding Availability (NOFA) for CDBG, HOME, HOPWA, and local funds.

### HE-A3.2

Action: Continue to offer housing opportunities and funding to facilitate housing for those with disabilities. Create a reasonable accommodation procedure.

Background: Persons with disabilities represent an important special-needs group in Contra Costa County. To maintain independent living, persons with disabilities are likely to require assistance, which may include special housing design features, income support for those who are unable to work, and in-home supportive services for persons with mobility limitations. To provide additional housing opportunities for persons with disabilities, the County will continue to require inclusion of accessible units in all new construction projects receiving County financing (e.g., CDBG, HOME). Current federal regulations require that 5 percent of the units must be accessible to the physically impaired and an additional 2 percent of the units must be accessible to the hearing/vision impaired.

To facilitate the development of appropriate housing for persons with special needs, the County works to remove development constraints and provide reasonable accommodations in the development of such housing as requests are made. The County will evaluate and explore this practice as written reasonable accommodation procedures.



Eight-Year Objectives:

- Continue to require inclusion of 5 percent accessible units for physically impaired and 2 percent accessible units for hearing/visually impaired in all new construction projects receiving County financing, for a minimum of (5 units for physically disabled and 2 for visual/hearing impairment based on 100 assisted units).
- Provide 40 zero- and low-interest loans through the Neighborhood Preservation Program for accessibility improvements in existing affordable owner-occupied, single-family residential units by end of planning period.
- Implement reasonable accommodation procedures to provide special consideration in zoning and land use for housing for persons with disabilities. The County will strive to make accommodations a ministerial process, with a minimal processing fee, subject to the approval of the Zoning Administrator who will apply the following decision-making criteria:
  1. Whether the requested reasonable accommodation would require a fundamental alteration in the nature of a County program or law, including, but not limited to, land use and zoning.
  2. The request for reasonable accommodation will be for the benefit of an individual with a disability protected under fair housing laws.
  3. Whether the requested accommodation is necessary for the individual to have equal opportunity to use and enjoy the housing and housing-related services;

4. The requested accommodation would not impose an undue financial or administrative burden on the County.

Funding Source: DCD, CDBG, HOME, Measure X, PLHA

Responsible Agency/Department: DCD

Timeframe: Annually: Include a priority for special-needs housing in CDBG, HOME, HOPWA NOFA. Draft reasonable accommodation procedure by 2024.

### HE-A3.3

Action: Address needs of persons experiencing homelessness

Background: The Contra Costa Council on Homelessness appointed by the Board of Supervisors, provides advice and input on the operations of homeless services, program operations, and program development efforts in Contra Costa County. The Council provides a forum for the Continuum of Care to communicate about the implementation of strategies to prevent and end homelessness including the Forging Ahead Towards Preventing and Ending Homelessness (Ten-Year) Plan. These plans are designed to address the needs of persons experiencing homelessness. The goal of these programs is to ensure that unhoused individuals and families can obtain decent, suitable, and affordable housing in the County. Through the Ten-Year Plan, the County has adopted a “housing first” strategy, which states homelessness is first a housing issue, and that necessary supports and access to comprehensive and integrated services is essential to achieving long-term housing stability. In addition, the Continuum of Care collaborates with entities such as the Contra Costa Council on Homelessness, the Department of



Conservation and Development, and Cities to develop and implement transitional facilities, permanent and longer-term housing, and services for people facing homelessness and housing instability. The CoC provides adequate funding or other supports to maintain and/or abate homeless encampments and provide adequate security for the Coordinated Outreach, Referral and Engagement Teams (CORE). CoC programs link people experiencing homelessness with supportive services, such as behavioral health, substance use services, and primary healthcare.

Eight-Year Objectives:

- Continue to update the Ten-Year Plan
- Continue to work with local non-profit organizations and relevant public agencies to encourage funding of permanent supportive housing unit projects.
- Continue to support existing transitional housing programs, operated by the County and non-profit agencies.
- Continue to support the operations of existing emergency shelters.
- Continue to support licensed residential care facilities in all residential zones through the land use permit process for 7 or more residents.

Funding Source: Hearth Act, CDBG, HOPWA, HOME, ESG

Responsible Agency/Department: Health Services; DCD

Timeframe: Ongoing

### **Goal HE-4**

Improve housing affordability for both renters and homeowners.

### **Policies**

#### **HE-P4.1**

Encourage access to homeownership for lower- and moderate-income households.

#### **HE-P4.2**

Continue to support the provision of rental assistance to extremely low-, very low-, and low-income households.

#### **HE-P4.3**

Prioritize and encourage financial support to non-profit organizations that own or operate housing for persons with developmental disabilities.

#### **HE-P4.4**

Designate additional land to address the County's Regional Housing Needs Assessment (RHNA) allocation.



## Actions

### HE-A4.1

Action: Promote the availability of programs that facilitate homeownership opportunities, including assistance for first-time homebuyers.

Background: The County implements programs to provide affordable homeownership opportunities for lower- and moderate-income households as well as special-needs groups, including farmworkers. These programs include the following:

- New Construction: HOME and CDBG (in support of new construction) funds are used for new construction of single-family homes.
- Inclusionary Housing: Through the Inclusionary Housing Ordinance, homes affordable to lower- and moderate-income homebuyers are constructed as a component of market-rate housing developments.

Eight-Year Objectives: Continue to expand homeownership opportunities through a combination of financial support of new construction, and development agreements. Assist 50 first-time homebuyers over the cycle.

Funding Source: HOME, CDBG, Measure X

Responsible Agency/Department: DCD

Timeframe: Ongoing

### HE-A4.2

Action: Encourage affordable housing developers to seek state and federal funding to support the construction and rehabilitation of low-income housing, particularly for housing that is affordable to extremely low-income households. The County shall also seek state and federal funding specifically targeted for the development of housing affordable to extremely low-income households, should they become available.

Background: The County is an entitlement jurisdiction for the CDBG, HOME, and ESG programs. It is a sub-grantee for the HOPWA program. In addition, the County applies for and receives approximately \$7 million in Hearth Act funds on an annual basis. The County administers each of these grants for either most or the entire county (incorporated cities and towns, and the unincorporated areas). Existing Board of Supervisor policy gives priority to projects that provide housing affordable to and occupied by extremely low-income households. The County shall promote the benefits of this assistance program to develop housing for extremely low-income households on its web page and in its program materials.

Eight-Year Objectives: DCD will promote the ELI development assistance program to developers (for profit and non-profit) by including the priority for ELI housing in information on the HOME, CDBG, and HOPWA programs.

Funding Source: HOME, CDBG, Measure X, State (as funding is available)

Responsible Agency/Department: DCD

Timeframe: Annually include a priority for extremely low-income housing in CDBG, HOME, HOPWA NOFA.





## Goal HE-5

Provide adequate sites through appropriate land use and zoning designations to accommodate the County's share of regional housing needs.

## Policies

### HE-P5.1

Maintain an up-to-date site inventory that details the amount, type, and size of vacant and underutilized parcels, and assist developers in identifying land suitable for residential development.

### HE-P5.2

Provide adequate sites to meet the housing needs of special-needs groups, including seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, farmworkers, and the homeless.

### HE-P5.3


Promote mixed-use development by eliminating minimum area requirement to establish a P-1 District.

## Actions

### HE-A5.1

Action: Increase the supply of land zoned for high-density housing. This will include creation of new zoning districts for consistency with the new General Plan land use designations. Amend the General Plan and County Ordinance Code, as needed and detailed in Section 6.4, to provide adequate sites for at least 3,266 lower-income units

Background: To address the 2023-2031 RHNA, amend the General Plan and County Ordinance Code, to provide adequate sites for at least 3,266 lower-income units. Redesignating and rezoning parcels in the sites exhibits in Appendix A, Table B will address the shortfall of suitably designated and zoned sites to address the lower-income RHNA. The allowed base density in the land use district and County Ordinance Code designation on all listed sites will be amended to permit 30 dwelling units per acre (or greater) with a minimum density of 20 du/ac. With the proposed allowed density, each site will permit at least 16 units. At least half of these sites shall be designated for residential use only. The exception to this requirement is that lower income housing needs may be accommodated on sites designated mixed-use if those sites allow 100-percent residential use and require that residential uses occupy at least 50 percent of the total floor area of a mixed-use project. Some of the requirements of this action will be achieved through inclusion of new or revised development standards or updates to processes and procedures in the County Ordinance Code to address constraints identified in this Housing Element and facilitate increased densities. The redesignation and rezoning of the parcels to address the lower income shortfall must be completed within one year of the beginning of the 6th Cycle Housing Element planning period, which is January 31, 2024.



Eight-Year Objectives: Provide suitably zoned sites to address the lower-income RHNA, prioritizing housing opportunities in high-resource areas to facilitate housing mobility.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Amend zoning by January 31, 2024

### HE-A5.2

Action: Change zoning on parcels identified in one or more prior Housing Element to address state law under Government Code Section 65583.2(c) and facilitate housing opportunities on those parcels.

Background: The vacant parcels specified in Appendix A as having been included in the land inventories of the 5th Cycle (2014) and 4th Cycle (2009) Contra Costa County Housing Elements as suitable for lower-income units to address the County's RHNA allocation. Per Government Code Section 65583.2(c), to continue to include these parcels in that portion of the land inventory for this 6th Cycle Housing Element, the County will update all required zoning and General Plan provisions to allow projects that have at least 20-percent affordable units (extremely low, very low, or low) without discretionary review or "by right" (Government Code Section 65583.2 (i)).

Eight-Year Objectives: Make additional sites available for lower-income housing development.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Amend General Plan and zoning by January 31, 2024

### HE-A5.3

Action: Update mixed use designations in Land Use Element.

Background: The General Plan Land Use Element includes mixed-use land use designations. These mixed-use designations have enabled unique projects that combine residential uses, such as apartments or condominiums, with commercial and other non-residential uses. Such developments provide needed housing in close proximity to key services, such as transportation hubs. The County anticipates updating this category and increasing allowed densities as part of the Envision Contra Costa 2040 General Plan Update, which is currently underway.

Eight-Year Objectives: Expand usage of mixed-use land use designations to encourage additional mixed-use development with greater residential densities.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Update General Plan by 2024.

### HE-A5.4

Action: Continue to offer density bonuses and to update the local density bonus ordinance to maintain consistency with state law.



Background: In accordance with State law and the County’s Residential Density Bonus Ordinance, the County provides density bonuses to qualified new housing projects to facilitate development of affordable housing consistent with state and local laws.

Eight-Year Objectives: Continue to offer density bonuses and other development incentives to facilitate affordable housing development. Continue to provide information regarding the Density Bonus Ordinance to developers at the application and permit center in DCD as well as during pre-application meetings.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Update Residential Density Bonus Ordinance for ongoing compliance with state law annually, or as needed.

## HE-A5.5

Action: Facilitate lot consolidation for multi-family infill development.

Background: Many unincorporated areas designated for multi-family residential development are fragmented and contain lots that do not meet current minimum lot size standards. Consolidation of undersized lots would likely be necessary to provide an adequate land area to develop an economically feasible multi-family project. To facilitate the infill development of multi-family housing, the County has included some small multi-family residential sites in the sites inventory that have the potential for consolidation with adjacent properties.

The County will reach out to local developers and property owners to discuss development opportunities and incentives for lot consolidation to accommodate affordable housing units and consider additional incentives brought forth by developers.

As developers/owners approach the County with interest in lot consolidation, the County will consider deferring certain fees, waive lot merger fees for certain small contiguous lots, and provide concurrent/fast tracking of project application reviews to developers who provide affordable housing. The County will also pursue grant funding for parcel assemblage land banking when it is available.

Eight-Year Objectives:

- Encourage and support the consolidation of smaller, contiguous, residential parcels into larger parcels that would allow for the development of large, well-designed, multi-family development projects. Continue to offer a tiered density bonus program to encourage consolidation of small lots for multifamily development.
- Support consolidation as applicable housing applications are received.
- Pursue grant funding as feasible during planning period if California legislation and/or programs enable a tax-increment or similar program that leads to funding for site assembly.
- Encourage the construction of 20 lower-income units through lot consolidation to alleviate displacement risk in areas where development was not otherwise possible.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Biennially: Review site inventory and adjust for planned and completed developments. Annually: meet with developers to receive input about incentives to be created.

## Goal HE-6

Mitigate potential governmental constraints to housing development and affordability.

## Policies

### HE-P6.1

Establish and maintain development standards that streamline housing development while protecting quality of life goals.

### HE-P6.2

Provide financial and/or regulatory incentives where feasible and appropriate to offset or reduce the costs of affordable housing development, including density bonuses and flexibility in site development standards.

### HE-P6.3

Encourage P-1 zoning in areas with significant numbers of non-conforming parcels and uses.

### HE-P6.4

Expand efforts to provide for timely and coordinated processing of residential development projects to minimize project holding costs and encourage housing production.

## Actions

### HE-A6.1

Action: Update Title 8 of the County Ordinance Code

Background: The County regulates the type, location, density, and scale of residential development in the unincorporated areas primarily through the General Plan and County Ordinance Code. Zoning regulations are designed to protect and promote the health, safety, and general welfare of residents as well as implement the policies of the County General Plan. The County is engaged in an ongoing process of reviewing the County Ordinance Code for consistency with state laws. In addition, the County is embarking on a comprehensive update to their zoning. The main purpose of this review is to ensure that the County's requirements and standards do not act as a constraint to the development of affordable housing.

#### Eight-Year Objectives:

- Periodically review the County Ordinance Code and other ordinances to ensure to the extent feasible, that County policies and regulations do not constrain housing development and affordability.
- As part of the comprehensive zoning update, promote the diversification of buildings, lot sizes, and open spaces to produce an environment in harmony with surrounding existing and potential uses. This work will align with the new zoning districts and land use designations that will be put in place by January 31, 2024.



- Current revisions needed to the County Ordinance Code include:
  - Allow employee housing for six persons or fewer anywhere single-family residential uses are allowed to comply with the Employee Housing Act.
  - Establish a streamlined review process and standards for eligible projects under SB 35 (2017), as set forth under Government Code Section 65913.4.
  - To affirmatively promote more inclusive communities, review and revise the County's requirements for Residential Care Facilities with seven or more persons and permit them as a residential use subject only to those restrictions that apply to other residential dwellings of the same type in the same zone. These types of facilities are still subject to state licensing requirements.
  - Allow transitional and supportive housing in all zoning districts in the same way that other housing is allowed per SB 2 (2007) and also to allow supportive housing without discretionary review in areas zoned for residential use where multifamily and mixed uses are permitted, per Assembly Bill (AB) 2162 (2018).
  - Allow low-barrier navigation centers without discretionary review in compliance with AB 101 in areas zoned for mixed use and nonresidential zones permitting multifamily uses.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Complete update of County Ordinance Code including specified revisions by 2024. Ongoing – periodic review of zoning and subdivision ordinances.

## HE-A6.2

Action: Continue developing and implementing practices to further streamline approval of planning entitlements and issuance of building permits for residential projects.

Background: To expedite the review of residential projects, the County has implemented the following policies and actions:

- The County Zoning Administrator reviews development applications for projects with fewer than 100 units.
- The County receives development applications for large and complex projects that require approvals or comments from multiple County departments. A monthly meeting between upper management representatives facilitates review of these projects. Development issues are identified early in the project review and staff from the different departments collaborate to identify approaches to resolve the issues.
- The Application and Permit Center makes permit processing more streamlined by enhancing coordination of permitting services, including online application submittal.

Eight-Year Objectives: Continue monthly meetings with various County departments to review applications that require approvals or comments from more than one County department. Continue reducing time and cost for processing residential development applications to the greatest extent possible.



Funding Source: DCD, PWD, and HSD

Responsible Agency/Department: DCD, PWD and HSD

Timeframe: Meet monthly and ongoing

### HE-A6.3

Action: Continually monitor development impact fees (transportation, drainage, park, etc.) and proposed increases.

Background: The County collects fees on development to mitigate impacts on infrastructure and services. Requiring developers to construct site improvements and/or pay fees toward the provision of infrastructure and services increases the cost of housing development. While these costs may impact housing affordability, these requirements are deemed necessary to maintain the quality of life desired by county residents and are consistent with the goals and policies of the General Plan.

Eight-Year Objectives: Development impact fees that are proportional to the cost of impacts and do not unnecessarily hinder residential development.

Funding Source: DCD and PWD

Responsible Agency/Department: DCD; PWD

Timeframe: Monitor fees every two years

### HE-A6.4

Action: Establish processes to streamlining planning review of small residential development applications.

Background: DCD has implemented a “fast-track” permitting process for residential projects, such as small additions, interior remodels, window replacement, new decks, that can be reviewed and approved quickly. Applications for these small projects are processed in approximately five business days.

Eight-Year Objectives: Continue to implement programs to complete small project application reviews within five days of application submittal.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Ongoing

### Goal HE-7

Promote equal opportunity for all residents to reside in the housing of their choice.

## Policies

### HE-P7.1

Prohibit discrimination in the sale or rental of housing to anyone on the basis of race, color, ancestry, national origin, religion, disability, gender identity sexual orientation, familial status, marital status, or other such arbitrary factors.



### HE-P7.2

Provide financial support to non-profit organizations providing fair housing services.

### HE-P7.3

Enhance the opportunity for seniors, persons with disabilities, large households, single parents, persons with HIV/AIDS, persons with mental illness, and farmworkers to have access to housing.

### HE-P7.4

Ensure that housing programs prioritize the needs of underserved communities, benefit lower-income residents, and avoid gentrification as neighborhoods are improved.

## Actions

### HE-A7.1

Actions:

- Continue offering fair housing counseling and legal services.
- Continue providing public outreach and education regarding fair housing rights; specialized property owner, management, and lender training; rental home seeking and relocation services; and discrimination complaint processing and investigation.
- Continue requiring housing developers that receive County funding to submit a marketing plan detailing the developer's equal opportunity outreach program and demonstrating efforts to reach those people who are

least likely to hear about affordable housing opportunities.

- Continue to update the Analysis of Impediments (AI) to Fair Housing Choice on the HUD required schedule.
- Implement the following previously identified (in earlier actions in this section) actions to affirmatively further fair housing:
  - Place-based revitalization strategies: Action HE-A2.4
  - Strategies to facilitate housing mobility: HE-A2.1, HE-A2.3, HE-A2.4, HE-A2.5, HE-A5.1, and HE-A6.1
  - Strategies to expand affordable housing in high resource areas: HE-A2.5, HE-A5.1, HE-A5.5, and HE-A6.1
  - Strategies to reduce or prevent displacement risk: HE-A2.1, HE-A5.5, and HE-A7.2
- By December 2023, the County will identify community groups and service providers in all disadvantaged communities, and those at risk of gentrification if different. By June 2024, the County will meet with each of these groups or providers to identify community-based partnerships and strategies to promote place-based revitalization to improve living conditions through efforts not related to development.
- By June 2023, ensure that fair housing information is available in County buildings and on the County's website. Update materials annually, or as needed if more frequent.



- Promote the availability of multi-lingual resources by ensuring that County-provided services and materials are available in languages other than English or that they make clear the availability of interpretation or translation services. Translate materials and make materials available by December 2024.
- Meet with school districts by January 2024 to determine what, if any, outside factors impede student performance in certain areas of the County that can be alleviated, such as stable housing opportunities, childcare opportunities for working parents or guardians, and more. If a need for a specific program is identified, the County will pursue solutions, which may include:
  - Reviewing the County Ordinance Code to ensure childcare facilities are permitted in close proximity to schools and employment centers;
  - Meeting with developers to identify sites suitable and incentives to encourage development of housing that is affordable on a teacher’s salary; or
  - Supporting school applications for grants that may be used for teacher recruitment and retention bonuses, providing classroom materials, and other similar incentives to attract high-quality teachers.
- Implement programs and policies identified throughout the General Plan to affirmatively further fair housing and overall conditions in disadvantaged communities identified in the Assessment of Fair Housing.
- Working with the Housing Authority, implement a Housing Choice Voucher (Section 8) education program to share information about the program and available incentives with rental property owners and managers as well as training on avoiding discriminatory practices based on

income or other protected classes. Distribute this information at least annually to property owners and managers across the county, though with an emphasis on areas in central and southern Contra Costa County where there are no Public Housing opportunities available, a disproportionately low rate of voucher usage, and high performing schools.

- By December 2025, create an online resource, in multiple languages, for tenants to understand their rights related to Building Code standards, landlord and tenant responsibilities, and how to request repairs or improvements to their home, including information that is specific to County housing and Code Enforcement regulations.

Background: To promote fair housing, the County allocates CDBG funds to local non-profit organizations for fair housing counseling and legal services. Services offered typically include advocacy and collaboration in support of fair housing opportunities for all; public outreach and education regarding fair housing rights; specialized property owner, management, and lender training; rental home seeking and relocation services; and discrimination complaint processing and investigation.

All housing developers receiving financial assistance from the County are required to submit a marketing plan detailing the developer’s equal opportunity outreach program and demonstrating efforts to reach those people who are least likely to hear about affordable housing opportunities. Typical outreach includes distributing informational flyers to social service agencies, and housing authority offices. Advertisements are placed in local newspapers and publications in both English and prevalent non-English languages.





The Contra Costa Consortium has adopted the HUD-mandated Analysis of Impediments to Fair Housing Choice. The AI includes a comprehensive review of the County's laws, regulations, and administrative policies; an assessment of how those laws affect the location, availability, and accessibility of housing; and an assessment of conditions, both public and private, affecting fair housing choice.

Eight-Year Objectives: Affirmatively further fair housing. Continue to support local non-profit organizations for fair housing counseling and legal services. Carry out necessary actions to address the impediments to fair housing choice identified in the AI. See expected outcomes of actions identified in the first bullet for AFFH objectives.

Funding Source: CDBG, General Fund

Responsible Agency/Department: DCD, Clerk-Recorder, Workforce Development Board

Timeframe: Refer to each strategy in the affirmatively furthering fair housing (AFFH) program for metrics and specific milestones.

## HE-A7.2

Action: Prioritize projects that will not involve permanent relocation of residents, offer first right to return if temporary relocation is unavoidable.

Background: In allocating affordable housing funds, the County assigns priority to projects that do not involve permanent relocation (displacement). However, projects involving relocation may be funded if required to eliminate unsafe or hazardous housing conditions, reverse conditions of neighborhood decline, stimulate revitalization of a specific area, and/or accomplish high-priority affordable housing

projects. In such situations, the County monitors projects to ensure that relocation consistent with federal and state requirements is provided. Wherever feasible, displaced households and organizations are offered the opportunity to relocate into the affordable housing project upon completion.

In accordance with California Government Code Section 65583.2(g), the County will require replacement housing units subject to the requirements of California Government Code Section 65915(c)(3) on sites identified in the sites inventory when any new development (residential, mixed-use, or nonresidential) occurs on a site that has been occupied by or restricted for the use of lower-income households at any time during the previous five years.

This requirement applies to:

- Non-vacant sites
- Vacant sites with previous residential uses that have been vacated or demolished.

Eight-Year Objectives: Prevent permanent relocation, to the extent practicable, to reduce displacement risk and comply with state law regarding replacement housing units.

Funding Source: HOME, CDBG

Responsible Agency/Department: DCD

Timeframe: Ongoing



## Goal HE-8

Promote energy-efficient retrofits of existing dwellings and exceeding building code requirements in new construction.

### Policies

#### HE-P8.1

Participate in State and Bay Area regional efforts to reduce energy consumption.

#### HE-P8.2

Encourage healthy indoor air quality and noise levels in existing and new housing. Support efforts to retrofit existing housing units with multi-paned windows, air filtration systems, low-emission building materials, equipment and appliances, and other improvements that reduce indoor air and noise pollution while at the same time working to improve energy efficiency.

#### HE-P8.3

Locate below market-rate housing developments outside of mapped hazard zones as identified in the Health and Safety Element.

### Actions

#### HE-A8.1

Action: Continue to participate in regional programs and activities and increase installed solar capacity.

Background: Contra Costa County is actively involved in regional energy conservation and sustainable development activities. It is a member of the Bay Area Regional Energy Network, which provides rebates and incentives for energy conservation. The County has streamlined the permitting process for solar panels by creating a checklist that includes the required elements to process a permit application. The application and instructions are also available on the County's website.

Eight-Year Objectives: Continue to participate in regional programs and activities. Increase installed solar capacity countywide. Continue to provide expedited rooftop solar permitting.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Ongoing

#### HE-A8.2

Action: Adopt and implement Updated Climate Action Plan.

Background: The most recent update to the County's Climate Action Plan was adopted in December 2015, the Board of Supervisors adopted a Climate Action Plan. The 2015 CAP included sections covering the scientific and regulatory environment, an updated GHG inventory and forecast, a GHG reduction strategy for community-wide emissions, and implementation plan.

The County is currently preparing the 2022 Climate Action Plan Update to build on the legacy of its prior efforts by including an updated estimate of the County's energy use and GHG emissions, updated emissions reductions and



implementation and monitoring strategies, and a discussion of climate change impacts relevant to Contra Costa County. The 2022 CAP will identify energy efficiency and conservation and GHG reduction strategies that benefit residents through and beyond 2050, consistent with the State’s goals and programs to achieve statewide net carbon neutrality and carbon free energy by 2045.

Eight-Year Objectives: Implement Climate Action Plan components related to housing.

Funding Source: DCD

Responsible Agency/Department: DCD

Timeframe: Adopt Updated Climate Action Plan by 2024.

## B. RELATED PLANS

In addition to the Housing Element, the goals and policies presented earlier are implemented through a series of housing programs offered primarily through the County Department of Conservation and Development (DCD), the County’s Health Services Department, and the Housing Authority of Contra Costa County. The following plans prepared by these agencies help define the County’s overall housing strategy presented in this Housing Plan.

### 1. Contra Costa Consortium Consolidated Plan

The Consolidated Planning process for the Contra Costa Consortium is managed by DCD. The Consolidated Plan outlines the Consortium’s objectives and strategy for meeting its housing and community development needs using CDBG, HOME, NSP, ESG, and HOPWA funds.

For CDBG and ESG funds, programs are available to the Urban County, including the unincorporated areas, and the cities and towns of Brentwood, Clayton, Danville, El Cerrito, Hercules, Lafayette, Martinez, Moraga, Oakley, Orinda, Pinole, Pleasant Hill, San Pablo, and San Ramon. HOME-funded programs are available to the Contra Costa Consortium, including the Urban County and the cities of Antioch, Concord, Pittsburg, and Walnut Creek. HOPWA-funded activities are available to all jurisdictions in the County.

The funds provided by these programs can be used for new affordable rental housing, home-buyer assistance, rehabilitation assistance, supportive housing assistance, public facilities improvements, and can be used to provide a variety of services for lower-income families and individuals, and unhoused persons.

The 2020-2025 Consortium Consolidated Plan outlines four priority needs for the entire County, including: affordable housing, reduction and alleviation of homelessness, non-housing community development, and strengthening of partnerships between all levels of government and the private sector. The updated plan notes that through the first four years of the consolidated plan, 12 of the previous goals have been met, including providing social services and housing to 62,000 county residents and households, the construction of 188 rental units, and the rehabilitation of 149 rental units countywide.

### 2. Contra Costa Council on Homelessness/ Continuum of Care Strategy

The Contra Costa Council on Homelessness (CCCH) serves as the County’s Continuum of Care Board, and includes non-profit community and advocacy groups, the interfaith community, business organizations, and other relevant community groups. Its purpose is to implement key strategies identified in

the five-year Continuum of Care Plan and the Ten-Year Plan to End Homelessness. The Council is responsible for approving funding allocations for proposed projects and monitoring and tracking performance and compliance in coordination with the Council on Homelessness and HMIS Lead Agency. Contra Costa Continuum of Care Plan identifies priorities and strategies for meeting the housing and service needs of homeless and at-risk populations throughout the county. The Plan addresses gaps in existing facilities and services for homeless households and includes strategies with priorities to expand capacity in the following areas: homeless prevention, outreach and assessment activities; emergency shelter, transitional housing, and permanent housing affordable to extremely low income and unhoused households; and supportive service needs. The County's Ten-Year Plan to End Homelessness includes priorities to address three types of unhoused populations: the chronically unhoused, those discharged into homelessness, and the transitionally (or episodic) unhoused people. This will include programs and projects to increase income and employment opportunities for homeless households, expand needed support services and programs to prevent homelessness, and increase the availability of housing affordable to extremely-low income households and homeless persons.

### 3. Public Housing Agency Plan

The Housing Authority of Contra Costa County (HACCC) owns and operates the County's public housing projects and administers the Section 8 Rental Assistance program for County residents. HACCC prepares a five-year Public Housing Agency Plan (PHAP) and an annual Action Plan, which identifies strategies and actions to maintain and improve the public housing stock, expand the availability and use of Section 8 assistance throughout the County, and improve overall program administration.

**TABLE 6-39 QUANTIFIED EIGHT-YEAR OBJECTIVES**

Activity	Extremely Low Income	Very Low Income	Low Income	Moderate Income	Above Moderate Income	Total
New Construction	1,036	1,036	1,194	1,211	3,133	<b>7,610</b>
Rehabilitation	169	189	192	20	20	<b>590</b>
Acquisition/Preservation <sup>1</sup>	51	66	66	0	0	<b>183</b>

1. The new construction objectives are the same as the County's RHNA.  
 2. The units under the rehabilitation objective are addressed by Actions HE-A1.1, HE-A1.2, HE-A1.3, HE-A1.4, and HE-A2.4  
 3. The units to be preserved are addressed by Action HE-A1.5



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# A. APPENDIX A: SITES INVENTORY

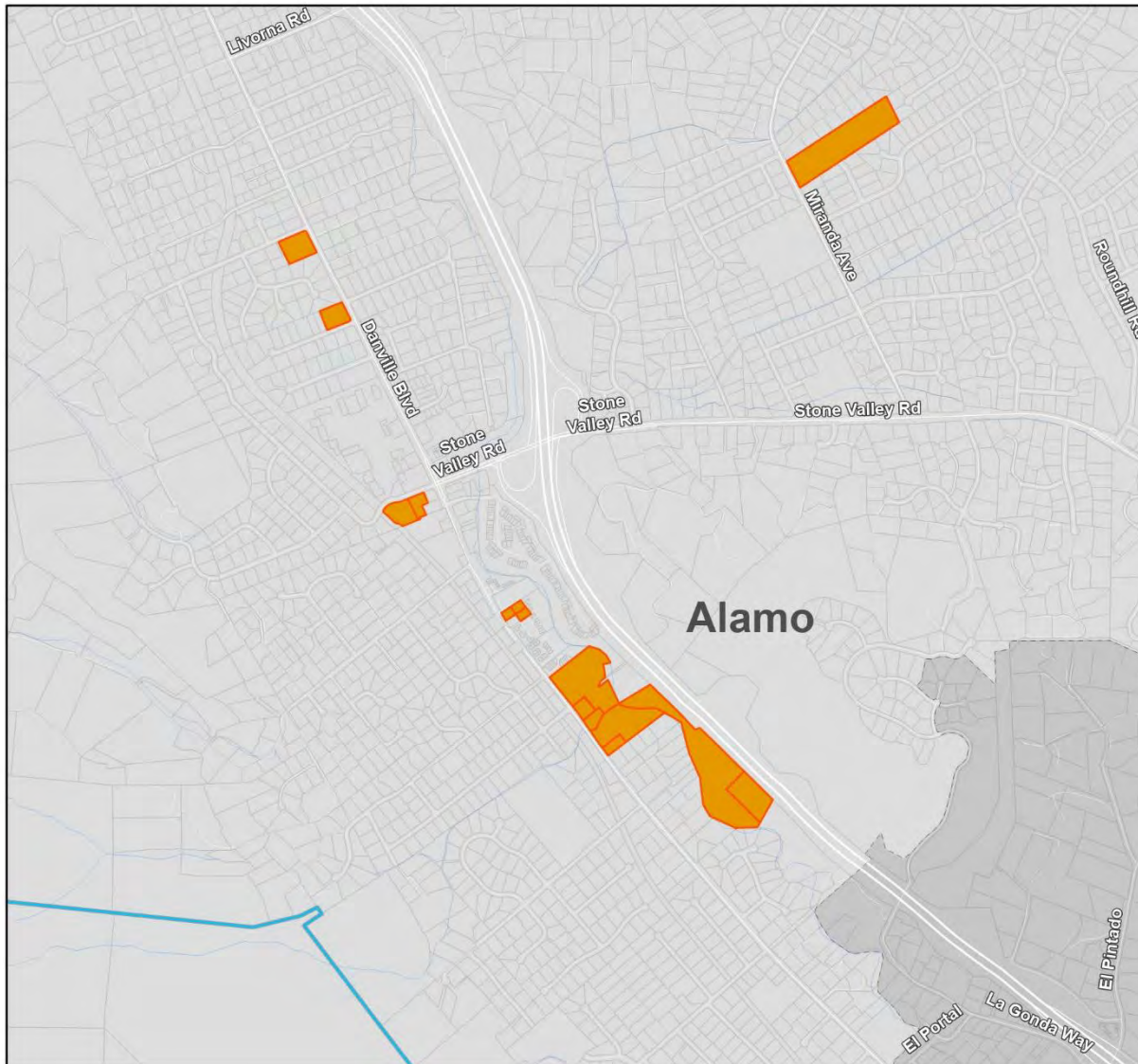
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## Sites Inventory Maps



# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Alamo



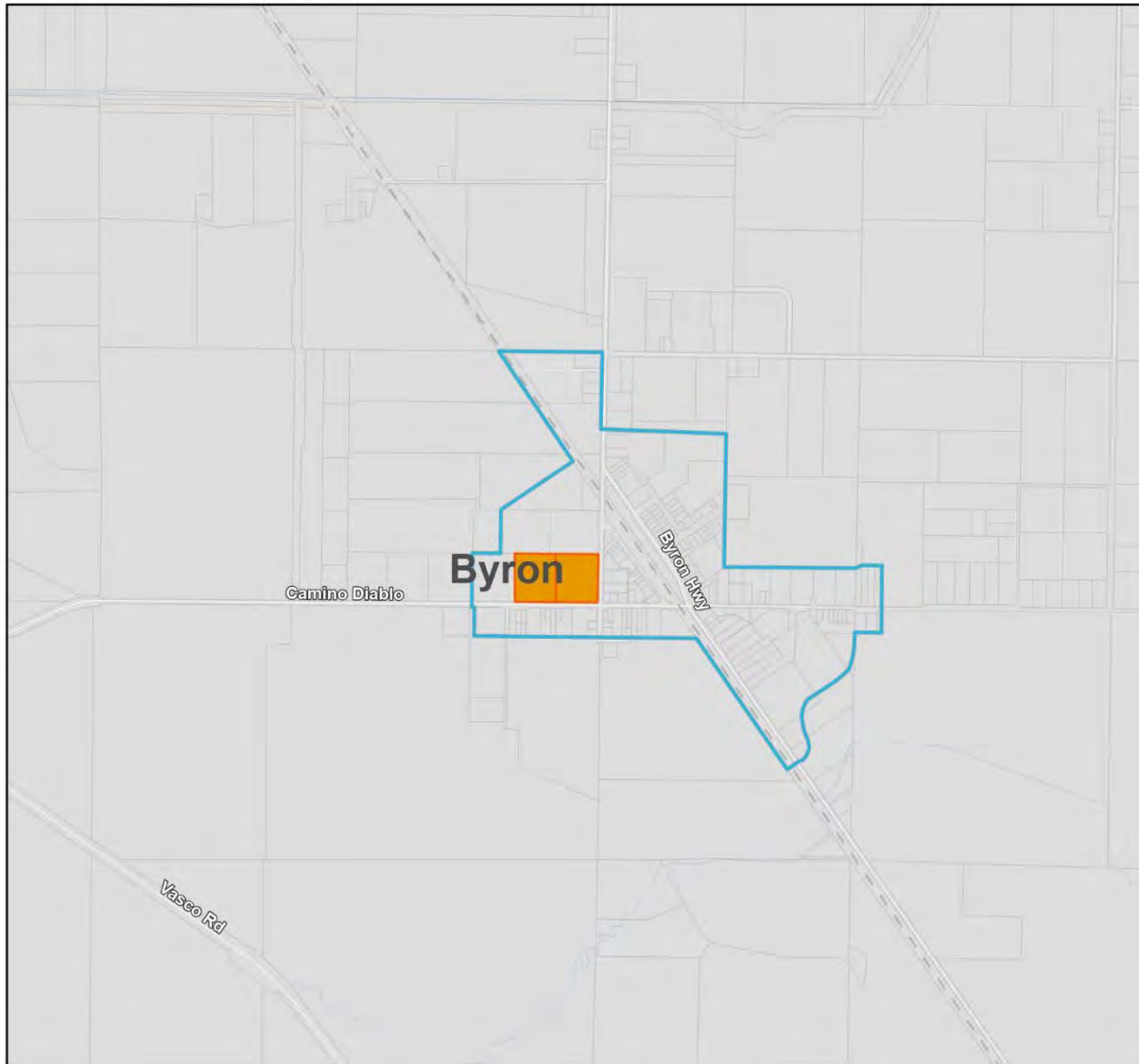
- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

**HOUSING ELEMENT**  
COUNTY OF CONTRA COSTA

**Sites Inventory:**  
**Byron**



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



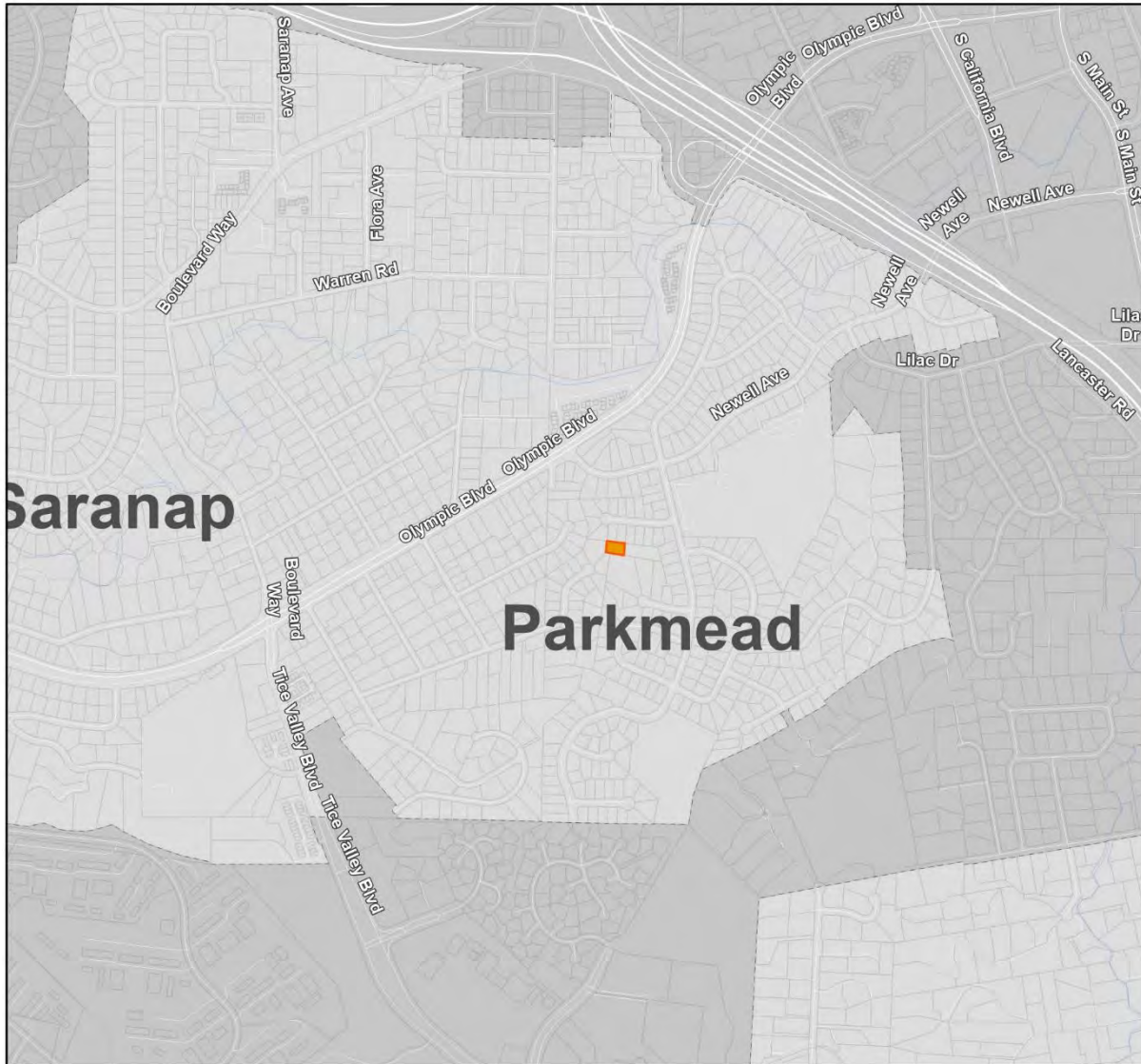
0 0.25 0.5 1 Miles





# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Saranap/Parkmead

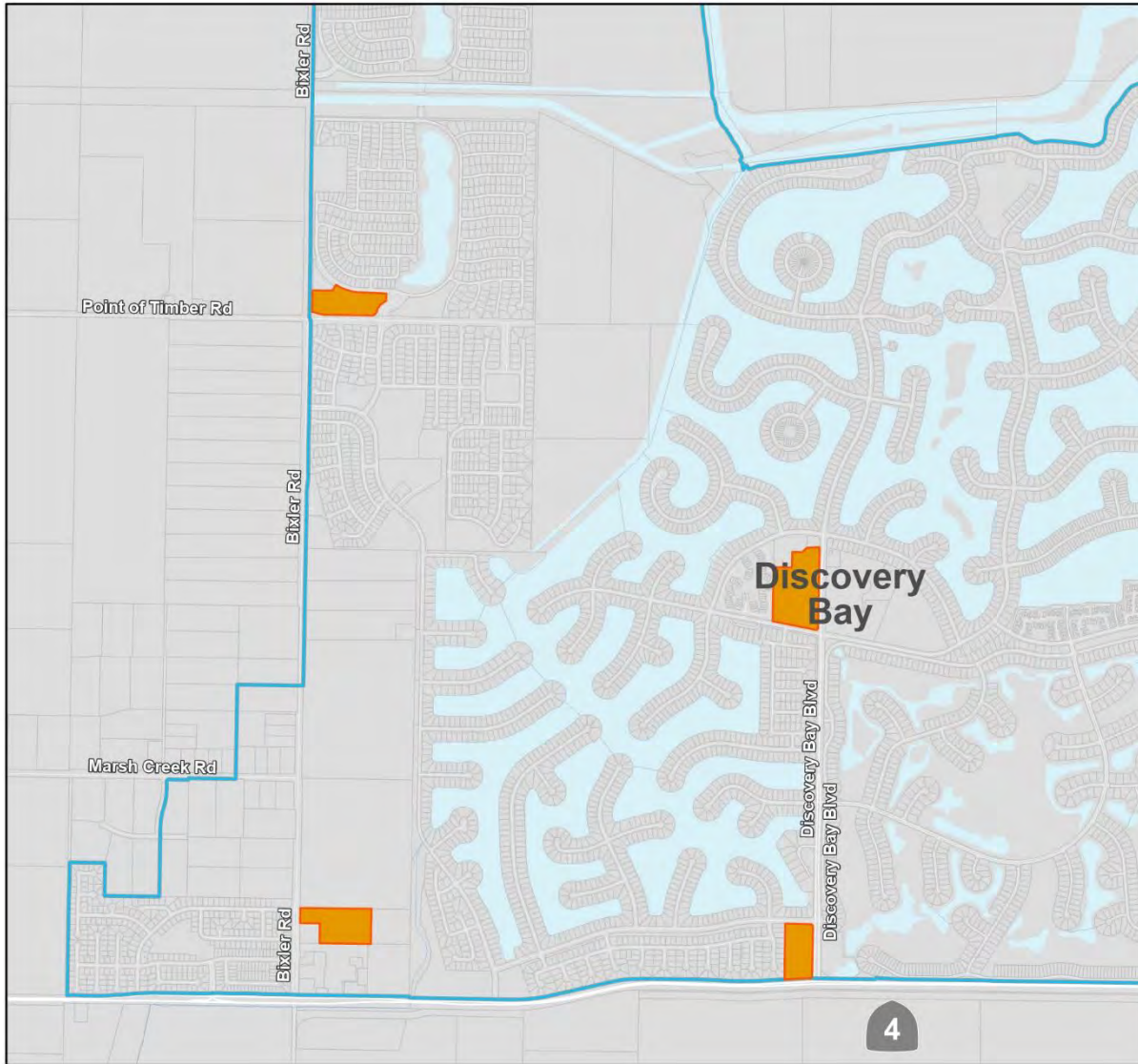


- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

**HOUSING ELEMENT**  
 COUNTY OF CONTRA COSTA



**Sites Inventory:**  
 Discovery Bay (West)

- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated

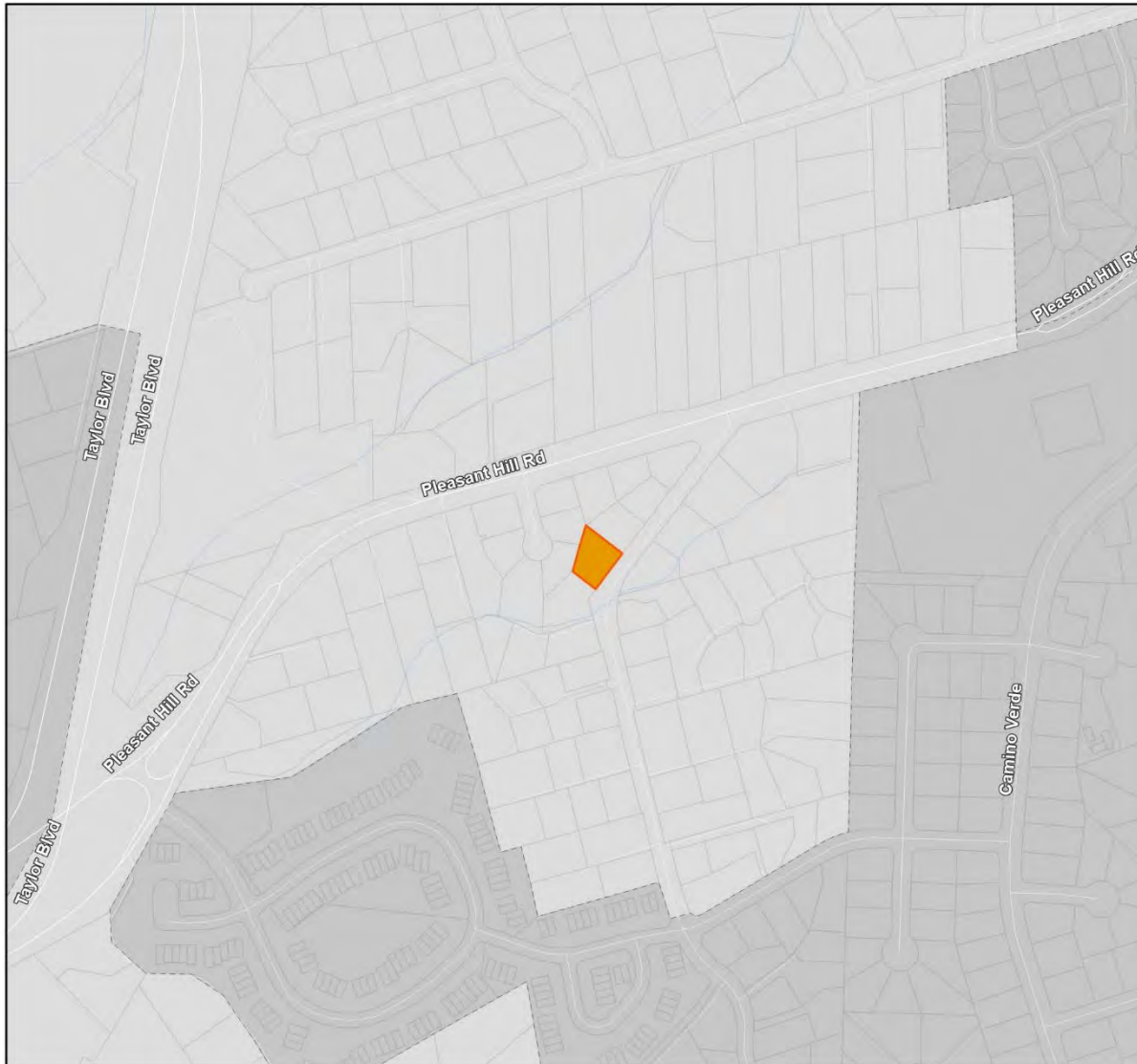


0 0.25 0.5 1 Miles



# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Reliez Valley



- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



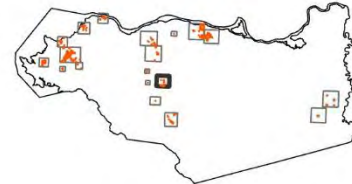
0 0.25 0.5 1 Miles

# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Contra Costa Centre



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated

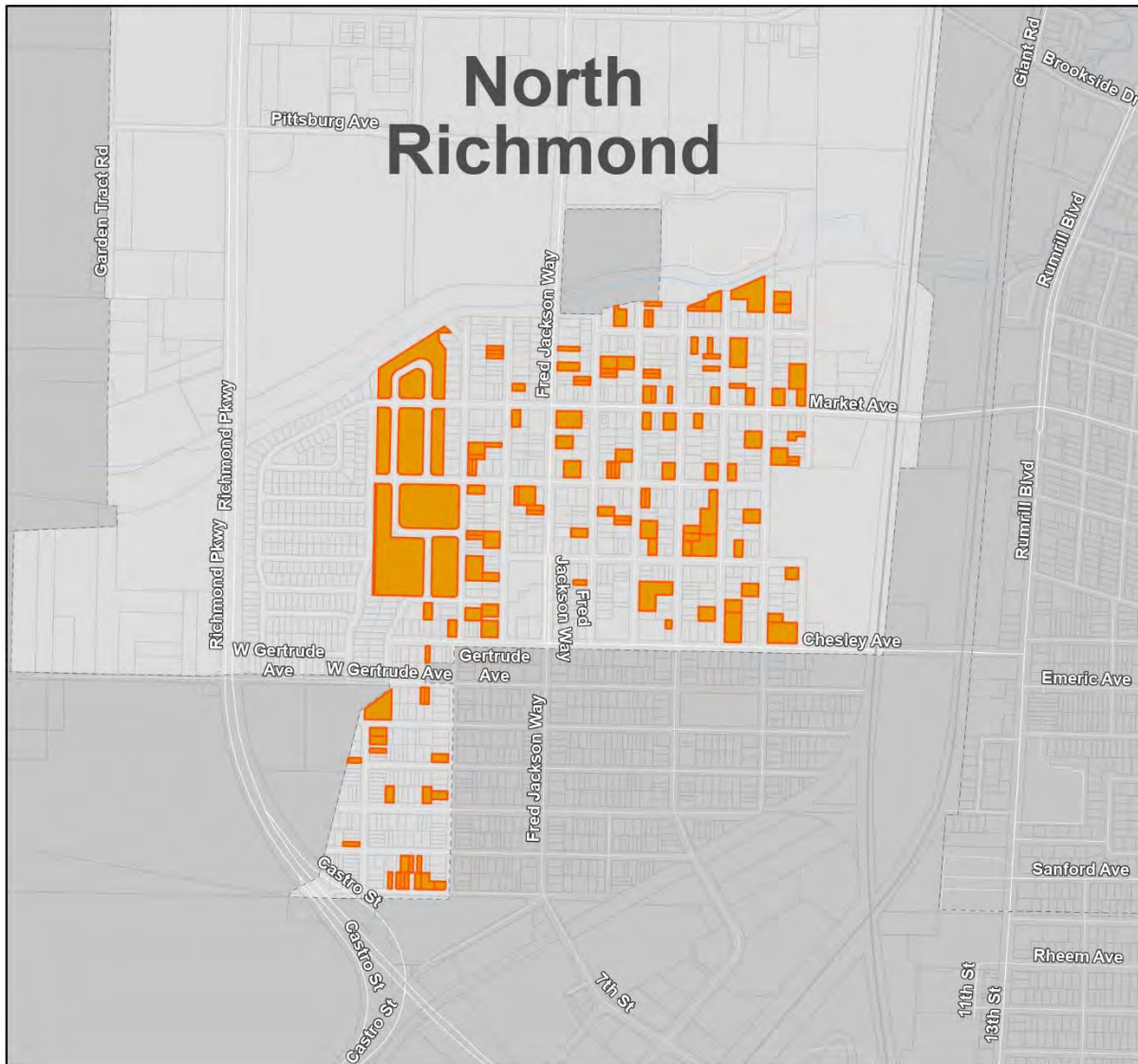


0 0.25 0.5 1 Miles



# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: North Richmond



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



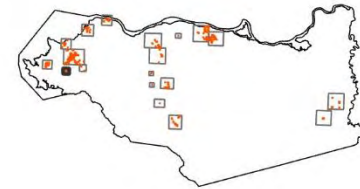
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**HOUSING ELEMENT**  
COUNTY OF CONTRA COSTA



**Sites Inventory:**  
East Richmond Heights

- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



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**HOUSING ELEMENT**  
COUNTY OF CONTRA COSTA

**Sites Inventory:**  
**El Sobrante (Southeast)**



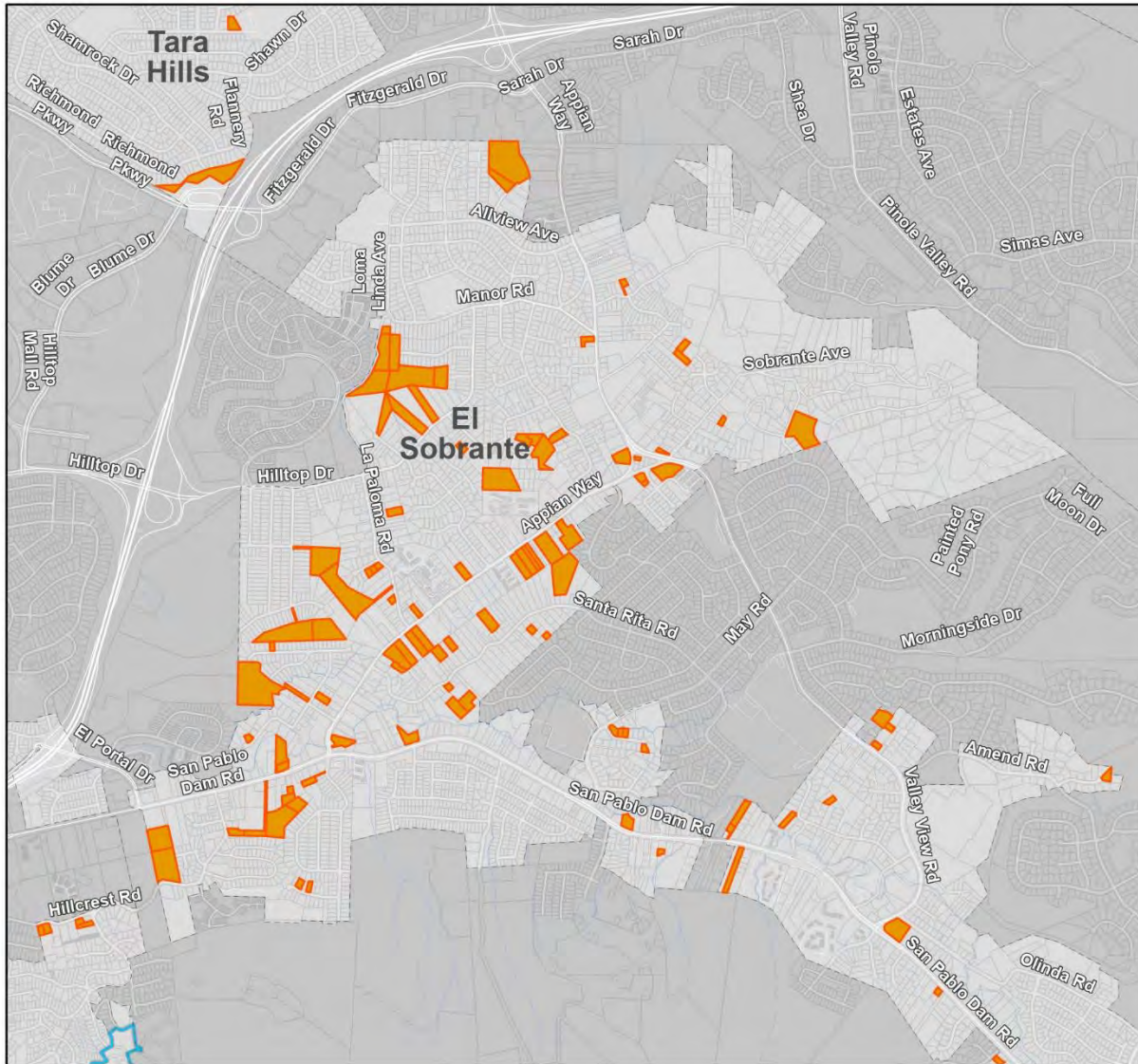
- City Limits
- ▭ Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



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**HOUSING ELEMENT**  
**COUNTY OF CONTRA COSTA**

**Sites Inventory:**  
**EI Sobrante/Tara Hills (South)**



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



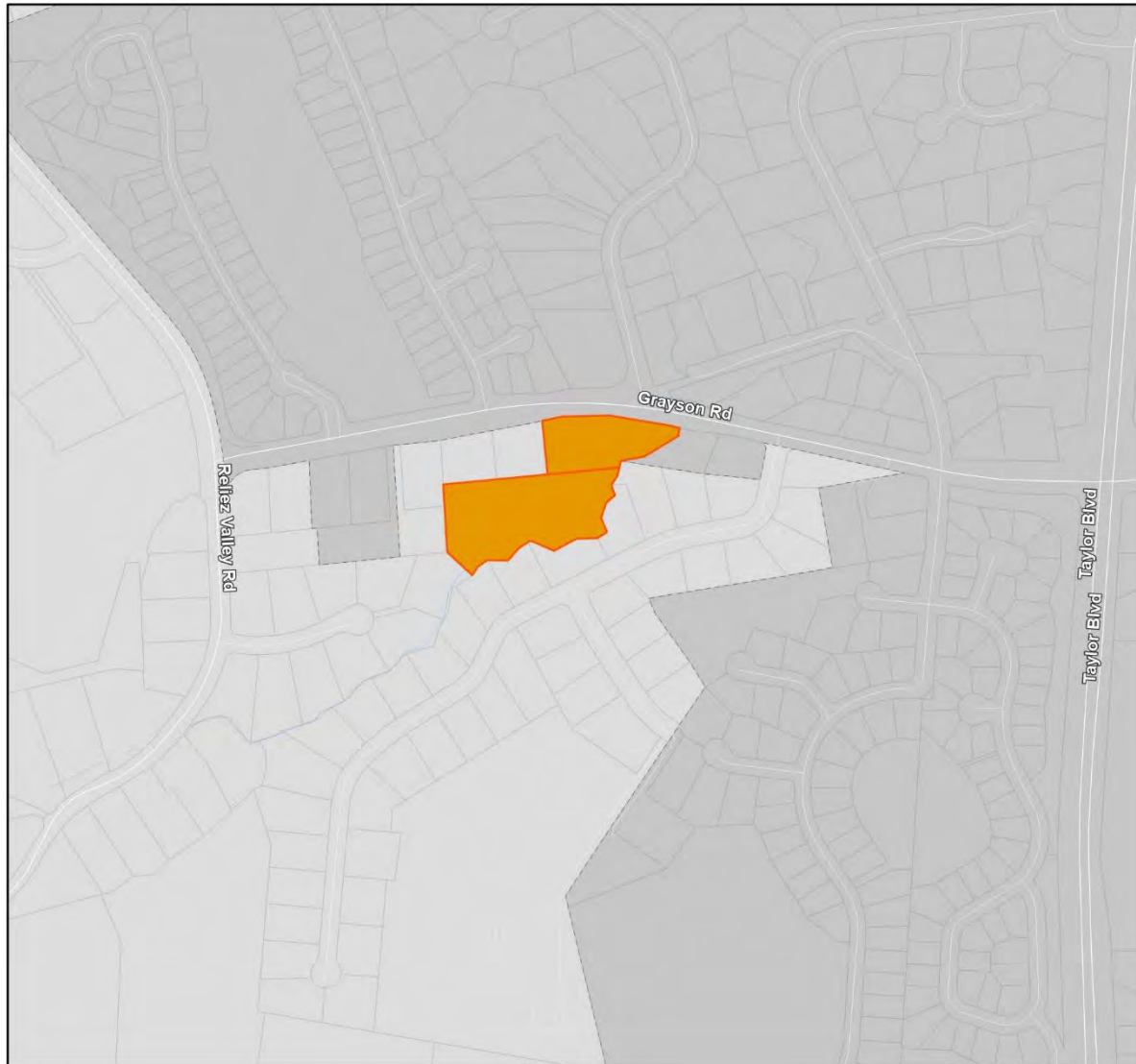
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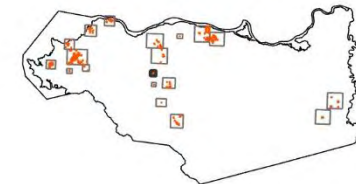


# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Pleasant Hill (Unincorporated)



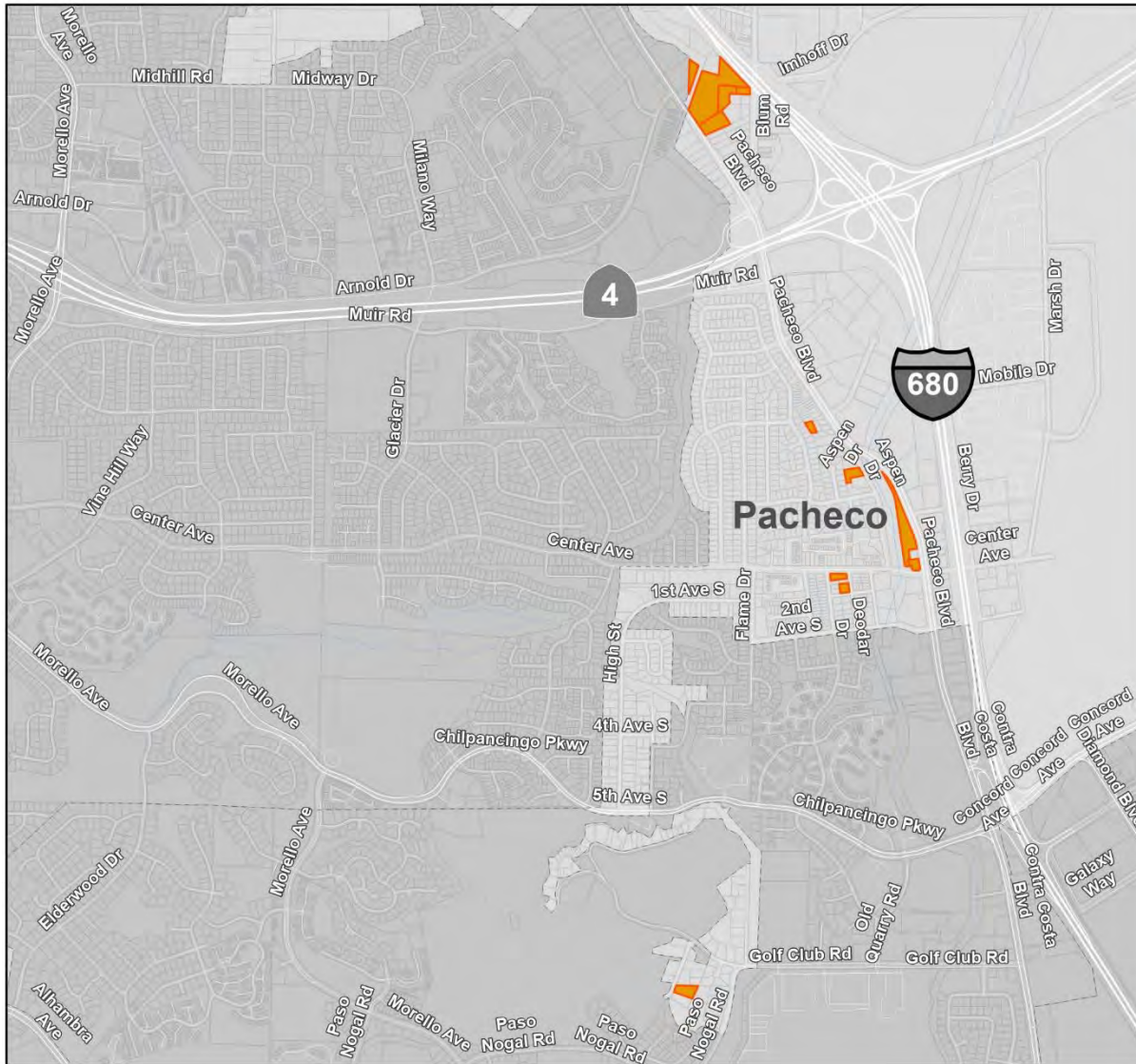
- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

**HOUSING ELEMENT**  
**COUNTY OF CONTRA COSTA**

**Sites Inventory:**  
**Pacheco**



- City Limits
- ▭ Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated

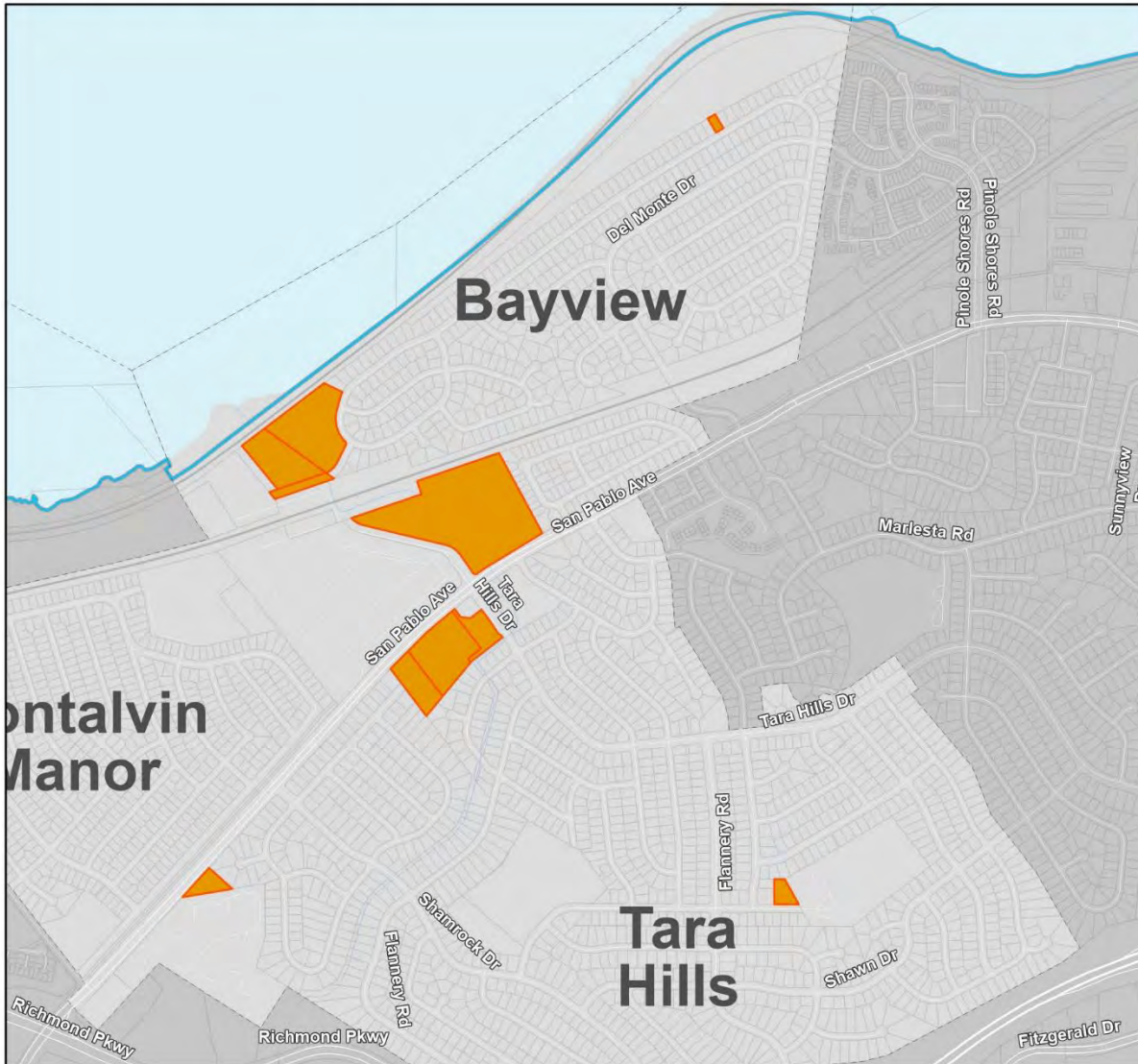


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# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Bayview/Tara Hills (North)



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated

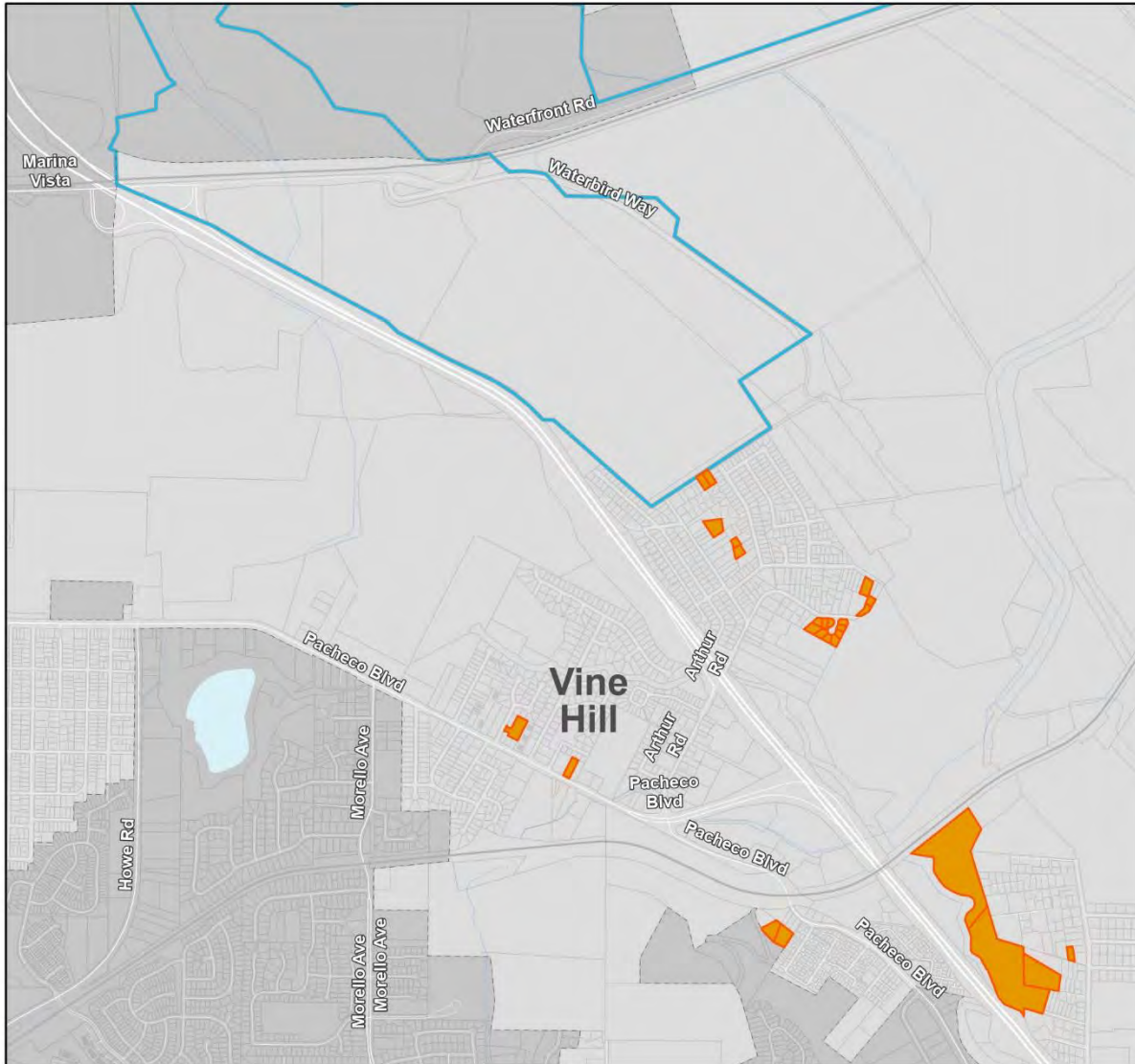


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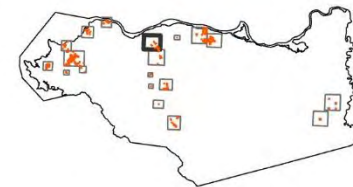


# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Vine Hill



- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



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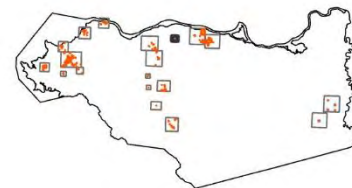


**HOUSING ELEMENT**  
COUNTY OF CONTRA COSTA

Sites Inventory:  
Clyde



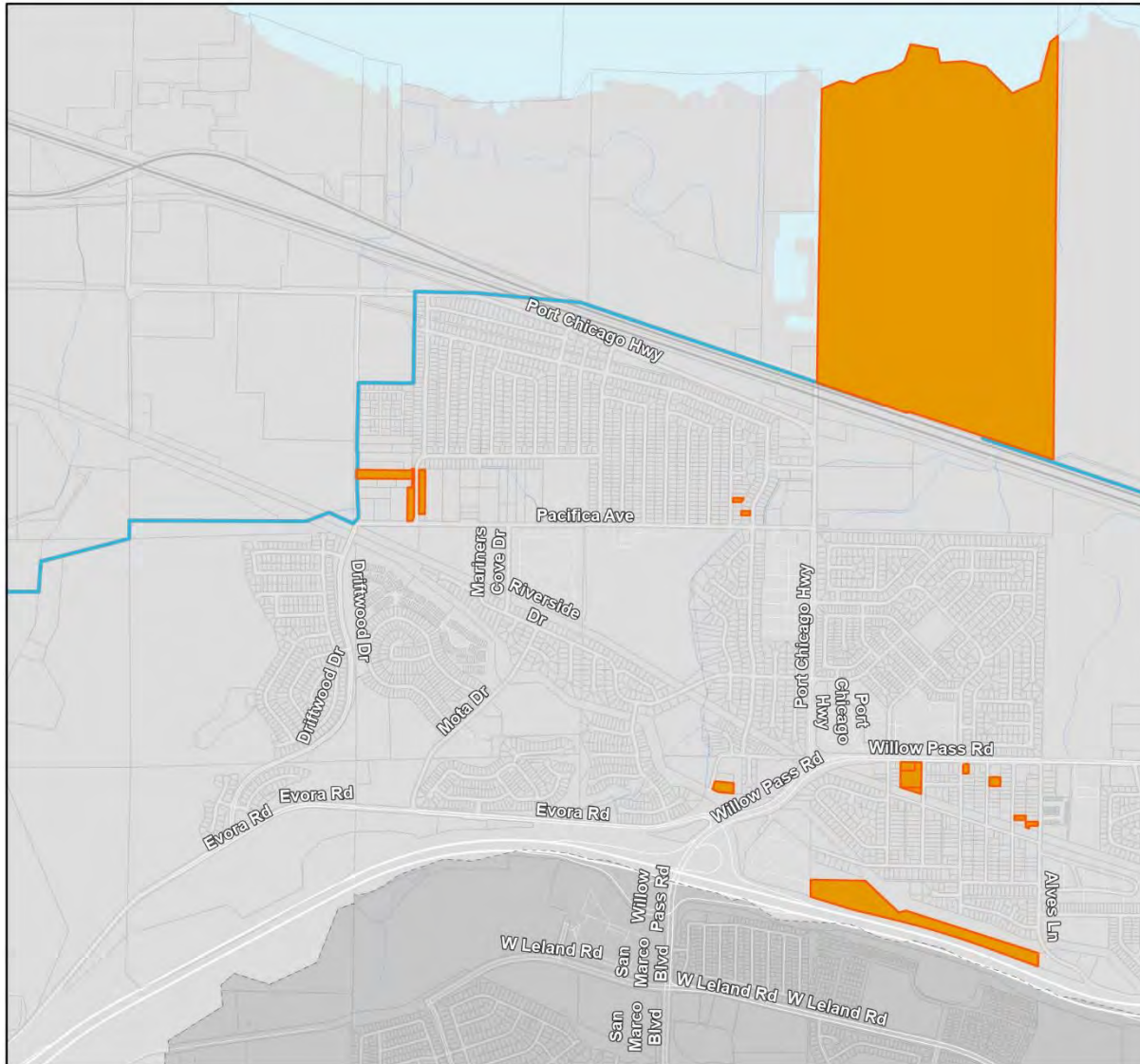
- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

**HOUSING ELEMENT**  
 COUNTY OF CONTRA COSTA

**Sites Inventory:**  
 Bay Point (West)



- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated

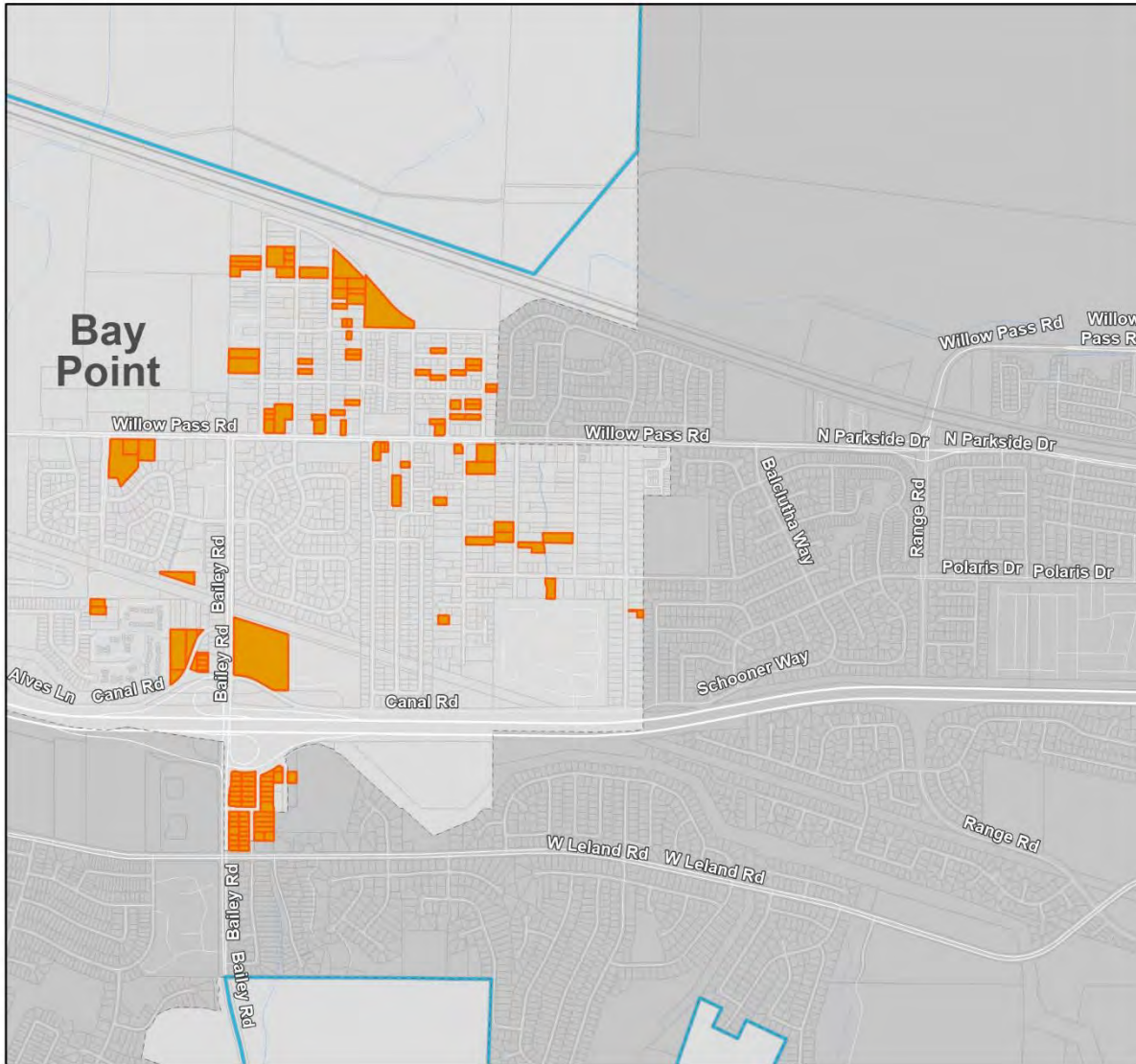


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# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Bay Point (East)



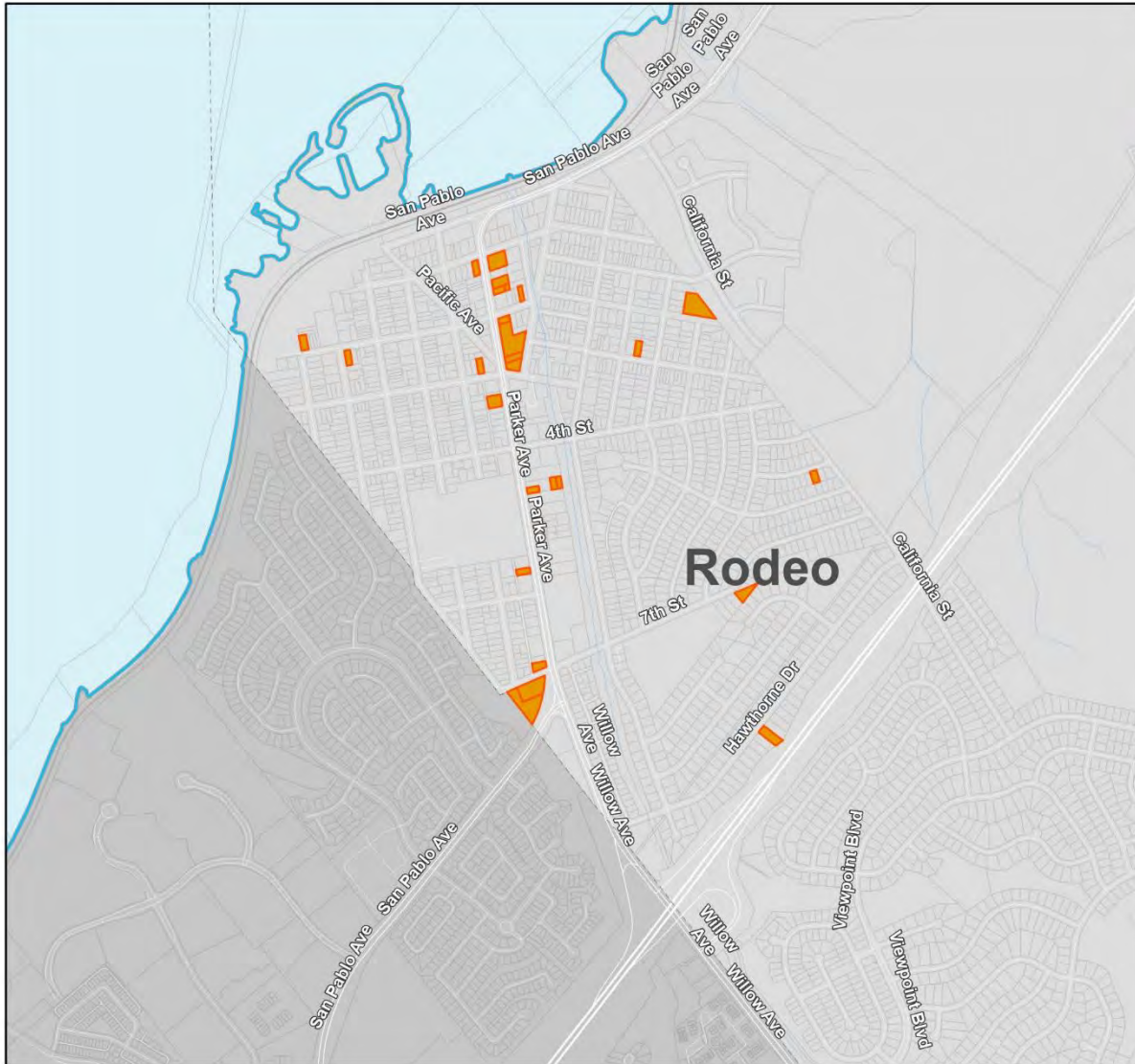
- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles

**HOUSING ELEMENT**  
**COUNTY OF CONTRA COSTA**

**Sites Inventory:**  
**Rodeo**



- City Limits
- ▭ Urban Limit Line
- ▭ Housing Element Sites
- ▭ Incorporated City
- ▭ Unincorporated



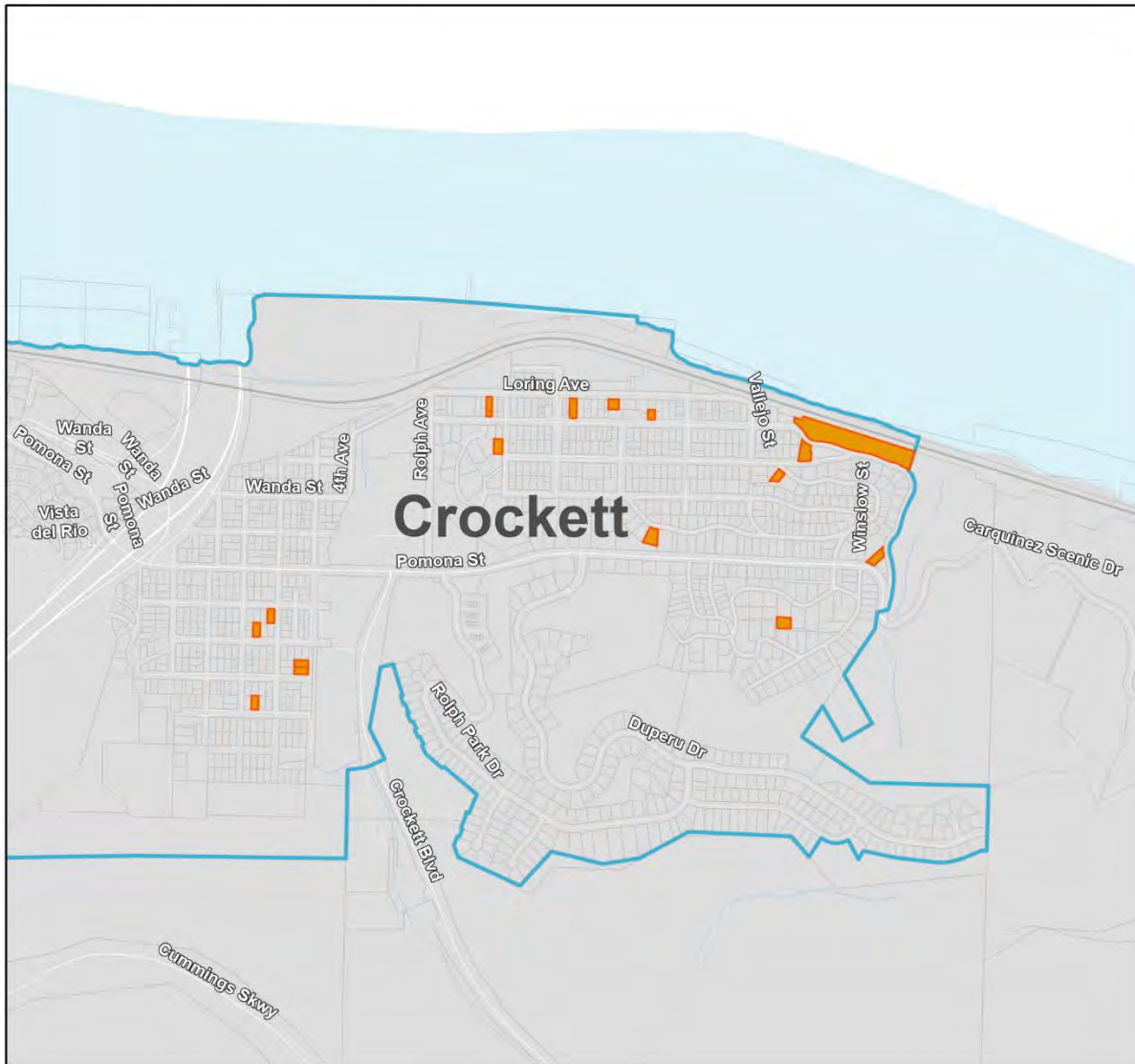
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# HOUSING ELEMENT COUNTY OF CONTRA COSTA

## Sites Inventory: Crockett



- City Limits
- Urban Limit Line
- Housing Element Sites
- Incorporated City
- Unincorporated



0 0.25 0.5 1 Miles



# Sites to Address the Lower Income RHNA



**SITE 1: APPIAN WAY CHURCH-OWNED SITE**



Parcel Number(s)	426261060
Street	Appian Way at Sobrante Ave. and Valley View Rd.
Site Size (acres)	0.87 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	13 lower-income units
Existing residential units on site	0
Small or Large Site?	No
<p>Mostly underutilized site with large parking lot and vacant buildings. Doesn't allow 100% residential development. Assuming 60% residential based on proposed General Plan Land Use Designation description.</p>	

**SITE 2: SAN PABLO DAM ROAD OLD GAS STATION**



<b>Parcel Number(s)</b>	<b>420010001 and 420010002</b>
Street	San Pablo Dam Rd. near Pitt Way
Site Size (acres)	1.58 acres total; 420010001: 0.39 acres and 420010002: 1.19 acres
Community	El Sobrante
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	One parcel vacant and the other non-vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	39 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes – small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Both parcels have the same owner. Mostly vacant site with a vacant boarded up old gas station site on the street. San Pablo Creek runs across the back end of the site so no development would occur in that area.	



**SITE 3: FORMER NURSERY SITE**



Parcel Number(s)	425252064
Street	Sobrante Ave. and Valley View Rd. at Shirley Vista St.
Site Size (acres)	1.33 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	20 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Non-vacant but the use is abandoned. Appears the former use was as a nursery. Doesn't allow 100% residential development. Assuming 60% residential based on proposed General Plan Land Use Designation description.	

**SITE 4: APPIAN WAY AND LA PALOMA ROAD**



<b>Parcel Number(s)</b>	<b>425210037 and 425210039</b>
Street	Appian Way across from La Paloma Rd.
Site Size (acres)	1.81 acres total; 425210037: 0.90 acres and 425210039: 0.91 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	One vacant and one non-vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	45 lower-income units
Existing residential units on site	1
Small or Large Site?	No
Both parcels have the same owner. Underutilized with one existing residential unit and otherwise vacant or in use for storage.	



**SITE 5: APPIAN WAY AT CORTE ARANGO**



<b>Parcel Number(s)</b>	<b>425230017, 425230036, 425230037, 425230038</b>
Street	4782, 4820, 4826, and 2800 Appian Way
Site Size (acres)	2.72 acres total; 425230017: 0.89 acres, 425230036: 0.47 acres, 425230037: 0.45 acres, 425230038: 0.91 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	67 lower-income units
Existing residential units on site	3
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Site is underutilized with residences/structures along Appian Way and a lot of flat undeveloped land behind. These 4 parcels are adjacent and have the same owner.	

SITE 6: APPIAN WAY AT SUNHILL CIRCLE



Parcel Number(s)	425240041
Street	Appian Way
Site Size (acres)	1.68 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	42 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant with a fair number of trees.	





**SITE 7: NEAR SAN PABLO DAM ROAD AND PITT WAY**



Parcel Number(s)	420192037 and 420192043
Street	San Pablo Dam Road
Site Size (acres)	1.23 acres total; 420192037: 0.76 acres, 420192043: 0.47 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	30 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
The parcels are adjacent with the same owner.	

**SITE 8: APPIAN WAY NEAR SANTA RITA ROAD**



<b>Parcel Number(s)</b>	<b>425210044 and 425210045</b>
Street	Santa Rita Road and Appian Way
Site Size (acres)	1.53 acres total; 425210044: 0.33 acres, 425210045: 1.30 acres
Community	El Sobrante
Current General Plan	Multiple Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	41 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
The two parcels are adjacent and have the same owner. Adjacent to Site 9.	



**SITE 9: 4462 APPIAN WAY**



Parcel Number(s)	425210042
Street	4462 Appian Way
Site Size (acres)	0.91 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	23 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel. Adjacent to Site 8.	

SITE 10: APPIAN WAY AND SAN PABLO DAM ROAD



<b>Parcel Number(s)</b>	<b>425170030</b>
Street	4150 Appian Way
Site Size (acres)	0.77 acres
Community	El Sobrante
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	19 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel	



**SITE 11: SAN PABLO DAM ROAD NEAR EL PORTAL DRIVE**



<b>Parcel Number(s)</b>	<b>420140003</b>
Street	San Pablo Dam Road
Site Size (acres)	2.12 acres
Community	El Sobrante
Current General Plan	Commercial
Current Zoning	Retail Business
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	R-80
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	54 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel	

SITE 12: HILLCREST ROAD AND PITT WAY



<b>Parcel Number(s)</b>	<b>420150030, 420150033 and 420184015</b>
Street	3900 Hillcrest Road
Site Size (acres)	4.16 acres total; 420150030: 0.45 acres, 420184015: 2.78 acres, 420150033: 0.93 acres
Community	El Sobrante
Current General Plan	San Pablo Dam Road Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	81 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
These parcels all have the same owner.	



**SITE 13: APPIAN WAY NEAR PEBBLE DRIVE**



<b>Parcel Number(s)</b>	<b>425100056</b>
Street	4653 Appian Way
Site Size (acres)	0.56 acres
Community	El Sobrante
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	14 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel.	

SITE 14: 4TH STREET NEAR GROVE AVENUE



Parcel Number(s)	409100004
Street	Fifth Street
Site Size (acres)	0.58 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	6 lower-income units
Existing residential units on site	6
Small or Large Site?	No

There are abandoned houses on this site. All parcels are owned by the Contra Costa County Housing Authority.





**SITE 15: END OF 6<sup>TH</sup> STREET**



Parcel Number(s)	409292001
Street	Sixth Street
Site Size (acres)	0.61 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	13 lower-income units
Existing residential units on site	8
Small or Large Site?	No

All of these parcels are owned by the Contra Costa County Housing Authority. The site contains some abandoned houses.

SITE 16: CARMEN LANE



Parcel Number(s)	431010010 and 431010011
Street	11 and 49 Carmen Lane
Site Size (acres)	1.05 acres total; 431010010: 0.79 acres, 431010011: 0.26 acres
Community	El Sobrante
Current General Plan	Single Family Residential
Current Zoning	Single Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	26 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
These parcels are non-vacant but one of the parcels is underutilized. Both parcels have the same owner.	



**SITE 17: SOLANO AVE. NEAR ALFARO AVE.**



<b>Parcel Number(s)</b>	<b>096043002</b>
Street	178 Solano Avenue
Site Size (acres)	0.64 acres
Community	Bay Point
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	16 lower-income units
Existing residential units on site	2
Small or Large Site?	No
This parcel is non-vacant but very underutilized.	

**SITE 18: DANVILLE BLVD. AND CASA MARIA CT.**



<b>Parcel Number(s)</b>	<b>197010013, 197010014, 197010016</b>
Street	20, 40, and 50 Casa Maria Court
Site Size (acres)	0.71 acres total; 197010013: 0.23 acres, 197010014: 0.24 acres, 197010016: 0.24 acres
Community	Alamo
Current General Plan	Multiple Family Residential
Current Zoning	Multiple Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	17 lower-income units
Existing residential units on site	12
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
All of these parcels are adjacent to one another and have the same owner.	



**SITE 19: POINSETTIA AVE.**



<b>Parcel Number(s)</b>	<b>096044001, 096044009, 096044010, and 096050007</b>
Street	Suisun Avenue and 164 Poinsettia Avenue
Site Size (acres)	2.18 acres total; 096044001: 0.42 acres, 096044009: 0.33 acres, 096044010: 0.34 acres, 096050007: 1.09 acres
Community	Bay Point
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	50 lower-income units
Existing residential units on site	4
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
The existing use on these parcels is car storage. They have the same owner and are catty corner to each other.	

**SITE 20: WILLOW PASS RD. AT BELLA VISTA AVE.**




Parcel Number(s)	095081020 and 095081023
Street	29 Bella Vista Avenue and 2239 Willow Pass Road
Site Size (acres)	1.49 acres total; 095081020: 0.77 acres, 095081023: 0.71 acres
Community	Bay Point
Current General Plan	095081020: Single Family Residential, 095081023: Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	68 lower-income units
Existing residential units on site	2
Small or Large Site?	No

These parcels are non-vacant, but underutilized. There are two houses on the parcels, a couple of small structures, and RVs. The parcels are adjacent and have the same owner.



**SITE 21: NORTH RICHMOND CLUSTER OF HOUSING AUTHORITY SITES**

<p>Parcel Number(s)</p>	<p>408160016, 409210011, 409210020, 409210021, 409210022, 409210023, 409210024, 409210025, 409210026</p>
<p>Street</p>	<p>Market Avenue, Silver Avenue, 135 W Grove Avenue, First Street, N Jade Street, Market Avenue</p>
<p>Site Size (acres)</p>	<p>11.50 acres total; 408160016: 0.16 acres, 409210011: 0.53 acres, 409210020: 0.67 acres, 409210021: 1.37 acres, 409210022: 2.16 acres, 409210023: 3.03 acres, 409210024: 1.28 acres, 409210025: 0.70 acres, 409210026: 1.60 acres</p>
<p>Community</p>	<p>North Richmond</p>
<p>Current General Plan</p>	<p>408160016: Single Family Residential, all other parcels: Multiple Family Residential</p>
<p>Current Zoning</p>	<p>Area Wide Planned Unit</p>



Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	1 non-vacant parcel, the rest vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	228 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
This set of parcels is known as Las Deltas and all parcels are owned by the Contra Costa County Housing Authority. Nearly all parcels are vacant except for the parcel with the community center which will remain with development of a new project.	





**SITE 22: N. BROADWAY AVE. AND ALFARO AVE.**

	
<b>Parcel Number(s)</b>	<b>096041001, 096041013, 096041026</b>
Street	187, 195, and 199 N Broadway Avenue
Site Size (acres)	1.06 acres total; 096041001: 0.33 acres, 096041013: 0.35 acres, 096041026: 0.37 acres
Community	Bay Point
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	26 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
<p>These three adjacent parcels could be consolidated, and they are all owned by the Contra Costa County Redevelopment Agency.</p>	

SITE 23: SOUTHWOOD DRIVE



Parcel Number(s)	403020013, 403020009, 403482043
Street	Cypress Avenue
Site Size (acres)	7.91 acres total; 403020013: 0.59 acres, 403020009: 2.77 acres, 403482043: 4.55 acres
Community	Bay View
Current General Plan	Public Semi-Public
Current Zoning	403020013 and 403020009: Area Wide Planned Unit, 403482043: Single Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	201 lower-income units
Existing residential units on site	0
Small or Large Site?	No

These three adjacent parcels could be consolidated. All are owned by West Contra Costa Unified School District.



**SITE 24: POINSETTIA AVE. AND WILLOW PASS RD.**



<b>Parcel Number(s)</b>	<b>096033037 and 096033039</b>
Street	15 Poinsettia Avenue and 2544 Willow Pass Road
Site Size (acres)	0.50 acres total; 096033037: 0.15 acres, 096033039: 0.35 acres
Community	Bay Point
Current General Plan	096033037: Single Family Residential, 096033039: Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	One vacant and one non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	26 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
These parcels have the same owner and are adjacent.	

SITE 25: SAPONE LANE



Parcel Number(s)	095021002
Street	77 Sapone Lane
Site Size (acres)	0.57 acres
Community	Bay Point
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	14 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel. This is a repeat site from the 4 <sup>th</sup> and 5 <sup>th</sup> Cycle Housing Elements.	



**SITE 26: N. BROADWAY AVE. NEAR ALFARO AVE.**

<b>Parcel Number(s)</b>	<b>096050011</b>
Street	210 N Broadway Avenue
Site Size (acres)	0.80 acres
Community	Bay Point
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	20 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel	

SITE 27: BEL AIR LANE



Parcel Number(s)	093170056
Street	190 Bel Aire Lane
Site Size (acres)	0.56 acres
Community	Bay Point
Current General Plan	Multiple Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential High– 30 to 70
Proposed Zoning	M-60
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 70
Realistic Units	33 lower-income units
Existing residential units on site	0
Small or Large Site?	No
This is owned by the Contra Costa County Redevelopment Agency.	



**SITE 28: PARKER AVE. BETWEEN 1<sup>ST</sup> AND 2<sup>ND</sup> STREETS**



Parcel Number(s)	357171019, 357171008, 357171020
Street	185 Parker Avenue
Site Size (acres)	0.39 acres total; 357171019: 0.11 acres, 357171008: 0.23 acres, 357171020: 0.04 acres
Community	Rodeo
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	One vacant and two non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	23 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
The non-vacant parcel is underutilized and contains a small structure and paved area. Parcels are adjacent with the same owner.	

**SITE 29: FRED JACKSON WAY AND MARKET AVE.**



<b>Parcel Number(s)</b>	<b>409191001</b>
Street	308 Market Avenue
Site Size (acres)	0.35 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	4 lower-income units
Existing residential units on site	4
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There are abandoned houses on this site. Owned by the Contra Costa County Housing Authority.	





**SITE 30: 1730 FRED JACKSON WAY**



Parcel Number(s)	409191013
Street	1730 Fred Jackson Way
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	1 lower-income unit
Existing residential units on site	1
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Contains one abandoned house and at least one occupied house. Owned by the Contra Costa County Housing Authority.	

SITE 31: SAN PABLO AVE. AT TARA HILLS DR.



<b>Parcel Number(s)</b>	<b>403211027</b>
Street	16330 San Pablo Avenue
Site Size (acres)	3.63 acres
Community	Montalvin Manor
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	57 moderate-income units and 174 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Existing use is an underutilized older strip mall.	



**SITE 32: 7<sup>TH</sup> ST. AT RODEO AVE.**



<b>Parcel Number(s)</b>	<b>357120002 and 357120003</b>
Street	No address
Site Size (acres)	1.44 acres total; 357120002: 0.65 acres, 357120003: 0.79 acres,
Community	Rodeo
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	91 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Existing use is a junk yard.	

**SITE 33: 7<sup>TH</sup> ST. AND CHESLEY AVE.**



Parcel Number(s)	409132007
Street	699 Chesley Avenue
Site Size (acres)	0.51 acres
Community	North Richmond
Current General Plan	Multiple Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	32 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Most of the parcel is vacant and the one existing building is not in good condition.	



**SITE 34: SAN PABLO AVE. NEAR SKYLINE**



<b>Parcel Number(s)</b>	<b>403211024</b>
Street	San Pablo Avenue
Site Size (acres)	1.69 acres
Community	Montalvin Manor
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	26 moderate-income units and 81 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel	

SITE 35: TARA HILLS DR. AND SAN PABLO AVE.



<b>Parcel Number(s)</b>	<b>403211026</b>
Street	San Pablo Avenue
Site Size (acres)	1.14 acres
Community	Montalvin Manor
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	18 moderate-income units and 54 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel	



**SITE 36: 1<sup>ST</sup> ST. AND PARKER AVE.**



Parcel Number(s)	357171010
Street	111 Parker Avenue
Site Size (acres)	0.42 acres
Community	Rodeo
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	26 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Not adjacent to other parcels with same owner.	

**SITE 37: WILLOW PASS RD. NEAR CLEARLAND DR.**



<b>Parcel Number(s)</b>	<b>093081027, 093081028, 093081029</b>
Street	Willow Pass Road
Site Size (acres)	1.81 acres total; 093081027: 0.52 acres, 093081028: 0.52 acres, 093081029: 0.77 acre
Community	Bay Point
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	No
Proposed General Plan Land Use	N/A
Proposed Zoning	N/A
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	122 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Pending project on this site. All three parcels have the same owner. Unit estimates are based on the pending project.	





**SITE 38: PARKER AVE. AT INVESTMENT ST.**



<b>Parcel Number(s)</b>	<b>357161001, 357161002, 357161013</b>
Street	223 Parker Avenue and Railroad Avenue
Site Size (acres)	1.29 acres total: 357161001: 0.22 acres, 357161002: 0.17 acres, 357161013: 0.90 acres
Community	Rodeo
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	80 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
These three parcels could be consolidated. They are all owned by the Contra Costa County Redevelopment Agency.	

**SITE 39: PACHECO COMMUNITY CENTER SITE**



<b>Parcel Number(s)</b>	<b>125130018 and 125130020</b>
Street	5780 Pacheco Boulevard
Site Size (acres)	0.98 acres total: 125130018: 0.79 acres, 125130020: 0.19 acres
Community	Pacheco
Current General Plan	Public Semi-Public
Current Zoning	Retail Business
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	61 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
This is an underutilized site that includes the Pacheco Community Center. This site is owned by Contra Costa County.	



**SITE 40: N. BROADWAY AVE. NEAR WILLOW PASS RD.**



Parcel Number(s)	096032011, 096032016, 096032028
Street	14 N Broadway Avenue and 2640 Willow Pass Road
Site Size (acres)	0.55 acres total; 096032011: 0.12 acres, 096032016: 0.12 acres, 096032028: 0.31 acres
Community	Bay Point
Current General Plan	096032011 and 096032016: Multiple Family Residential, 096032028: Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	24 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
These parcels are adjacent and share the same owner.	

**SITE 41: ALBERTS AVE. AND WILLOW PASS RD.**



<b>Parcel Number(s)</b>	<b>093036010, 093036014, 093036015</b>
Street	78 and 96 Alberts Avenue and 3515 Willow Pass Road
Site Size (acres)	1.81 acres total; 093036010: 0.21 acres, 093036014: 0.37 acres, 093036015: 1.23 acres
Community	Bay Point
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	50 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
These parcels are adjacent and share the same owner.	

SITE 42: RICHMOND UNION HIGH SCHOOL SITE



Parcel Number(s)	<b>520032002, 520042013, 520050001, 520062001, 520070004</b>
Street	Loring Avenue, Arlington Boulevard, Patterson Circle, Yale Avenue
Site Size (acres)	9.16 acres total; 520032002: 1.09 acres, 520042013: 0.96 acres, 520050001: 3.42 acres, 520062001: 1.59 acres, 520070004: 2.10 acres
Community	East Richmond Heights
Current General Plan	Public Semi-Public
Current Zoning	Single Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	50 lower-income units
Existing residential units on site	0
Small or Large Site?	No
<p>All five parcels are adjacent and are parking lots or underutilized. The school on this site is closed. They are all owned by the West Contra Costa Unified School District. These sites don't allow 100% residential development, so realistic units on the site assume 60% of development is residential.</p>	

SITE 43: WILLOW PASS RD. AND SOLANO AVE.



<b>Parcel Number(s)</b>	<b>096032032</b>
Street	Willow Pass Road
Site Size (acres)	0.92 acres
Community	Bay Point
Current General Plan	Multiple Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	14 moderate-income units and 44 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant parcel	

SITE 44: MIMS AVENUE



Parcel Number(s)	093170069
Street	81 Mims Avenue
Site Size (acres)	1.41 acres
Community	Bay Point
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 75 to 125
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	75 to 125
Realistic Units	105 lower-income units
Existing residential units on site	1
Small or Large Site?	No
Near the BART station.	

SITE 45: CANAL ROAD



Parcel Number(s)	093170018, 093170021, 093170022, 093170076, 093170078, 093170080
Street	231 and 235 Amerson Avenue and Canal Road
Site Size (acres)	0.90 acres total; 093170018: 0.12 acres, 093170021: 0.13 acres, 093170022: 0.13 acres, 093170076: 0.06 acres, 093170078: 0.19 acres, 093170080: 0.27 acres
Community	Bay Point
Current General Plan	093170080: Mixed Use, all other parcels: Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 75 to 125
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	75 to 125
Realistic Units	65 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Near the BART station and owned by the Contra Costa County Redevelopment Agency. These parcels are adjacent and have the same owner.	





**SITE 46: MIMS AVE. AND CANAL RD.**



<b>Parcel Number(s)</b>	<b>093170071</b>
Street	Mims Ave.
Site Size (acres)	0.53 acres
Community	Bay Point
Current General Plan	Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 75 to 125
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	75 to 125
Realistic Units	39 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Near the BART station.	

SITE 47: BIXLER ROAD AT REGATTA DRIVE



Parcel Number(s)	011220039
Street	Bixler Road
Site Size (acres)	6.42 acres
Community	Discovery Bay
Current General Plan	Office
Current Zoning	Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	4 lower-income units
Existing residential units on site	No
Small or Large Site?	No
This parcel has had developer interest. The realistic units are based on developer interest.	

SITE 48: DISCOVERY BAY BLVD.



Parcel Number(s)	008010039
Street	Discovery Bay Blvd.
Site Size (acres)	4.60 acres
Community	Discovery Bay
Current General Plan	Commercial
Current Zoning	Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	0 to 30
Realistic Units	94 above moderate-income units, 13 moderate-income units, 3 lower-income units
Existing residential units on site	No
Small or Large Site?	No
Realistic units are based on developer interest	

**SITE 49: N. BROADWAY AVE NEAR PULLMAN AVE.**



<b>Parcel Number(s)</b>	<b>096031018</b>
Street	No address
Site Size (acres)	0.62 acres
Community	Bay Point
Current General Plan	Multiple Family Residential – Low Density
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential High – 30 to 70
Proposed Zoning	M-60
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 70
Realistic Units	18 lower-income units
Existing residential units on site	1
Small or Large Site?	No

Most of the parcel is vacant or is used as storage. There is also one existing residential unit. This parcel is adjacent to APN 096031019, and it has the same owner.



**SITE 50: N. BROADWAY AVE NEAR W SIINO AVE.**



Parcel Number(s)	096031019
Street	No address
Site Size (acres)	1.02 acres
Community	Bay Point
Current General Plan	Multiple Family Residential – Low Density
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential High – 30 to 70
Proposed Zoning	M-60
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 70
Realistic Units	30 lower-income units
Existing residential units on site	3
Small or Large Site?	No
Most of the parcel is vacant or is used as storage. There are also three existing residential units. This parcel is adjacent to APN 096031018 and has the same owner.	

SITE 51: 2<sup>ND</sup> ST. AND W. RUBY ST.



Parcel Number(s)	409052001
Street	Second Street
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 52: CHESLEY AVE. AND 2<sup>ND</sup> ST.**



<b>Parcel Number(s)</b>	<b>409052003</b>
Street	121 Chesley Avenue
Site Size (acres)	0.23 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 53: 1<sup>ST</sup> ST. AND W. RUBY ST.



Parcel Number(s)	409052009
Street	First Street
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.

There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.





**SITE 54: 2<sup>ND</sup> ST. NEAR GROVE AVE.**



<b>Parcel Number(s)</b>	<b>409060009</b>
Street	Second Street
Site Size (acres)	0.23 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 55: 1<sup>ST</sup> ST. NEAR W. RUBY ST.




<b>Parcel Number(s)</b>	<b>409060018</b>
Street	First Street
Site Size (acres)	0.35 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	4 lower-income units
Existing residential units on site	4
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 56: GIARAMITA ST.**

<b>Parcel Number(s)</b>	<b>409110007</b>
Street	1525 Giaramita Street
Site Size (acres)	0.19 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 57: 6<sup>TH</sup> ST. AND GROVE AVE.



<b>Parcel Number(s)</b>	<b>409120005</b>
Street	1547 Sixth Street
Site Size (acres)	0.18 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 58: 6<sup>TH</sup> ST. NEAR SILVER AVE.**



<b>Parcel Number(s)</b>	<b>409131003</b>
Street	1722 Sixth Street
Site Size (acres)	0.23 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 59: SIXTH ST. NEAR GROVE AVE.



<b>Parcel Number(s)</b>	<b>409141006</b>
Street	1639 Sixth Street
Site Size (acres)	0.18 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 60: GIARAMITA ST. AT SILVER AVE.**



<b>Parcel Number(s)</b>	<b>409142005</b>
Street	Giaranita Street
Site Size (acres)	0.49 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	5 lower-income units
Existing residential units on site	5
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 61: SIXTH ST. NEAR MARKET AVE.



Parcel Number(s)	409151005
Street	1741 Sixth Street
Site Size (acres)	0.23 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	





**SITE 62: GIARAMITA ST. AND SILVER AVE. – NE CORNER**

<b>Parcel Number(s)</b>	<b>409151011</b>
Street	1710 Giaramita Street
Site Size (acres)	0.11 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	1 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
<p>There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.</p>	

**SITE 63: GIARAMITA ST. AND SILVER AVE. – NW CORNER**



<b>Parcel Number(s)</b>	<b>409152007</b>
Street	Silver Avenue
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 64: 4<sup>TH</sup> ST. AND MARKET AVE.**



<b>Parcel Number(s)</b>	<b>409161001</b>
Street	1744 Fourth Street
Site Size (acres)	0.11 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	1 lower-income unit
Existing residential units on site	0
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 65: 5<sup>TH</sup> ST. AND SILVER AVE.



<b>Parcel Number(s)</b>	<b>409161008</b>
Street	Silver Avenue
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 66: 4<sup>TH</sup> ST. NEAR SILVER AVE.**



<b>Parcel Number(s)</b>	<b>409162018</b>
Street	Fourth Street
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 67: 4<sup>TH</sup> ST. NEAR GROVE AVE.



<b>Parcel Number(s)</b>	<b>409171015</b>
Street	1622 Fourth Street
Site Size (acres)	0.24 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 68: SILVER AVE. NEAR 2<sup>ND</sup> ST.**



<b>Parcel Number(s)</b>	<b>409182002</b>
Street	218 Silver Avenue
Site Size (acres)	0.26 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

**SITE 69: SILVER AVE. NEAR FRED JACKSON WAY**



<b>Parcel Number(s)</b>	<b>409191009</b>
Street	317 Silver Avenue
Site Size (acres)	0.23 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	





**SITE 70: 1<sup>ST</sup> ST. NEAR SILVER AVE.**



<b>Parcel Number(s)</b>	<b>409200016</b>
Street	1710 First Street
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 71: TRUMAN ST. NEAR VERDE AVE.



<b>Parcel Number(s)</b>	<b>409251022</b>
Street	1840 Truman Street
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 72: VERDE AVE. NEAR TRUMAN ST.**



<b>Parcel Number(s)</b>	<b>409252008</b>
Street	Verde Avenue
Site Size (acres)	0.19 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

**SITE 73: GIARAMITA ST. NEAR VERDE AVE.**



<b>Parcel Number(s)</b>	<b>409272009</b>
Street	1927 Giaramita Street
Site Size (acres)	0.23 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	7 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 74: VERDE AVE. AT GIARAMITA ST.**



<b>Parcel Number(s)</b>	<b>409281001</b>
Street	542 Verde Avenue
Site Size (acres)	0.40 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	4 lower-income units
Existing residential units on site	4
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

SITE 75: 7<sup>TH</sup> ST. NEAR MARKET AVE.



Parcel Number(s)	409282005
Street	1817 Seventh Street
Site Size (acres)	0.34 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	4 lower-income units
Existing residential units on site	4
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	



**SITE 76: MARKET AVE. AT 6<sup>TH</sup> ST.**



<b>Parcel Number(s)</b>	<b>409282019</b>
Street	611 Market Avenue
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	

**SITE 77: 6<sup>TH</sup> ST. NEAR VERDE AVE.**



<b>Parcel Number(s)</b>	<b>409291009</b>
Street	1932 Sixth Street
Site Size (acres)	0.17 acres
Community	North Richmond
Current General Plan	Single Family Residential
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	2 lower-income units
Existing residential units on site	2
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
There is developer interest, and the owner is willing to sell the site. The Housing Authority owns this site and has a track record of selling similar sites.	





**SITE 78: MCAVOY SITE**



<b>Parcel Number(s)</b>	<b>098250013</b>
Street	No address
Site Size (acres)	256.18 acres
Community	Bay Point
Current General Plan	Parks Watersheds and Open Space
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	500 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - large

Unit assumptions are based on an older lapsed approval for residential development on this site. Other sites larger than 10 acres in the County have successfully subdivided and resulted in multifamily housing projects. Examples include Park Regency, Hilltop Commons and Avalon Bay Apartments. This site is within the County’s Urban Limit Line. For wastewater service for this site an amendment to the Delta Diablo Sanitation District sphere of influence would be needed and then it would need annexed into the sanitation district. There is recent precedent for this when Delta Diablo Sanitation District annexed a Park District in the same area and pulled a pipe over the railroad tracks.

SITE 79: RAY LANE



Parcel Number(s)	093121001
Street	No address
Site Size (acres)	10.99 acres
Community	Bay Point
Current General Plan	Single Family Residential – High Density
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	No
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	224 above moderate-income units, 32 moderate-income units, 8 lower-income units
Existing residential units on site	0
Small or Large Site?	Yes - large
Underutilized site that contains a church parking lot. A County Supervisor is interested in seeing this site developed with housing. Adjacent to APN 197030027.	

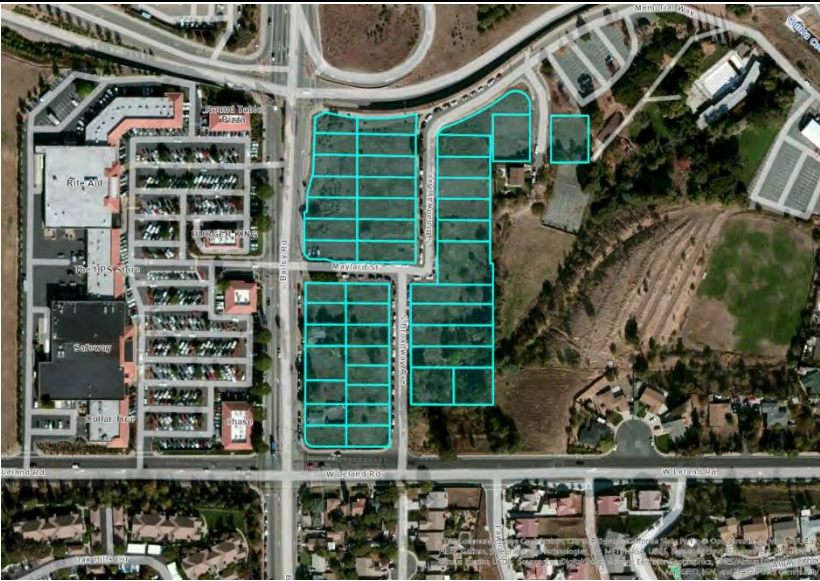


**SITE 80: CREEKSIDE COMMUNITY CHURCH OWNED PROPERTIES**



<b>Parcel Number(s)</b>	<b>197030026 and 197030027</b>
Street	Danville Blvd.
Site Size (acres)	6.29 acres total; 197030026: 5.68 acres, 197030027: 0.61 acres
Community	Alamo
Current General Plan	Single Family Residential – Low Density
Current Zoning	Single Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	80 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Underutilized site that contains a church, church parking lot and vacant lot.	

SITE 81: ORBISONIA HEIGHTS



Parcel Number(s)	094012021, 094012022, 094012023, 094012024, 094012025, 094012026, 094012027, 094012030, 094012031, 094012032, 094012033, 094012038, 094012039, 094012040, 094013001, 094013002, 094013003, 094013004, 094013005, 094013006, 094013012, 094013013, 094013014, 094013015, 094013016, 094014001, 094014010, 094014011, 094014012, 094014013, 094014014, 094015006, 094015010, 094015011, 094015012, 094015013, 094015014, 094015027, 094015028, 094016002, 094026001, 094026002, 094026007, 094026008
Street	Bailey Road
Site Size (acres)	6.63 acres total (the parcels that make up this site are similar in size ranging from .10 to .30 in size. Acreage for each parcel can be found later in Appendix A where the full list of sites is provided)
Community	Bay Point
Current General Plan	Bay Point Residential Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	No
Proposed General Plan Land Use	N/A



Proposed Zoning	N/A
Vacant or Non-Vacant	Vacant
Proposed or Allowed Density (units per acre)	21 to 29.9
Realistic Units	384
Existing residential units on site	No
Small or Large Site?	No
Entitled project. Units are based on approved project.	

SITE 82: APPIAN WAY NEAR SUNHILL CIRCLE



Parcel Number(s)	425200006 and 425230035
Street	Appian Way
Site Size (acres)	5.06 acres total; 425200006: 3.12 acres, 425230035: 1.94 acres
Community	El Sobrante
Current General Plan	Multiple Family Residential – Low Density and Appian Way General Mixed Use
Current Zoning	Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 0 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	One vacant and one non-vacant parcel
Proposed Density (units per acre)	0 to 30
Realistic Units	126 lower income units
Existing residential units on site	1
Small or Large Site?	No
Two adjacent parcels – one is vacant and one is underutilized. Both parcels have the same owner.	

SITE 83: ST. ANNE VILLAGE



Parcel Number(s)	003120008 and 003120009
Street	Camino Diablo Road
Site Size (acres)	10.02 acres total; 003120008: 4.94 acres, 003120009: 5.08 acres
Community	Byron
Current General Plan	Single-Family Residential - Medium Density
Current Zoning	Single-Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	157 above-moderate income units, 21 moderate-income units, and 6 lower-income units
Existing residential units on site	
Small or Large Site?	No

Potential project on this site. St. Anne Village senior housing. Units are based on the potential project. Existing use is agriculture. Access to water infrastructure has been secured as part of the pre-planning for the project.

SITE 84: DISCOVERY BAY MIXED USE



Parcel Number(s)	004182006
Street	Discovery Bay Boulevard
Site Size (acres)	9.52 acres
Community	Discovery Bay
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	2 above-moderate income units and 168 lower-income units
Existing residential units on site	No
Small or Large Site?	No
<p>Site is mostly vacant land or paved parking lot. Two existing non-residential structures on the site. There is a pending project on this site. The units are based on that pending project.</p>	



SITE 85: PACHECO BLVD



Parcel Number(s)	159210039, 159210042, 159210043, and 159210004
Street	Pacheco Boulevard
Site Size (acres)	6.51 acres total; 159210039: 1.05 acres, 159210042: 4.33 acres, 159210043: 0.87 acres, 159210004: 0.26 acres
Community	Vine Hill
Current General Plan	Commercial
Current Zoning	3 parcels – Retail Business; 1 parcel Multiple Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 30 to 75
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 75
Realistic Units	234 above-moderate income units, 33 moderate-income units, and 8 lower-income units
Existing residential units on site	No
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.



Site is underutilized and is mostly made up of vacant land and parking lot. There are a few non-residential structures on the site. All four parcels have the same owner. There is a pending project on this site. The units are based on that pending project.



**SITE 86: LAS JUNTAS WAY AND OAK ROAD**



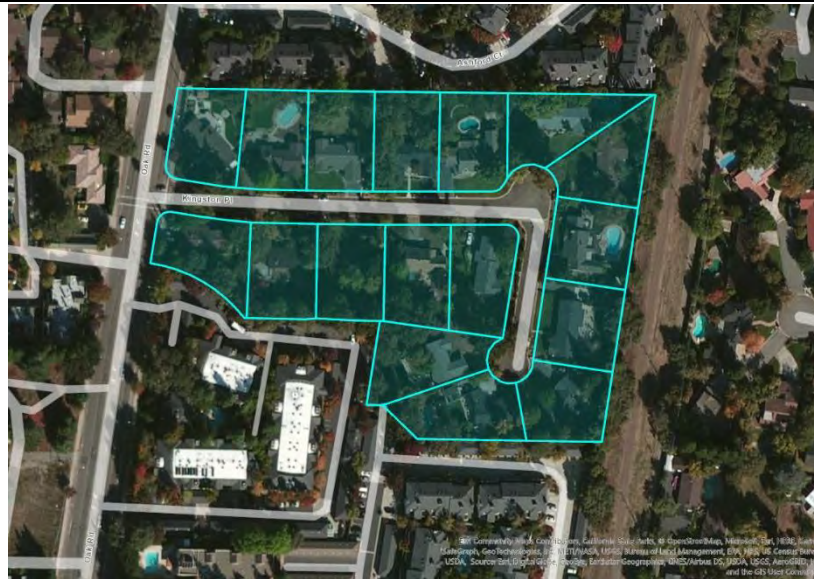
<b>Parcel Number(s)</b>	<b>148221033</b>
Street	Las Juntas Way
Site Size (acres)	1.81 acres
Community	Walnut Creek
Current General Plan	Pleasant Hill BART Mixed Use
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Mixed Use – 75 to 125
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	75 to 125
Realistic Units	48 moderate-income units and 144 lower-income units
Existing residential units on site	No
Small or Large Site?	No
Existing use is an office building. Two developers have approached the County about redeveloping this property for housing and the property has recently been for sale.	

SITE 87: CHERRY LANE




<b>Parcel Number(s)</b>	<b>148350009, 148350010, 148350011, 148350020</b>
Street	Cherry Lane
Site Size (acres)	3.73 acres total; 148350009: 0.45 acres, 148350010: 0.48 acres, 148350011: 1.01 acres, 148350020: 1.79 acres
Community	Walnut Creek
Current General Plan	Single-Family Residential - Medium Density
Current Zoning	Single Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential High
Proposed Zoning	M-60
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 60
Realistic Units	184 lower-income units
Existing residential units on site	4
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Existing use is very low density residential.	

SITE 88: KINGSTON PLACE

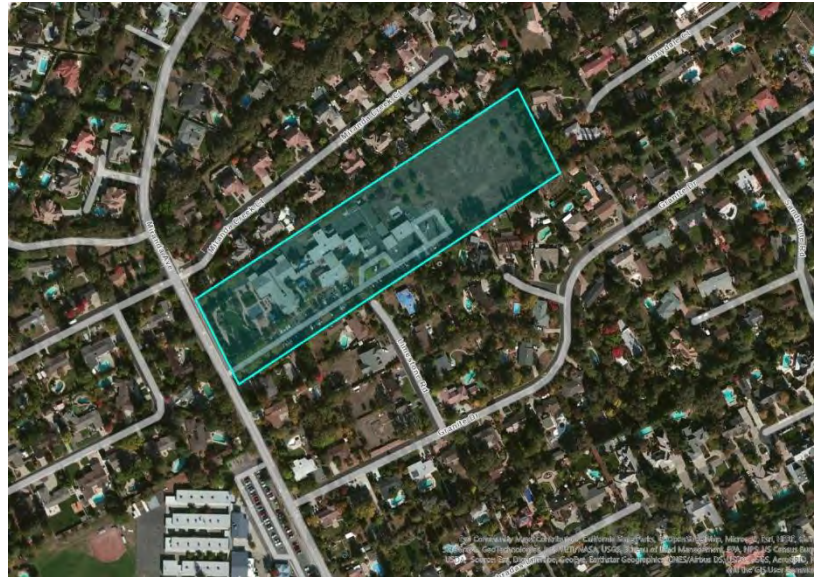


Parcel Number(s)	172120002, 172120003, 172120004, 172120005, 172120006, 172120007, 172120008, 172120009, 172120010, 172120011, 172120012, 172120013, 172120025, 172120027, 172120028, 172120051, 172120052
Street	Kingston Place
Site Size (acres)	5.91 acres total; 172120002: 0.35 acres, 172120003: 0.35 acres, 172120004: 0.34 acres, 172120005: 0.35 acres, 172120006: 0.35 acres, 172120007: 0.35 acres, 172120008: 0.35 acres, 172120009: 0.35 acres, 172120010: 0.35 acres, 172120011: 0.35 acres, 172120012: 0.34 acres, 172120013: 0.34 acres, 172120025: 0.33 acres, 172120027: 0.36 acres, 172120028: 0.37 acres, 172120051: 0.34 acres, 172120052: 0.35 acres
Community	Walnut Creek
Current General Plan	Multiple-Family Residential - High Density
Current Zoning	Single Family Residential
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Very High
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant



Proposed Density (units per acre)	70 to 125
Realistic Units	602 lower-income units
Existing residential units on site	17
Small or Large Site?	Yes - small. The County has a track record of developing smaller sites. In addition, Action HE-A5.5 will support the development of smaller sites.
Existing use is low density residential. The owners of these properties have requested rezoning to higher density from the County and are interested in redeveloping their street with high density affordable units. All parcels are adjacent to each other on Kingston Place.	

SITE 89: MAUZY SCHOOL



Parcel Number(s)	172120002, 17212000
Street	2964 Miranda Ave.
Site Size (acres)	7.74 acres
Community	Walnut Creek
Current General Plan	Public and Semi-Public
Current Zoning	R-20
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	PS
Proposed Zoning	M-60
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	30 to 60
Realistic Units	10 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Existing use is a special needs school. The school is interested in building affordable housing onsite for its students.	

SITE 90: CRESTWOOD DR.

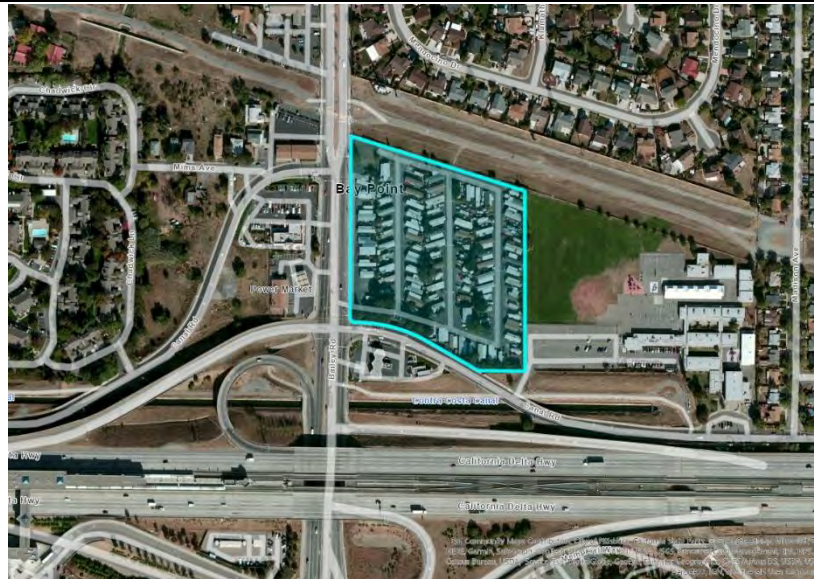


<b>Parcel Number(s)</b>	<b>405203018</b>
Street	Crestwood Dr.
Site Size (acres)	0.73 acres
Community	San Pablo
Current General Plan	Single-Family Residential – High Density
Current Zoning	Retail Business
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-30
Vacant or Non-Vacant	Vacant
Proposed Density (units per acre)	17 to 30
Realistic Units	18 lower-income units
Existing residential units on site	0
Small or Large Site?	No
Vacant site.	





**SITE 91: FAR HILLS MOBILE HOME PARK**



<b>Parcel Number(s)</b>	<b>095010010</b>
Street	Bailey Dr.
Site Size (acres)	6.97 acres
Community	Bay Point
Current General Plan	Commercial
Current Zoning	Area Wide Planned Unit
Rezoning or Change to Land Use Required?	Yes
Proposed General Plan Land Use	Residential Medium-High – 17 to 30
Proposed Zoning	M-125
Vacant or Non-Vacant	Non-vacant
Proposed Density (units per acre)	75 to 125
Realistic Units	650 lower-income units
Existing residential units on site	90
Small or Large Site?	No
Existing mobile home park. Owner is interested in redeveloping with high density affordable housing. Owner of Mobile Home Park is aware of and will comply with relocation laws.	





**Table A: Housing Element Sites Inventory**

Jurisdiction Name	Site Address/ Intersection	5 Digit ZIP Code	Assessor Parcel Number	Consolidated Sites	General Plan Designation (Current)	Zoning Designation (Current)	Minimum Density Allowed (units/acre)	Max Density Allowed (units/acre)	Parcel Size (Acres)	Existing Use/Vacancy	Infrastructure	Publicly-Owned	Site Status	Identified in Last/Last Two Planning Cycle(s)	Lower Income Capacity	Moderate Income Capacity	Above Moderate Income Capacity	Total Capacity
CONTRA COSTA COUNTY			430132002		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.19	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			430161004		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.44	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			430161020		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.37	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			430184021		Single-Family Residential - Low Density	Single Family Residential	1	2.9	0.24	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1.0	1
CONTRA COSTA COUNTY			431070026		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.27	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			431070028		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.20	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			431070035		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.20	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			433190041		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.22	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			433190043		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.23	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			433190060		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.93	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			5	5
CONTRA COSTA COUNTY			433241057		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.45	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			433241065		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.23	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			433460007		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.35	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			435120070		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.16	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1
CONTRA COSTA COUNTY			435130015		Single-Family Residential - High Density	Single Family Residential	5	7.2	0.23	Vacant	YES - Potential	NO - Privately-Owned	Available	N/A			1	1











**Table B: Candidate Sites Identified to be Rezoned to Accommodate Shortfall Housing Need**

Jurisdiction Name	Site Address/Intersection	5 Digit ZIP Code	Assessor Parcel Number	Very Low-Income	Low-Income	Moderate-Income	Above Moderate-Income	Type of Shortfall	Parcel Size (Acres)	Current General Plan Designation	Current Zoning	Proposed General Plan (GP) Designation	Proposed Zoning	Minimum Density Allowed	Maximum Density Allowed	Total Capacity	Vacant/ Nonvacant
CONTRA COSTA COUNTY			409172027				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409172028				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409181008				2	Shortfall of Sites	0.12	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Vacant
CONTRA COSTA COUNTY			409182002	1	1			Shortfall of Sites	0.26	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Non-Vacant
CONTRA COSTA COUNTY			409182020				1	Shortfall of Sites	0.07	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409182023				2	Shortfall of Sites	0.07	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Vacant
CONTRA COSTA COUNTY			409182024				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	1	Vacant
CONTRA COSTA COUNTY			409191001	2	2			Shortfall of Sites	0.35	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	4	Non-Vacant
CONTRA COSTA COUNTY			409191009	1	1			Shortfall of Sites	0.23	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Non-Vacant
CONTRA COSTA COUNTY			409191013	1	0			Shortfall of Sites	0.17	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	1	Non-Vacant
CONTRA COSTA COUNTY			409192001				7	Shortfall of Sites	0.12	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	7	Vacant
CONTRA COSTA COUNTY			409200009				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409200015				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409200016	1	1			Shortfall of Sites	0.17	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Non-Vacant
CONTRA COSTA COUNTY			409200024				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409200025				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409210011	3	3			Shortfall of Sites	0.53	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	6	Vacant
CONTRA COSTA COUNTY			409210020	4	4			Shortfall of Sites	0.67	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	8	Vacant
CONTRA COSTA COUNTY			409210021	8	8			Shortfall of Sites	1.37	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	16	Vacant
CONTRA COSTA COUNTY			409210022	16	15			Shortfall of Sites	2.16	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	31	Vacant
CONTRA COSTA COUNTY			409210023	38	39			Shortfall of Sites	3.03	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	77	Non-Vacant
CONTRA COSTA COUNTY			409210024	16	16			Shortfall of Sites	1.28	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	32	Vacant
CONTRA COSTA COUNTY			409210025	9	8			Shortfall of Sites	0.70	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	17	Vacant
CONTRA COSTA COUNTY			409210026	20	20			Shortfall of Sites	1.60	Multiple-Family Residential - Low Density	Area Wide Planned Unit	RMH	M-30	17	30	40	Vacant
CONTRA COSTA COUNTY			409220006				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409220007				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409220008				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409230015				2	Shortfall of Sites	0.07	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Vacant
CONTRA COSTA COUNTY			409240017				9	Shortfall of Sites	0.15	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	9	Vacant
CONTRA COSTA COUNTY			409240019				2	Shortfall of Sites	0.08	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Vacant
CONTRA COSTA COUNTY			409240029				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409240030				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409251019				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409251020				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409251021				4	Shortfall of Sites	0.17	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	4	Vacant
CONTRA COSTA COUNTY			409251022	1	1			Shortfall of Sites	0.17	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Non-Vacant
CONTRA COSTA COUNTY			409252008	1	1			Shortfall of Sites	0.19	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Non-Vacant
CONTRA COSTA COUNTY			409261009				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	1	Vacant
CONTRA COSTA COUNTY			409261012				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	1	Vacant
CONTRA COSTA COUNTY			409261013				7	Shortfall of Sites	0.12	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	7	Vacant
CONTRA COSTA COUNTY			409261015				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409261016				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409271005				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409271007				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409271011				2	Shortfall of Sites	0.12	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Vacant
CONTRA COSTA COUNTY			409271021				2	Shortfall of Sites	0.09	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Vacant
CONTRA COSTA COUNTY			409271025				1	Shortfall of Sites	0.07	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409272007				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409272009	4	3			Shortfall of Sites	0.23	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	7	Non-Vacant
CONTRA COSTA COUNTY			409272010				1	Shortfall of Sites	0.04	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409281001	2	2			Shortfall of Sites	0.40	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	4	Non-Vacant
CONTRA COSTA COUNTY			409281011				6	Shortfall of Sites	0.12	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	6	Vacant
CONTRA COSTA COUNTY			409281014				1	Shortfall of Sites	0.06	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			409282005	2	2			Shortfall of Sites	0.34	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	4	Non-Vacant
CONTRA COSTA COUNTY			409282006				6	Shortfall of Sites	0.12	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	6	Vacant
CONTRA COSTA COUNTY			409282019	1	1			Shortfall of Sites	0.17	Single-Family Residential - High Density	Area Wide Planned Unit	MU*	M-125	30	75	2	Non-Vacant
CONTRA COSTA COUNTY			409291008				2	Shortfall of Sites	0.11	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Vacant
CONTRA COSTA COUNTY			409291009	1	1			Shortfall of Sites	0.17	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	2	Non-Vacant
CONTRA COSTA COUNTY			409292001	7	6			Shortfall of Sites	0.61	Single-Family Residential - High Density	Area Wide Planned Unit	RMH	M-30	17	30	13	Non-Vacant
CONTRA COSTA COUNTY			420010001	5	4			Shortfall of Sites	0.39	Commercial	Area Wide Planned Unit	MU*	M-30	0	30	9	Non-Vacant
CONTRA COSTA COUNTY			420010002	15	15			Shortfall of Sites	1.19	Commercial	Area Wide Planned Unit	MU*	M-30	0	30	30	Non-Vacant
CONTRA COSTA COUNTY			420090029				44	Shortfall of Sites	3.07	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	44	Vacant
CONTRA COSTA COUNTY			420140003	27	27			Shortfall of Sites	2.12	Commercial	Retail Business	MU*	M-30	0	30	54	Vacant
CONTRA COSTA COUNTY			420150030	5	4			Shortfall of Sites	0.45	San Pablo Dam Road Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	9	Vacant
CONTRA COSTA COUNTY			420150033		18			Shortfall of Sites	0.93	San Pablo Dam Road Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	18	Vacant

**Table B: Candidate Sites Identified to be Rezoned to Accommodate Shortfall Housing Need**

Jurisdiction Name	Site Address/Intersection	5 Digit ZIP Code	Assessor Parcel Number	Very Low-Income	Low-Income	Moderate-Income	Above Moderate-Income	Type of Shortfall	Parcel Size (Acres)	Current General Plan Designation	Current Zoning	Proposed General Plan (GP) Designation	Proposed Zoning	Minimum Density Allowed	Maximum Density Allowed	Total Capacity	Vacant/ Nonvacant
CONTRA COSTA COUNTY			420184015	27	27			Shortfall of Sites	2.78	San Pablo Dam Road Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	54	Vacant
CONTRA COSTA COUNTY			420192018				2	Shortfall of Sites	0.39	Single-Family Residential - High Density	Retail Business	RLM	R-10	3	7	2	Vacant
CONTRA COSTA COUNTY			420192037	10	9			Shortfall of Sites	0.76	San Pablo Dam Road Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	19	Vacant
CONTRA COSTA COUNTY			420192042			4		Shortfall of Sites	0.19	San Pablo Dam Road Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	4	Vacant
CONTRA COSTA COUNTY			420192043	5	6			Shortfall of Sites	0.47	San Pablo Dam Road Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	11	Vacant
CONTRA COSTA COUNTY			425023011				42	Shortfall of Sites	2.94	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	42	Vacant
CONTRA COSTA COUNTY			425040016				52	Shortfall of Sites	3.64	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	52	Vacant
CONTRA COSTA COUNTY			425040024				33	Shortfall of Sites	2.33	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	33	Vacant
CONTRA COSTA COUNTY			425061012				66	Shortfall of Sites	4.57	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	66	Vacant
CONTRA COSTA COUNTY			425061032				1	Shortfall of Sites	0.20	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	1	Vacant
CONTRA COSTA COUNTY			425061033				1	Shortfall of Sites	0.19	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	1	Vacant
CONTRA COSTA COUNTY			425061034				1	Shortfall of Sites	0.17	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	1	Vacant
CONTRA COSTA COUNTY			425072024				7	Shortfall of Sites	0.49	Single-Family Residential - High Density	Single Family Residential	RM	M-30	7	17	7	Vacant
CONTRA COSTA COUNTY			425100054				4	Shortfall of Sites	0.30	Appian Way General Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	4	Vacant
CONTRA COSTA COUNTY			425100056	7	7			Shortfall of Sites	0.56	Appian Way General Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	14	Vacant
CONTRA COSTA COUNTY			425142015				5	Shortfall of Sites	0.41	Single-Family Residential - High Density	Area Wide Planned Unit	RM	M-30	7	17	5	Vacant
CONTRA COSTA COUNTY			425160015				9	Shortfall of Sites	0.40	Open Space	Single Family Residential	MU*	M-30	0	30	9	Vacant
CONTRA COSTA COUNTY			425170030	10	9			Shortfall of Sites	0.77	Commercial	Area Wide Planned Unit	MU*	M-30	0	30	19	Vacant
CONTRA COSTA COUNTY			425200006	39	40			Shortfall of Sites	3.12	Multiple-Family Residential - Low Density	Planned Unit	MU*	M-30	0	30	79	Vacant
CONTRA COSTA COUNTY			425230035	23	24			Shortfall of Sites	1.94	Appian Way General Mixed Use	Planned Unit	MU*	M-30	0	30	47	Non-Vacant
CONTRA COSTA COUNTY			425210037	11	11			Shortfall of Sites	0.90	Appian Way General Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	22	Non-Vacant
CONTRA COSTA COUNTY			425210039	12	11			Shortfall of Sites	0.91	Appian Way General Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	23	Vacant
CONTRA COSTA COUNTY			425210042	12	11			Shortfall of Sites	0.91	Appian Way General Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	23	Vacant
CONTRA COSTA COUNTY			425210044				2	Shortfall of Sites	0.33	Multiple-Family Residential - Low Density	Area Wide Planned Unit	MU*	M-30	0	30	2	Vacant
CONTRA COSTA COUNTY			425210045				2	Shortfall of Sites	1.30	Multiple-Family Residential - Low Density	Area Wide Planned Unit	MU*	M-30	0	30	2	Vacant
CONTRA COSTA COUNTY			425230017	11	11			Shortfall of Sites	0.89	Appian Way General Mixed Use	Planned Unit	MU*	M-30	0	30	22	Non-Vacant
CONTRA COSTA COUNTY			425230036	6	5			Shortfall of Sites	0.47	Appian Way General Mixed Use	Planned Unit	MU*	M-30	0	30	11	Non-Vacant
CONTRA COSTA COUNTY			425230037	6	5			Shortfall of Sites	0.45	Appian Way General Mixed Use	Planned Unit	MU*	M-30	0	30	11	Non-Vacant
CONTRA COSTA COUNTY			425230038	12	11			Shortfall of Sites	0.91	Appian Way General Mixed Use	Planned Unit	MU*	M-30	0	30	23	Non-Vacant
CONTRA COSTA COUNTY			425240041	21	21			Shortfall of Sites	1.68	Appian Way General Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	42	Vacant
CONTRA COSTA COUNTY			425251006				2	Shortfall of Sites	0.09	Commercial	Area Wide Planned Unit	MU*	M-30	0	30	2	Vacant
CONTRA COSTA COUNTY			425252045				4	Shortfall of Sites	0.30	Triangle Area Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	4	Vacant
CONTRA COSTA COUNTY			425252048				1	Shortfall of Sites	0.12	Triangle Area Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	1	Vacant
CONTRA COSTA COUNTY			425252064	10	10			Shortfall of Sites	1.33	Triangle Area Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	20	Non-Vacant
CONTRA COSTA COUNTY			426070020				17	Shortfall of Sites	2.98	Public and Semi-Public	Single Family Residential	RLM	R-10	3	7	17	Vacant
CONTRA COSTA COUNTY			426261060	7	6			Shortfall of Sites	0.87	Triangle Area Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	13	Non-Vacant
CONTRA COSTA COUNTY			430012022				19	Shortfall of Sites	3.21	Single-Family Residential - Medium Density	Single Family Residential	RLM	R-10	3	7	19	Vacant
CONTRA COSTA COUNTY			430152062				2	Shortfall of Sites	0.16	Triangle Area Mixed Use	Area Wide Planned Unit	MU*	M-30	0	30	2	Vacant
CONTRA COSTA COUNTY			431010010				4	Shortfall of Sites	0.79	Single-Family Residential - High Density	Single Family Residential	RMH	M-30	17	30	4	Non-Vacant
CONTRA COSTA COUNTY			431010011				1	Shortfall of Sites	0.26	Single-Family Residential - High Density	Single Family Residential	RMH	M-30	17	30	1	Non-Vacant
CONTRA COSTA COUNTY			431020017				10	Shortfall of Sites	0.45	Multiple-Family Residential - Low Density	Multiple Family Residential	RMH	M-30	17	30	10	Vacant
CONTRA COSTA COUNTY			431070027				1	Shortfall of Sites	0.19	Open Space	Single Family Residential	RLM	R-10	3	7	1	Vacant
CONTRA COSTA COUNTY			433060014				16	Shortfall of Sites	1.55	Multiple-Family Residential - Low Density	Multiple Family Residential	MU*	M-30	0	30	16	Vacant
CONTRA COSTA COUNTY			435070008				1	Shortfall of Sites	0.16	Multiple-Family Residential - Low Density	Two Family Residential	RMH	M-30	17	30	1	Vacant
CONTRA COSTA COUNTY			435080005				23	Shortfall of Sites	0.99	Multiple-Family Residential - Low Density	Single Family Residential	RMH	M-30	17	30	23	Vacant
CONTRA COSTA COUNTY			435171006				1	Shortfall of Sites	0.45	Single-Family Residential - Medium Density	Single Family Residential	RLM	R-10	3	7	1	Vacant
CONTRA COSTA COUNTY			520032002	7	8			Shortfall of Sites	1.09	Public and Semi-Public	Single Family Residential	MU*	M-30	0	30	15	Non-Vacant
CONTRA COSTA COUNTY			520042013	2	3			Shortfall of Sites	0.96	Public and Semi-Public	Single Family Residential	MU*	M-30	0	30	5	Non-Vacant
CONTRA COSTA COUNTY			520050001	5	5			Shortfall of Sites	3.42	Public and Semi-Public	Single Family Residential	MU*	M-30	0	30	10	Non-Vacant
CONTRA COSTA COUNTY			520062001	2	3			Shortfall of Sites	1.59	Public and Semi-Public	Single Family Residential	MU*	M-30	0	30	5	Non-Vacant
CONTRA COSTA COUNTY			520070004	7	8			Shortfall of Sites	2.10	Public and Semi-Public	Single Family Residential	MU*	M-30	0	30	15	Non-Vacant



# B.

## APPENDIX B: REVIEW OF PREVIOUS HOUSING ELEMENT PROGRAMS

Housing Program	Implementation Status	Continue /Modify/Delete
<b>HOUSING AND NEIGHBORHOOD CONSERVATION</b>		
<p><b><u>Program 1: Neighborhood Preservation Program</u></b></p> <p>Through the Neighborhood Preservation Program, the County provides home rehabilitation loans to extremely-low, very-low, and low-income persons to make necessary home repairs and improve their homes. DCD administers this program which is available to income-qualified households throughout the Urban County.</p> <p>Eligible residents may receive assistance for a variety of home improvement activities including but not limited to: re-roofing, plumbing/heating/electrical repairs, termite and dry rot repair, modifications for disabled accessibility, security, exterior painting, and energy conservation. Specific loan terms are based on financial need and may be zero or three percent, deferred or amortizing.</p> <p>DCD has identified the following unincorporated areas for focused rehabilitation assistance:</p> <p>Bay Point, Bethel Island, Byron, Clyde, Crockett, El Sobrante, Montalvin Manor, North Richmond, Rodeo, Rollingwood, and the Vine Hill area near Martinez.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Disseminate information on housing rehabilitation assistance through the County website, public access cable channels, notices in the press, presentations and distribution of brochures to public service agencies and community groups, and mailings to County residents.</li> <li>-Rehabilitate 5 units annually for a total of 40 units over 8 years.</li> </ul> <p><b>Funding Source:</b> CDBG</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>Due to the national emergency declaration due to the COVID-19 pandemic, this program faced challenges in 2020 that included contact limitations with clients (many at-risk), limited scopes due to restrictions on more invasive construction, extended permit/inspection timeframes, limited materials/equipment availability, homeowner reluctance for improvements, and the reduction of contractors.</p> <p>This program serves the entire county, including the unincorporated areas and the cities. In total, there were thirty-five projects that were funded and completed since the last Housing Element was adopted, with 14 households at 30% of the area median income (AMI), 7 households at 50% AMI, and 14 households at 80% AMI.</p> <p>Information about the Neighborhood Preservation Program is available on the County’s website, public access cable channels, through notices in the media, and via presentations given periodically.</p>	<p>Continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<p><b><u>Program 2: Weatherization Program</u></b></p> <p>The County DCD offers a free weatherization program for extremely-low, very-low, and low income homeowners and renters. The program provides resources for minor home repairs and energy improvements including: attic insulation, weather stripping, pipe wrapping, furnace filters, shower heads, heaters/ovens, ceiling fans, door bottoms, etc. In addition, the program provides assistance to lower utility bills for lower income households.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>-Assist 50 households annually for a total of 400 households over 8 years.</li> <li>-Provide education on energy conservation.</li> </ul> <p><b>Funding Source:</b></p> <p>Low Income Housing Energy Assistance Program</p> <p><b>Responsible Agency/Dept.:</b></p> <p>Conservation &amp; Development</p> <p><b>Timeframe:</b></p> <p>Ongoing</p>	<p>More than 1,400 unduplicated units have been weatherized through this program in County cities, towns, and communities since adoption of the current Housing Element. Education about energy conservation was provided as part of the Residential Energy Conservation Program discussed later in this table.</p>	<p>Continue</p>
<p><b><u>Program 3: Code Enforcement</u></b></p> <p>The DCD Code Enforcement section is responsible for enforcing both State and County regulations governing the maintenance of all buildings and properties in the unincorporated areas. Code enforcement handles complaints and inspections in the unincorporated area. Code enforcement staff handles approximately 60 cases per month. Most of the complaints deal with property maintenance, substandard housing issues, junk and debris, and abandoned vehicles. To facilitate the correction of code violations or deficiencies, code enforcement works closely with other County agencies. Code enforcement staff routinely refers homeowners to the County’s rehabilitation loan and grants programs including the Neighborhood Preservation Program. The staff also refers homeowners, mobile home owners, and apartment owners to the County’s Weatherization Program.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>-Continue to implement program.</li> </ul>	<p>In 2020, there were a total of 1,675 cases opened and 1,632 cases closed. Approximately 98% of all cases are residential.</p>	<p>Continue</p>

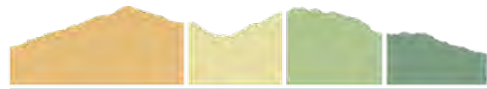
Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>		
<p><b>Program 4: Preservation of Affordable Housing Assisted with Public Funds</b></p> <p>As of 2014, a total of 1,259 publicly assisted housing units in multi-family developments are located in the unincorporated areas of the County. Of these units, 49 units in Rivershore Apartments are at risk of conversion to market rate housing in 2017.</p> <p><b>Eight-year Program</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to enforce the condominium conversion ordinance.</li> <li>- Monitor the at-risk units by reviewing the California Housing Partnership Corporation list of at-risk properties annually</li> <li>- Provide information regarding tenant rights and conversion procedures should the property owner be uninterested in refinancing.</li> <li>- Offer tenants information regarding Section 8 rental subsidies and other available assistance through County agencies and non-profit organizations.</li> </ul> <p><b>Funding Source:</b> Tax Exempt Bonds, CDBG, HOME</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>The County funds projects throughout the unincorporated County and in the cities. The following work involving preservation occurred in the unincorporated County since adoption of the existing Housing Element:</p> <ul style="list-style-type: none"> <li>• The County awarded \$2.37 million dollars to Bridge Housing in CDBG funds for the acquisition/rehabilitation of 87 existing rental units at Coggins Square in the Contra Costa Centre area in the unincorporated Walnut Creek area that is affordable to and occupied by low-income families.</li> <li>• The County closed financing and issued \$19,500,000 in tax-exempt bonds on rehabilitation projects, which includes Elaine Null, a 14-unit apartment in Bay Point.</li> <li>• The County provided \$361,900 in HOME and CDBG funding for a 14-unit rehabilitation project at Elaine Null in Bay Point.</li> <li>• In 2022, the County awarded \$2.2 million in CDBG funds to EAH Housing for the rehabilitation of Rodeo Gateway Senior Housing, a 50-unit project in Rodeo.</li> <li>• In 2022, the County awarded \$600,000 in funds to Resources for Community Development (RCD) for the rehabilitation of Aspen Court, a 12-unit special needs housing project.</li> </ul> <p>Bonds funding Rivershore Apartments defeased and that project is no longer deed-restricted for affordable households. The County will continue to implement this program and the program will be amended for consistency with current state law.</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<b>HOUSING PRODUCTION</b>		
<p><b><u>Program 5: New Construction of Affordable Housing</u></b></p> <p>Non-profit and for-profit housing developers play an important role in providing affordable housing in Contra Costa County. Over the years, the County has provided direct financial assistance, regulatory incentives, and land write-downs to numerous developers to provide both ownership and rental housing to extremely-low, very-low, low-income, and special needs households. Major sources of County financing include annual entitlement grants of CDBG, HOME, and HOPWA funds. The County reserves 45 percent of each year’s CDBG allocation for projects to increase and maintain affordable housing in the Urban County. The County also serves as an issuer of tax-exempt bond financing when developers seek tax-exempt financing. Projects have been completed with County resources in both unincorporated areas and the cities.</p> <p>Funding is provided annually on a competitive application basis to developers of multifamily rental housing and homeownership developments. A notice of funding availability is issued in the fall. Applications are due in late fall/early winter, with funding awards made prior to the first nine-percent tax credit round in the spring. Funding criteria include proposed target population and alleviation of affordable housing needs, cost-effectiveness, developer experience, and term of affordability. The County Board of Supervisors has adopted a funding priority for projects that reserve a portion of the units for extremely low income households.</p> <p>County staff maintains continuous contact with numerous affordable housing developers. County staff offers formal technical assistance and guidance as well as frequent consultations with interested developers.</p> <p>The County awards of HOME and CDBG to housing developers provide local funds, which help leverage other local, State, and federal funds. The County applies for Mortgage Credit Certificates annually, which are provided to homebuyers in both unincorporated areas and all cities and towns.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>-Continue to support Affordable Housing Development through direct financial assistance. Sources of financial assistance available through the County include HOME, CDBG, HOPWA, and tax exempt bond financing.</li> <li>-Meet with the local development community, key leaders and local civic and community groups to promote the County’s interest in working cooperatively to increase housing development activity.</li> </ul>	<p>The County funds project throughout the unincorporated County and in the cities. The County provided \$2,750,000 in CDBG funding and \$15,790,000 in tax-exempt bonds to Heritage Point, a 42-unit rental project in North Richmond.</p> <p>The County provided \$66 million in tax-exempt bonds to Bay Point Family Apartments, a 193-unit multifamily apartment project.</p>	<p>Continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<ul style="list-style-type: none"> <li>-Allow techniques such as smaller unit sizes, parking reduction, common dining facilities and fewer required amenities for senior projects.</li> <li>-Provide low interest loans to non-profit organizations to develop housing affordable to extremely low- and very low-income households.</li> <li>-Support applications by nonprofit organizations for affordable housing funds, including federal, State, and local public and private funds.</li> <li>-Collaborate with HACCC to explore the use of project-based Section 8 assistance as leverage to obtain additional private sector funds for affordable housing development.</li> <li>-Assist in the financing and development of 100 affordable units over 8 years.</li> </ul> <p><b>Funding Source:</b> CDBG, HOME, HOPWA, Bond-financing</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Annual: Award HOME, CDBG, and HOPWA funds to experienced housing developers (funds are not limited to projects in the unincorporated County)</p>		
<p><b><u>Program 6: Housing Successor to the former Redevelopment Agency</u></b></p> <p>On February 1, 2012, redevelopment agencies throughout the State of California were eliminated. The statute eliminating redevelopment allowed housing assets to be retained by the redevelopment host jurisdiction (known as Housing Successor Agencies). Contra Costa County owns land designated for housing in Bay Point, North Richmond, and Rodeo. The Housing Successor Agency provided pre-development funds to Community Housing Development Corporation of North Richmond (CHDC). CHDC has submitted General Plan amendment and development applications for the County-owned parcel in North Richmond (Heritage Point).</p> <p>The County has not identified developers for the Rodeo Town Center and Orbisonia Heights properties, but will seek developers next year.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to work on the Heritage Point development in North Richmond.</li> </ul>	<p>A Disposition, Development and Loan Agreement and Final Development Plan for the Rodeo Senior Housing-Phase 2 project in Rodeo was approved in 2022.</p> <p>A Master Development Agreement and Phase 1 Disposition, Development and Loan Agreement for the Orbisonia Heights project in Bay Point were approved in May 2022.</p> <p>In 2018, the County reissued a request for proposal for the development of the Rodeo Town Plaza site in Rodeo, which includes a mixed-use development with townhouses and commercial spaces. The selected developer did not proceed with the project. The County issued a Notice of Availability of Surplus Land for all outstanding Housing Successor assets. Response to the solicitation was minimal.</p>	Continue





Housing Program	Implementation Status	Continue /Modify/Delete
<p>- Issue request for proposals for developers for the Rodeo Town Center and Bay Point Orbisonia Heights developments.</p> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Disposition agreements by 2020</p>		
<p><b><u>Program 7: Inclusionary Housing</u></b></p> <p>In October, 2006, the County adopted an Inclusionary Housing Ordinance (IHO). All new residential developments of five or more units, as well as condominium conversions, are subject to the IHO. Fifteen percent of all the residential units are required to be affordable.</p> <ul style="list-style-type: none"> <li>• Rental Projects: 12 percent to lower income households and 3 percent to very low income households.</li> <li>• For-sale Projects: 12 percent to moderate income households and 3 percent to low income households.</li> </ul> <p>Developers may comply with the IHO through several alternative approaches:</p> <ul style="list-style-type: none"> <li>• On-site development</li> <li>• Off-site development</li> <li>• Land conveyance</li> <li>• Payment of a fee in lieu of development</li> <li>• Other – developers may propose another method of compliance that would have at least the same benefit as on-site construction.</li> </ul> <p>However, in the Palmer/Sixth Street Properties L.P. v. City of Los Angeles ("Palmer"), the California Court of Appeal held that local inclusionary requirements applied to rental housing violate the Costa-Hawkins Act, the state law governing rent control. The Palmer decision has significant implications for local inclusionary ordinances. In response, Contra Costa lowered the rental in lieu fee to 0 dollars. This effectively suspends the provisions of the ordinance that apply to rental housing.</p>	<p>An update to the inclusionary housing in-lieu fees for rental and for-sale housing was brought to the Board of Supervisors and approved in December 2018, which became effective in February 2019. The County's Inclusionary Housing Ordinance (Chapter 822-4 of the County Ordinance Code) was updated on November 25, 2019, and February 1, 2022. There was a total of \$946,550 in in-lieu fees collected between 2015 and June 2022.</p>	<p>Amend and continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to implement the IHO and encourage developers to provide affordable units on site.</li> <li>- Provide in-lieu fees to support the development of affordable housing projects.</li> </ul> <p><b>Funding Source:</b> None Required</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>		
<p><b><u>Program 8: Acquisition/ Rehabilitation</u></b></p> <p>The County offers financial assistance, including CDBG, HOME, NSP, and HOPWA funds to affordable housing developers for the acquisition and rehabilitation of existing rental housing. These as low-interest deferred loans in exchange for long-term affordability restrictions on the rental units. Priority is assigned to projects that reserve a portion of the units for extremely low-income households.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:-</b></p> <ul style="list-style-type: none"> <li>Disseminate information on housing rehabilitation assistance on the Department webpage, presentations and distribution of brochures to apartment owners and property management associations.</li> <li>-Provide financing and assist in the acquisition and rehabilitation of 50 rental units over 8 years.</li> </ul> <p><b>Funding Source:</b> CDBG, HOME, HOPWA, Bond Financing</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>In 2022, the County awarded \$2,250,000 in CDBG funds to Rodeo Gateway Senior for the acquisition and rehabilitation of 49 affordable rental units for very low-income seniors.</p> <p>In 2020, the County awarded \$2.37 million dollars to Bridge Housing in CDBG funds for the acquisition/rehabilitation of 87 existing rental units in the Contra Costa Centre area in unincorporated Walnut Creek that is affordable to and occupied by low-income families. There were no projects in 2018 within the unincorporated County; however, the County awarded and closed financing for \$1.3 million in HOME funds for the Antioch Scattered Sites rehabilitation project in Antioch for 56 rental units across two sites. In 2017, the County awarded \$625,000 in HOME funds for the rehabilitation of the Elaine Null Apartments, an existing 14-unit rental development in Bay Point.</p> <p>There were no projects in 2015 within the unincorporated County; however, the County issued \$45,464,000 in tax-exempt bonds for 235 units in the cities of Pinole and Concord.</p>	Continue



Housing Program	Implementation Status	Continue /Modify/Delete																														
<p><b><u>Program 9: Second Units</u></b></p> <p>Second units are attached or detached dwelling units that provide complete, independent living facilities for one or more persons which are located on the same lot as the primary structure and include permanent provisions for living, sleeping, cooking and sanitation. Integrating second units in existing residential neighborhoods is a means of increasing the supply of needed rental housing. The development of second units is also effective in dispersing affordable housing throughout the unincorporated areas and can provide housing to lower- and moderate-income individuals and families, as well as seniors and disabled persons. Since 2003, when the County adopted a Residential Second Unit Ordinance consistent with State law, there have been 153 second units.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b> -Publicize the Residential Secondary Unit Program to increase public awareness.</p> <p><b>Funding Source:</b> None Required</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>The County’s accessory dwelling unit regulations (Chapter 82-24 of the County Ordinance Code) were last updated in 2020.</p> <p>Accessory dwelling unit approvals between 2015 and 2021 are detailed below:</p> <table border="1"> <thead> <tr> <th colspan="3">Accessory Dwelling Unit Approvals</th> </tr> <tr> <th></th> <th>Entitlement permits approved</th> <th>Building permits issued</th> </tr> </thead> <tbody> <tr> <td><b>Total</b></td> <td><b>358</b></td> <td><b>312</b></td> </tr> <tr> <td>2021</td> <td>131</td> <td>100</td> </tr> <tr> <td>2020</td> <td>84</td> <td>47</td> </tr> <tr> <td>2019</td> <td>65</td> <td>58</td> </tr> <tr> <td>2018</td> <td>78</td> <td>47</td> </tr> <tr> <td>2017</td> <td>0</td> <td>28</td> </tr> <tr> <td>2016</td> <td>0</td> <td>19</td> </tr> <tr> <td>2015</td> <td>0</td> <td>13</td> </tr> </tbody> </table> <p>The Contra Costa County Accessory Dwelling Unit (ADU) Incentive Program was adopted by the Board of Supervisors on June 18, 2019, and ran through July 1, 2021. An indirect outcome of the program is to make construction of ADUs more attractive in the county, and thereby, facilitate the development of affordable housing. The ADU Incentive Program was intended to encourage owners of the unpermitted ADUs to come into compliance with zoning and building code requirements using the most cost-effective methods available and minimizing the changes required to the existing construction. Late filing fees and building permit penalty fees were waived for previously constructed unpermitted ADUs under the program.</p> <p>The County will continue to update the accessory dwelling unit regulations for consistency with current state law.</p>	Accessory Dwelling Unit Approvals				Entitlement permits approved	Building permits issued	<b>Total</b>	<b>358</b>	<b>312</b>	2021	131	100	2020	84	47	2019	65	58	2018	78	47	2017	0	28	2016	0	19	2015	0	13	<p>Amend and continue</p>
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2015	0	13																														

Housing Program	Implementation Status	Continue /Modify/Delete
<p><b><u>Program 10: Affordability by Design</u></b></p> <p>Develop affordability by design program to promote creative solutions to building design and construction.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b> -Draft policy</p> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> 2017</p>	<p>Progress was not made towards this program during the planning period and it will not be continued.</p>	<p>Delete</p>
<p><b><u>Program 11: New Initiatives Program</u></b></p> <p>Develop new programs or policies to fund or incentivize affordable housing development</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b> -Track and evaluate new ideas such as land value recapture</p> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> 2017</p>	<p>In 2017, the County updated the Accessory Dwelling Unit Ordinance to streamline internal conversions. The County recently administered the Contra Costa County Accessory Dwelling Unit (ADU) Incentive Program, which ran from 2019 through mid-2021. Additional information about the program is provided under the implementation status of Program 9, above. In addition, the County is working on updating its code to include objective design standards. That work will occur in 2022.</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<b>SPECIAL-NEEDS HOUSING</b>		
<p><b><u>Program 12: Special Needs Housing</u></b></p> <p>In addition to the development of affordable housing in general, the County will work with housing developers to provide housing appropriate to the County’s special needs populations, including mentally and physically disabled persons, seniors, large households, persons with HIV/AIDS, and farmworkers.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Provide financial incentives for the development of housing targeted to special needs populations (HOME, CDBG, and HOPWA).</li> <li>- Work with developers to obtain additional required financing.</li> <li>- Allow techniques such as smaller unit sizes, parking reduction, common dining facilities and fewer required amenities for senior projects.</li> </ul> <p><b>Funding Source:</b> CDBG, HOME, HOPWA</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Annually: Include a priority for special needs housing in CDBG, HOME, HOPWA NOFA (See #5 above)</p>	<p>In 2022, the County awarded \$600,000 in HOPWA funds to a 12-unit project in Pacheco for the rehabilitation of a special needs project that includes units for persons with HIV/AIDS. The County also awarded \$2.2 million in CDBG funds to a 50-unit senior project in Rodeo for rehabilitation. In 2015, a project on Fred Jackson Way in North Richmond added two units of very low-income rental housing for women leaving prison with \$245,250 in Neighborhood Stabilization Program 1 (NSP) funds.</p> <p>There were no projects in 2016 within the unincorporated county. However, the County provided \$487,000 in HOME funds to support the development of a 30-unit rental project in the City of Pittsburg for veterans, including homeless veterans.</p>	<p>Amend and continue</p>
<p><b><u>Program 13: Developmental Disabled Housing</u></b></p> <p>In addition to the development of affordable housing in general, the County will work with housing developers to provide housing appropriate for persons with developmental disabilities.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>-Continue to fund housing developments appropriate for persons with developmental disabilities.</li> </ul> <p><b>Funding Source:</b> Conservation &amp; Development</p>	<p>Progress was not made towards this program during the planning period.</p>	<p>Combine with Program 12: Special Needs Housing and delete.</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Annually: Include a priority for special needs housing in CDBG, HOME, HOPWA NOFA (See #5 above)</p>		
<p><b>Program 14: Accessible Housing</b></p> <p>Persons with disabilities represent a major special needs group in Contra Costa County. To maintain independent living, disabled persons are likely to require assistance, which may include special housing design features, income support for those who are unable to work, and in-home supportive services for persons with mobility limitations. To provide additional housing opportunities for the disabled, the County will continue to require inclusion of accessible units in all new construction projects receiving County financing (e.g. CDBG, HOME). Current regulations require that five percent of the units must be accessible to the physically impaired and an additional two percent of the units must be accessible to the hearing/vision impaired.</p> <p>In order to facilitate the development of appropriate housing for persons with special needs, the County works to remove development constraints and provide reasonable accommodations in the development of such housing as requests are made. The County will formalize this practice as written reasonable accommodation procedures.</p> <p><b>Eight-year Program</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to require inclusion of accessible units in all new construction projects receiving County financing.</li> <li>- Provide zero and low-interest loans through the Neighborhood Preservation Program for accessibility improvements in existing affordable housing.</li> <li>- Implement reasonable accommodation procedures to provide special consideration in zoning and land use for housing for persons with disabilities. The County will strive to make accommodations a ministerial process, with a minimal processing fee, subject to the approval of the Zoning Administrator who will apply the following decision-making criteria:             <ol style="list-style-type: none"> <li>1. The request for reasonable accommodation will be for the benefit of an individual with a disability protected under fair housing laws.</li> <li>2. The requested accommodation is necessary to make housing available to an individual with a disability protected under fair housing laws.</li> </ol> </li> </ul>	<p>In 2015, there were no new construction projects in the unincorporated county. There were three projects that the County provided funding for in the cities of Antioch, El Cerrito, and Walnut Creek that included a total of eight fully accessible units, six physically disabled units, and two vision/hearing-impaired units.</p> <p>In 2016, the County provided funding for a multifamily rental project in North Richmond that included four fully accessible units, three physically disabled units, and one vision/hearing impaired unit. Additionally, the County provided funding for projects located in the Cities of El Cerrito, Pittsburg, and Walnut Creek that included a total of 11 fully accessible units, 8 physically disabled units, and 3 vision/hearing-impaired units.</p> <p>The County continues to require accessible units in all new construction projects that receive HOME or CDBG funding. Accessible units are included in rehabilitation projects when feasible where 5% of the units must be accessible to the physically impaired and an additional 2% of the units must be accessible to the hearing/vision impaired. (See Program 5, New Construction of Affordable Housing)</p> <p>The County has drafted procedures for reasonable accommodation but has not yet adopted the procedures.</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<p>3. The requested accommodation would not impose an undue financial or administrative burden on the County.</p> <p>4. The requested accommodation would not require a fundamental alteration in the nature.</p> <p><b>Funding Source:</b> None Required</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>		
<p><b><u>Program 15: Reasonable Accommodation</u></b></p> <p>Increase the supply of special needs and accessible housing.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b> -Implement County’s reasonable accommodation policy.</p> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>Through Program 1, Neighborhood Preservation Program (see above), between 2015 and 2020, the County funded 18 projects that consisted of accessibility upgrades. Examples of upgrades included exterior surface improvements, full bathroom remodels, the installation of ADA-compliant toilets, grab bars, handrails, steps and landing, and an easy step shower enclosure. Translation services have also been provided through the Neighborhood Preservation Program (Program 1).</p>	<p>Combine with Program 14 and delete</p>
<p><b><u>Program 16: Contra Costa Interagency Council on Homelessness</u></b></p> <p>The Contra Costa Interagency Council on Homelessness implements programs and strategies contained in the Continuum of Care Plan and Ten-Year Plan to End Homelessness. These plans are designed to address the needs of the homeless. The goal of these programs is to ensure that homeless individuals and families can obtain decent, suitable, and affordable housing in the County. Through the Ten Year Plan, the County has adopted a “housing first” strategy, which works to immediately house a homeless individual or family rather than force them through a sequence of temporary shelter solutions. The Ten Year Plan further deemphasizes emergency shelters by supporting “interim housing” as a preferred housing type. Interim housing is very short-term and</p>	<p>This program is currently known as the Council on Homelessness. Health Services through the Health, Housing and Homeless Services (H3) Division administers the County's homeless Continuum of Care (CoC). H3 functions as the collaborative applicant and CoC and HMIS Lead Agency, and provides strategic direction, coordination of funding and programmatic oversight to the CoC. The CoC is designed to assist individuals and families experiencing homelessness by providing services and housing needed to help these individuals and families move into permanent</p>	<p>Amend and continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p>focuses on helping people access permanent housing as quickly as possible. Services provided in interim housing include housing search assistance and case management to help address immediate needs and identify longer-term issues to be dealt with once in permanent housing.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Update the Ten-Year Plan</li> <li>- Continue to work with local non-profit organizations and relevant public agencies to obtain required funding to expand the number of permanent supportive housing units.</li> <li>- Continue to support existing transitional housing programs, operated by the County and non-profit agencies.</li> <li>- Continue to support the operations of existing emergency shelters.</li> <li>- Continue to support licensed residential care facilities in all residential zones through the land use permit process.</li> </ul> <p><b>Funding Source:</b> Hearth Act, CDBG, HOPWA, HOME</p> <p><b>Responsible Agency/Dept.:</b> Health Services; Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>housing, with the goal of long-term stability. The Council on Homelessness (COH), appointed by the Contra Costa Board of Supervisors, is the governing body for the CoC and serves as the homelessness advisory body to the Board of Supervisors. H3 provides staffing support to the COH to support the governance and administration of the CoC. The COH is responsible for approving some funding allocations for proposed projects and monitoring and tracking project and agency performance and compliance in coordination with the CoC and HMIS Lead Agency. The COH also provides advice and input on the operations of homeless services, program operations, and program development efforts in Contra Costa County. The Contra Costa CoC and COH are made up of multiple private and public partners who work collaboratively with the County and H3 to end homelessness in Contra Costa.</p>	
<p><b><u>Program 17: Farmworker Housing</u></b></p> <p>In addition to the development of affordable housing in general, the County will work with housing developers to provide housing appropriate for agricultural workers.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>-Include farmworkers as a population likely to be extremely and very-low income and in need of permanent housing.</li> </ul> <p><b>Funding Source:</b> CDBG, HOME</p>	<p>The agricultural worker housing ordinance was adopted on September 19, 2017. No housing specifically for agricultural workers has been constructed during the planning period. The number of farmworkers has been decreasing in the county. The portion of this program addressing farmworker housing will not be continued.</p>	Delete





Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Annually: Include farmworker housing in CDBG, HOME NOFA (See #5 above)</p>		
<b>HOUSING AFFORDABILITY</b>		
<p><b>Program 18: First-Time Homebuyer Opportunities</b></p> <p>The County implements a number of programs to provide affordable homeownership opportunities for lower- and moderate-income households as well as special needs groups, including farmworkers. These programs include the following:</p> <p><u>Mortgage Credit Certificate (MCC):</u> The MCC is a federal program designed to assist low and moderate-income first-time homebuyers. A mortgage credit certificate is issued to qualified homebuyers, allowing for a federal income tax credit of up to 20 percent of the annual mortgage interest paid.</p> <p><u>New Construction:</u> HOME and CDBG funds are used for new construction and rehabilitation of single-family homes. Following completion, these funds are rolled over into subsidized loans for lower- and moderate-income homebuyers.</p> <p><u>Inclusionary Housing:</u> Through the Inclusionary Housing Ordinance, homes affordable to lower- and moderate-income homebuyers are constructed as a component of market-rate housing developments.</p> <p><b>Eight-year Program</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to expand homeownership opportunities through a combination of homebuyer assistance programs, financial support of new construction, and development agreements.</li> <li>- Assist 50 first-time homebuyers over 5 years.</li> </ul> <p><b>Funding Source:</b> MCC, HOME, CDBG</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>Between 2015 and 2020, the County provided 158 households with Mortgage Credit Certificates (MCC) throughout the county and cities for a total of over \$10 million in MCC assistance. In 2015, permits were issued for 12 Muir Ridge Homes.</p>	<p>Continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p><b><u>Program 19: Extremely Low Income (ELI) Housing Development Assistance</u></b></p> <p>The County is an entitlement jurisdiction for the CDBG, HOME, and ESG programs. It is a sub-grantee for the HOPWA program. In addition, the County applies for and receives approximately \$7 million in Hearth Act funds on an annual basis. The County administers each of these grants for either most or the entire County (incorporated cities and towns, and the unincorporated areas). Existing Board of Supervisor policy gives priority to projects that provide housing affordable to and occupied by extremely low income households. The County shall promote the benefits of this assistance program to develop housing for extremely low income households on its web page and in its program materials.</p> <p>The County shall continue to encourage affordable housing developers to seek state and federal funding to support the construction and rehabilitation of low-income housing, particularly for housing that is affordable to extremely low income households. The County shall also seek state and federal funding specifically targeted for the development of housing affordable to extremely low income households, should they become available.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>-Department of Conservation and Development will promote the ELI development assistance program to developers (for profit and non-profit) by including the priority for ELI housing in information on the HOME, CDBG, and HOPWA programs.</li> </ul> <p><b>Funding Source:</b></p> <p>HOME, CDBG, State (as funding is available)</p> <p><b>Responsible Agency/Dept.:</b></p> <p>Conservation &amp; Development</p> <p><b>Timeframe:</b></p> <p>Annually: Include a priority for extremely-low income housing in CDBG, HOME, HOPWA NOFA (See #5 above)</p>	<p>The County continues to provide funding preferences to developers throughout the county who include units that are affordable to extremely low-income households. There were a total of 1,116 extremely low-income housing units that were provided funding assistance between 2015 and 2020 for rehabilitation of existing housing (See Program 1, Neighborhood Preservation Program, and Program 2, Weatherization Program). There were 63 units of new very low-income units from the construction of a single-family residence in Bay Point, Heritage Point Apartments in North Richmond, and Bay Point Family Apartments in Bay Point.</p>	<p>Continue</p>
<b>PROVISION OF ADEQUATE HOUSING SITES</b>		
<p><b><u>Program 20: Sites Inventory</u></b></p> <p>As part of the 2015-2023 (5th cycle) Housing Element update, an analysis of the residential development potential in each of the unincorporated communities of the County was conducted. This analysis was performed using the County’s Geographic Information System (GIS) and data from the County Assessor’s records. Based on this assessment, the</p>	<p>The County has continued to maintain an adequate inventory of suitably zoned sites to address the 5th cycle Regional Housing Needs Assessment (RHNA).</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<p>unincorporated areas can potentially accommodate over 3,318 new units on vacant and underutilized properties. Combined with housing units built and projects approved since January 2014, the County has sufficient sites to meet the 1,367-unit RHNA (374 very-low income, 218 low-income, 243 moderate-income, and 532 above moderate-income).</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to provide adequate sites to accommodate the County’s RHNA of 1,367 units.</li> <li>- Maintain an up-to-date inventory of vacant/underutilized residential sites as funding permits and make inventory available to potential developers (both for profit and non-profit developers)</li> </ul> <p><b>Funding Source:</b> Funding source to be determined for maintenance of site inventory</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing maintenance of site inventory.</p>		
<p><b><u>Program 21: Mixed-Use Developments</u></b></p> <p>County General Plan Land Use Element includes a category for mixed-use developments in the unincorporated areas. This category has enabled the County to create unique projects that combine residential uses such as apartments or condominiums with commercial and other uses. Such developments provide needed housing in close proximity to key services such as transportation. The development at the Contra Costa Centre is an example of mixed-use development. The mixed-use category offers the County greater flexibility by providing needed housing in urban areas close to important services.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to encourage mixed-use development where appropriate by offering flexible development standards.</li> <li>- Consider reducing the 15-acre site area requirement for mixed residential and non-residential uses</li> </ul>	<p>In 2015, a 44-unit very low-income affordable mixed-use project in North Richmond (Heritage Point) was approved.</p> <p>The County is reviewing the existing ordinance as part of the General Plan update, currently underway.</p>	<p>Amend and continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> 2015 – 2016: Review existing ordinance and development patterns. 2016 – 2017: Draft outline of revised ordinance and meet with stakeholder groups 2017 – 2018: Determine whether or not to draft and adopt revised ordinance</p>		
<p><b><u>Program 22: Density Bonus &amp; Other Development Incentives</u></b></p> <p>In accordance with State law and the County’s Residential Density Bonus Ordinance, the County provides density bonuses to qualified new housing projects consistent with State law. The County will continue to update its ordinance as State law changes. Currently, the housing development must have: (1) at least 5 percent of the total units affordable to very-low income households; (2) at least 10 percent of the total units affordable to lower income households; or (3) at least at least 10 percent ownership in a planned development for moderate income, or (4) 100 percent senior housing development. If one of these conditions is met, a developer is entitled to a density bonus of 20 percent (5 percent for ownership) of the maximum density permitted in the underlying zone plus other development concessions or incentives (e.g. modified standards, regulatory incentives, or concessions). Affordability must be maintained for a minimum of 30 years. The County has utilized density bonuses to facilitate the development of affordable housing.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Continue to offer density bonuses and other development incentives to facilitate affordable housing development.</li> <li>- Continue to provide information regarding the Density Bonus Ordinance to developers at the application and permit center in DCD as well as during pre-application meetings.</li> </ul> <p><b>Funding Source:</b> Conservation &amp; Development</p>	<p>The Driftwood Residential Project in Bay Point included six affordable units with three new units on-site and three rehabilitated single-family residences off-site.</p> <p>Bay Point Family Apartments, a 193-unit multifamily apartment project entered into a Density Bonus Developer Agreement with the County. The project was completed in 2017 and includes 191 affordable units.</p> <p>In 2020, the County granted entitlements for a 284-unit apartment project in the unincorporated Walnut Creek area that requested a density bonus. This project includes 12 very low-income units and 24 moderate-income units.</p> <p>The County recently approved entitlements for two projects with density bonus requests. The two projects are a 22-unit apartment complex in Rodeo (approved in 2021) and a 100-unit apartment in Bay Point (approved in 2022).</p> <p>The County will continue to update the Density Bonus Regulations in the County Ordinance Code for consistency with current state law.</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>		
<p><b><u>Program 23: Infill Development</u></b></p> <p>Throughout the unincorporated areas, many single-family lots were legally created but do not meet the current minimum lot size standard specified in the Planning and Zoning Code. To acknowledge the development right on these parcels, the County DCD uses a Small Lot Review process to assist applicants in determining the massing and bulk of the units to ensure compatibility with adjacent properties.</p> <p>Similarly, many multi-family residential lots in the unincorporated areas do not meet current minimum lot size standards. Consolidation of a number of undersized lots would likely be necessary to provide an adequate land area to develop an economically feasible multi-family project. As a means to facilitate the infill development of multi-family housing, the County has identified small vacant multi-family residential sites that have the potential for lot consolidation with adjacent properties.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>-Continue to use the Small Lot Review process to assist applicants in developing infill single-family homes on small lots.</li> <li>-Identify small vacant multi-family lots with the potential for lot consolidation and make this information available to developers.</li> <li>-Consider offering a tiered density bonus program based on lot size to encourage consolidation of small lots for multi-family development.</li> </ul> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Biennially: Review site inventory and adjust for planned and completed developments</p>	<p>The County continues to use the Small Lot Review process to assist applicants in developing infill single-family residences on substandard-size lots and</p> <p>streamline the administrative review process for infill housing in the former redevelopment areas and on substandard sized lots. This process is a common application type that is used throughout the county, mostly in older areas that were established prior to the current zoning standards.</p>	<p>Continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<b>REMOVAL OF GOVERNMENTAL CONSTRAINTS</b>		
<p><b><u>Program 24: Planned Unit District</u></b></p> <p>The Planned Unit District (P-1) provides the opportunity for more creative and flexible design for large-scale residential developments than would be permitted in the conventional residential districts. The use of the P-1 district is intended to promote the diversification of buildings, lot sizes, and open spaces to produce an environment in harmony with surrounding existing and potential uses. The flexibility associated with the P-1 district includes variation in structures, lot sizes, yards, and setbacks and enables the developer to address specific needs or environmental constraints in an area. The final plan for a P-1 development is subject to approval by the County Planning Commission. The P-1 District is applicable to all residential districts.</p> <p>Through the P-1 District, increased residential densities can be achieved. Density of up to 44.9 units per acre can be achieved in the P-1 district if the underlying General Plan designation is Multiple-Family Residential Very High Density (MV). The density can be increased to 99 units per acre if the underlying General Plan designation is Multiple-Family Residential Very High Density Special (MS).</p> <p>In older, developed areas where the objective is to revitalize neighborhoods through redevelopment, the P-1 process can also be used to define allowable land uses, and minimum development and design guidelines that are appropriate for the specific community. In this situation, the P-1 designation streamlines the development process for projects consistent with the specified guidelines.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>-Encourage rezoning to P-1 District in the unincorporated areas, where appropriate, particularly in areas where the underlying General Plan designation is Multiple-Family Residential Very High Density and Multiple-Family Residential Very High Density Special.</li> <li>-Consider eliminating the 5-acre minimum parcel size currently required for P-1 zoning to permit flexibility for small sites and infill development.</li> </ul> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p>	<p>In 2015, a 14-unit residential subdivision and Planned Unit District was approved.</p> <p>In 2017, the County began drafting a revised ordinance to remove the minimum lot size requirements for Planned Unit Development projects. As of 2020, the Department had administered a review of the current district standards to identify any provisions that unintentionally hinder development in the P-1 District. Staff identified potential amendments, such as eliminating the existing minimum acreage requirements for a P-1 district and granting the Zoning Administrator the ability to decide additional application types for properties within P-1 Districts, which will ease the entitlement process for housing developments. Staff is in the process of finalizing language for a formal ordinance amendment proposal.</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Timeframe:</b> Ongoing</p>		
<p><b><u>Program 25: Development Fees</u></b></p> <p>The County, special districts, and joint power authorities collect fees on development to mitigate the impacts of development on infrastructure. Requiring developers to construct site improvements and/or pay fees toward the provision of infrastructure, public facilities, services, and processing increases the cost of housing. While these costs may impact housing affordability, these requirements are deemed necessary to maintain the quality of life desired by County residents, and are consistent with the goals and policies of the General Plan.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Work with utility companies to waive or reduce hook-up fees for second units.</li> <li>- Monitor transportation fee impact on development costs.</li> </ul> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>	<p>Under the Contra Costa County Accessory Dwelling Unit (ADU) Incentive Program, unpermitted ADUs are encouraged to be legalized and brought into compliance with zoning and building code requirements. Late filing fees and building permit penalty fees are waived for previously constructed unpermitted ADUs under this program. State law has been updated to regulate the amount of fees that can be levied on ADUs under a certain size, which addressed a portion of this program.</p>	<p>Amend and continue</p>
<p><b><u>Program 26: Quick Turn-around Program</u></b></p> <p>The County periodically receives applications for small, easily reviewed projects. The department has begun a program to identify those applications that can be reviewed and approved much more quickly than complex development applications. The applications for these small projects are pulled and assigned to staff that will process the application in approximately five days.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>- Continue to implement program to complete small project application reviews within 5 days of application submittal.</li> </ul>	<p>In 2015, there were three projects that received expedited review.</p> <p>This program continues to be utilized for ensuring expedited review of infill projects and various planning applications, including tree permits, variances and design reviews.</p>	<p>Continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> 2015</p>		
<p><b>Program 27: Coordinated County Department Review of Development Applications</b></p> <p>The County receives development applications for large and complex projects that require approvals or comments from multiple County departments. A monthly meeting between upper management representatives facilitates review of these projects. Development issues are identified early in the project review and staff from the different departments are able to work as a team to identify approaches to resolve the issues.</p> <p><b>Eight-year Program</b></p> <p><b>Objective:</b> -Continue monthly meetings with various County departments to review applications that require approvals or comments from more than one County department.</p> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development, Public Works, and Health Services Departments</p> <p><b>Timeframe:</b> Ongoing</p>	<p>The County continues to coordinate and work with other various County departments and agencies when processing new applications. Regular meetings between community development, building inspection, and public works are scheduled to discuss the review and processing of applications and fees.</p>	<p>Continue</p>
<p><b>Program 28: Review and Update of Zoning &amp; Subdivision Ordinance</b></p> <p>The County regulates the type, location, density, and scale of residential development in the unincorporated areas primarily through the Planning and Zoning Code. Zoning regulations are designed to protect and promote the health, safety, and general welfare of residents as well as implement the policies of the County General Plan. The County is engaged in an ongoing process of reviewing the Planning and Zoning Code for consistency with State laws. The main purpose of this review is to ensure that the County's</p>	<p>The emergency shelter ordinance was adopted on November 4, 2014. The agricultural worker housing, permanent supportive housing, and transitional housing zoning ordinances were adopted on September 19, 2017. An ordinance to allow single-room occupancy (SRO) units was adopted in 2014.</p> <p>The County is reviewing the existing zoning ordinance as part of the General Plan update, currently underway.</p>	<p>Amend and continue</p>





Housing Program	Implementation Status	Continue /Modify/Delete
<p>requirements and standards do not act as a constraint to the development of affordable housing.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>-Periodically review the Planning and Zoning Code and other regulations to ensure that County policies and regulations do not constrain housing development and affordability.</li> <li>-Revise the zoning code to allow emergency shelters by right in the General Commercial zone, permit transitional and permanent housing as residential uses, and allow agricultural farmworker housing.</li> </ul> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development, and Public Works</p> <p><b>Timeframe:</b></p> <p>By December 31, 2014: Adopt emergency housing and single room occupancy ordinance. <i>(adopted 11/4/2014)</i></p> <p>1st quarter 2015: Adopt Agricultural worker housing, permanent supportive, and transitional housing zoning text changes</p> <p>Ongoing: period review of zoning and subdivision ordinances</p>		
<b>EQUAL HOUSING OPPORTUNITY</b>		
<p><b><u>Program 29: Anti-Discrimination Program</u></b></p> <p>To promote fair housing, the County allocates CDBG funds to local non-profit organizations for fair housing counseling and legal services. Services offered typically include advocacy and collaboration in support of fair housing opportunities for all; public outreach and education regarding fair housing rights; specialized property owner, management, and lender training; rental home seeking and relocation services; and discrimination complaint processing and investigation.</p> <p>All housing developers receiving financial assistance from the County are required to submit a marketing plan detailing the developer’s equal opportunity outreach program and demonstrating efforts to reach those people who are least likely to hear about affordable housing opportunities. Typical outreach includes distributing informational flyers to social</p>	<p>The County Board of Supervisors adopted a Countywide 2020-2025 Analysis of Impediments/Assessment to Fair Housing Choice report on June 11, 2019. The County worked with the Cities of Antioch, Concord, Pittsburg, and Walnut Creek as well as the three Public Housing Authorities in Contra Costa County to prepare this report.</p> <p>The County continued to provide fair housing services as described in the program, by contracting with ECHO Housing.</p>	<p>Amend and continue</p>

Housing Program	Implementation Status	Continue /Modify/Delete
<p>service agencies, and housing authority offices. Advertisements are placed in local newspapers and publications such as the Korea Times, Sing Tao, and El Mensajero.</p> <p>The Contra Costa Consortium has adopted the HUD-mandated Analysis of Impediments (AI) to Fair Housing Choice. The AI includes: a comprehensive review of the County’s laws, regulations, and administrative policies; an assessment of how those laws affect the location, availability, and accessibility of housing; and an assessment of conditions, both public and private, affecting fair housing choice.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>-Continue to support local non-profit organizations for fair housing counseling and legal services.</li> <li>-Carry out necessary actions to address the impediments to fair housing choice identified in the AI.</li> </ul> <p><b>Funding Source:</b> CDBG</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Complete update to the AI after promulgation of new regulations</p>		
<p><b><u>Program 30: Residential Displacement Program</u></b></p> <p>In allocating affordable housing funds, the County assigns priority to projects that do not involve permanent relocation (displacement). However, projects involving relocation may be funded if required to eliminate unsafe or hazardous housing conditions, reverse conditions of neighborhood decline, stimulate revitalization of a specific area, and/or accomplish high priority affordable housing projects. In such situations, the County monitors projects to ensure that relocation consistent with federal and state requirements is provided. Wherever feasible, displaced households and organizations are offered the opportunity to relocate into the affordable housing project upon completion.</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>-Prevent permanent relocation to the extent practicable.</li> </ul>	<p>There is nothing to report during the planning period within the unincorporated county. The County will continue to monitor for potential displacement and implement this program, including complying with current state law regarding potential displacement.</p>	<p>Amend and continue</p>



Housing Program	Implementation Status	Continue /Modify/Delete
<p><b>Funding Source:</b> HOME, CDBG</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> Ongoing</p>		
<b>ENERGY CONSERVATION AND SUSTAINABLE DEVELOPMENT</b>		
<p><b><u>Program 31: Residential Energy Conservation Program</u></b></p> <p>Contra Costa County is actively involved in regional energy conservation and sustainable development activities. It is a member of the Bay Area Regional Energy Network, which provides rebates and incentives for energy conservation upgrades. The County is also an East Bay Energy Watch partner. Recognizing the hurdles residential property owners face when seeking to install solar panels, Contra Costa is participating in regional efforts to develop guidelines for solar energy retrofit projects. The County has begun to streamline the permitting process for solar panels by creating a checklist that includes the required elements to process a permit application. Staff are identifying common issues that delay approval. Building upon the checklist, staff will develop guidelines for property owners and contractors to streamline the application process. convert</p> <p><b><u>Eight-year Program</u></b></p> <p><b>Objective:</b> -Develop guidelines for solar energy home retrofit projects</p> <p><b>Funding Source:</b> Conservation &amp; Development</p> <p><b>Responsible Agency/Dept.:</b> Conservation &amp; Development</p> <p><b>Timeframe:</b> 2015: Review examples of guidelines for solar retrofit 2016: Draft County guidelines 2017: Adopt guidelines</p>	<p>Solar permits for roof-mounted residential photovoltaic (PV) systems are available online under the Application and Permit Center web page. Instructions for online submittal for expedited review is posted on the County’s web page. The number of residential solar permits issued in 2020 was 2,355.</p> <p>The County also participates in the Bay Area Regional Energy Network (BayREN), one of several Regional Energy Networks (RENS) established under the auspices of the California Public Utilities Commission. The program is led by the Association of Bay Area Governments in coordination with the nine Bay Area counties and provides rebates for owners and property managers that make specific energy-efficiency improvements to single-family and multifamily buildings. In 2020, there were 1,382 single-family home upgrades and 6 multifamily projects with 759 multifamily units upgraded countywide, which includes 103 single-family upgrades in the unincorporated county.</p>	Continue





**PLACEWORKS**

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**Appendix 5.3-1**

**Air Quality and Greenhouse Gas Emissions Data**



## Land Use Statistics - Contra Costa County

	Existing Conditions	Buildout Estimates		Projected Growth (Proposed Project)			
	2019	2030	2040	2019-2030	%	2019-2040	%
Housing Units	60,320	70,040	83,080	9,720	16%	22,760	38%
Population	174,150	199,600	242,070	25,450	15%	67,920	39%
Employment	38,760	45,690	50,600	6,930	18%	11,840	31%
<b>Service Population</b>	<b>212,910</b>	<b>245,290</b>	<b>292,670</b>	<b>32,380</b>	15%	<b>79,760</b>	37%



## AQMP Consistency Analysis

### Comparison of the Change in Population and VMT in Contra Costa (O-D Method)

Category	Existing	2030 Proposed Project	2040 Proposed Project	2030 Change from Existing		2040 Change from Existing	
				Change	Percent	Change	Percent
Population	174,150	199,600	242,070	25,450	15%	67,920	39%
Employment	38,760	45,690	45,690	6,930	18%	6,930	18%
SP	212,910	245,290	287,760	32,380	15%	74,850	35%
VMT per Day	3,276,401	3,653,776	4,031,152	377,375	12%	754,751	23%
VMT/person	18.8	18.3	16.7	-0.5	-3%	-2.2	-11%
VMT/SP	15.4	14.9	14.0	-0.5	-3%	-1.4	-9%

Note Origin-Destination (O-D) Methodology is not the same methodology for SB 743, which considers only commute-trip VMT. VMT

Modeling of vehicle miles traveled (VMT) is provided by Fehr and Peers is based on the Contra Costa County Transportation Authority's Contra Costa Transportation Analysis Guidelines. VMT from passenger vehicles and trucks that have an origin or destination in the County using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375). For accounting purposes, there are three types of trips:

- » Vehicle trips that originated and terminated within the County (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips, and their emissions, are attributed to the County.
- » Vehicle trips that either originated or terminated (but not both) within the County (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips is attributed to the County.
- » Vehicle trips that neither originated nor terminated within the County. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted towards the County's VMT or emissions.

**Contra Costa Community GHG Emissions Inventory and Forecast**

Category	With State and Regional Actions											
	2005		Existing		2030		Change from Existing (2030)		2040		Change from Existing (2040)	
	TOTAL		TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
On-Road Transportation	628,200	49%	464,040	46%	425,870	43%	-38,170	-8%	443,380	42%	-20,660	-4%
Residential Energy	294,930	23%	191,780	19%	208,720	21%	16,940	9%	217,410	21%	25,630	13%
Nonresidential Energy	118,740	9%	109,370	11%	91,120	9%	-18,250	-17%	69,040	7%	-40,330	-37%
Solid Waste/Landfills	243,940	19%	220,760	22%	229,820	23%	9,060	4%	249,820	24%	29,060	13%
Agriculture	33,350	3%	36,130	4%	34,770	3%	-1,360	-4%	33,410	3%	-2,720	-8%
Off-road Equipment	34,160	3%	54,010	5%	69,670	7%	15,660	29%	91,100	9%	37,090	69%
Water and Wastewater	8,080	1%	4,870	0%	4,640	0%	-230	-5%	4,550	0%	-320	-7%
BART	1,040	0%	190	0%	140	0%	-50	-26%	80	0%	-110	-58%
Land Use and Sequestration	-70,860	-5%	-70,860	-7%	-67,580	-7%	3,280	-5%	-52,970	-5%	17,890	-25%
<b>Total Community Emissions</b>	<b>1,291,580</b>	<b>100%</b>	<b>1,010,290</b>	<b>100%</b>	<b>997,170</b>	<b>100%</b>	<b>-13,120</b>	<b>-1%</b>	<b>1,055,820</b>	<b>100%</b>	<b>45,530</b>	<b>5%</b>
Residents	154,270		174,150		199,600		25,450	15%	242,070		67,920	39%
MTCO <sub>2e</sub> /capita	8.4		5.8		5.0		-0.8	-14%	4.4		-1.4	-25%
<b>Trajectory to AB 32, SB 32, and EO S-03-05</b>			<b>1,097,840</b>		<b>658,704</b>				<b>439,136</b>			
<b>Achieves Target</b>			<b>Yes</b>		<b>No</b>				<b>No</b>			
<b>Stationary Sources</b>	<b>13,983,030</b>		<b>10,867,670</b>									
<b>Wildfire</b>	<b>14,270</b>		<b>10,100</b>									

Source: Based on the emissions inventory and forecast being conducted for the County's Climate Action Plan Update.

Notes: Emissions may not total to 100 percent due to rounding. Based on GWPs in the IPCC Fifth Assessment Report (AR5).

The emissions inventory and forecast is based on activity data for Contra Costa County. This emissions inventory methodology identifies GHG emissions produced within a jurisdiction and captures direct and indirect emissions generated by land uses in a community. The activity data methodology allows a direct comparison between a community's GHG emissions and that identified by CARB in the AB 32 and SB 32 inventory and forecast prepared for the scoping plan. Unlike a "consumption-based" GHG emissions inventory, an activity-based emissions inventory does not capture lifecycle emissions associated with consumptions of goods. While a consumption-based emissions inventory approach may document GHG emissions associated with the final demand (regardless of where they were generated), a consumption-based emissions inventory excludes emissions associated with products produced within the jurisdiction but consumed elsewhere. For these reasons, an activity-based emissions inventory was determined to be most applicable for determining significant impacts under CEQA.

Unincorporated Contra Costa County GHG emissions in 2005 were 1,291,580 MTCO<sub>2e</sub>, translating to a 1990 GHG emissions level of 1,097,840 MTCO<sub>2e</sub>

Note: Excludes GHG emissions natural gas use from Permitted Sources within the County

## County of Contra Costa Community Criteria Air Pollutant Emissions Inventory and Forecast

### Sources

<sup>1</sup> Source: Fehr and Peers 2021; EMFAC2021 Version 1.0.2 Emissions Database (County - Contra Costa)

<sup>2</sup> Sources: Natural Gas Use based on the Climate Action Plan Update. CalEEMod User's Guide for natural gas criteria air pollutant emission rates. Excludes criteria air pollutant emissions natural gas use from Permitted Sources within the County.

<sup>3</sup> Source: OFFROAD 2021<sup>1</sup>

<sup>4</sup> Source: CalEEMod User's Guide

### EXISTING (2019)

Phase	Existing Criteria Air Pollutant Emissions (lbs/day)				Existing Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	218	1,120	59	66	38	194	10	11
Energy <sup>2</sup>	47	875	66	66	9	160	12	12
Offroad Equipment <sup>3</sup>	17	16	1	1	3	3	0	0
Consumer Products <sup>4</sup>	2,432				444			
<b>Total</b>	<b>2,715</b>	<b>2,012</b>	<b>125</b>	<b>132</b>	<b>493</b>	<b>357</b>	<b>22</b>	<b>24</b>

### EXISTING LAND USES (2030 Emission Rates)

Phase	Existing (2030) Criteria Air Pollutant Emissions (lbs/day)				Existing (2030) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	75	344	9	59	13	60	1	10
Energy <sup>2</sup>	47	875	66	66	9	160	12	12
Offroad Equipment <sup>3</sup>	17	16	1	1	3	3	0	0
Consumer Products <sup>4</sup>	2,432				444			
<b>Total</b>	<b>2,572</b>	<b>1,235</b>	<b>75</b>	<b>125</b>	<b>469</b>	<b>222</b>	<b>14</b>	<b>22</b>

### Year 2030

Phase	Project (2030) Criteria Air Pollutant Emissions(lbs/day)				Project (2030) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	84	383	10	65	15	67	2	11
Energy <sup>2</sup>	53	979	74	74	10	179	13	13
Offroad Equipment <sup>3</sup>	20	17	1	1	4	3	0	0
Consumer Products <sup>4</sup>	2,976				543			
<b>Total</b>	<b>3,133</b>	<b>1,379</b>	<b>84</b>	<b>140</b>	<b>571</b>	<b>248</b>	<b>15</b>	<b>25</b>

## County of Contra Costa Community Criteria Air Pollutant Emissions Inventory and Forecast

### NET CHANGE (No Project)

Phase	Net Change (2030-2030 No Project) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2030-2030 No Project) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	9	40	1	7	2	7	0	1
Energy <sup>2</sup>	6	104	8	8	1	19	1	1
Offroad Equipment <sup>3</sup>	3	1	0	0	0	0	0	0
Consumer Products <sup>4</sup>	544				99			
<b>Total</b>	<b>561</b>	<b>144</b>	<b>9</b>	<b>15</b>	<b>102</b>	<b>26</b>	<b>2</b>	<b>3</b>
BAAQMD THRESHOLD	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	Yes	No	No	Yes	Yes	No	No

### NET CHANGE (from Existing)

Phase	Net Change (2030-Existing) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2030-Existing) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	-134	-737	-49	0	-23	-128	-9	0
Energy <sup>2</sup>	6	104	8	8	1	19	1	1
Offroad Equipment <sup>3</sup>	3	1	0	0	0	0	0	0
Consumer Products <sup>4</sup>	544				99			
<b>Total</b>	<b>418</b>	<b>-632</b>	<b>-41</b>	<b>8</b>	<b>78</b>	<b>-109</b>	<b>-7</b>	<b>1</b>
BAAQMD THRESHOLD	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	No	No	No	Yes	No	No	No

### EXISTING LAND USES (2040 Emission Rates)

Phase	Existing (2040) Criteria Air Pollutant Emissions (lbs/day)				Existing (2040) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	49	220	5	59	9	38	1	10
Energy <sup>2</sup>	47	875	66	66	9	160	12	12
Offroad Equipment <sup>3</sup>	17	16	1	1	3	3	0	0
Consumer Products <sup>4</sup>	2,432				444			
<b>Total</b>	<b>2,545</b>	<b>1,111</b>	<b>72</b>	<b>125</b>	<b>464</b>	<b>201</b>	<b>13</b>	<b>22</b>

### Year 2040

Phase	Project (2040) Criteria Air Pollutant Emissions(lbs/day)				Project (2040) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	60	271	6	72	10	47	1	13
Energy <sup>2</sup>	56	1,041	79	79	10	190	14	14
Offroad Equipment <sup>3</sup>	23	18	1	1	4	3	0	0
Consumer Products <sup>4</sup>	3,707				676			
<b>Total</b>	<b>3,846</b>	<b>1,330</b>	<b>86</b>	<b>152</b>	<b>701</b>	<b>240</b>	<b>16</b>	<b>27</b>

## County of Contra Costa Community Criteria Air Pollutant Emissions Inventory and Forecast

### Net Change (No Project)

Phase	Net Change (2040-2040 No Project) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2040-2040 No Project) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	11	51	1	14	10	47	1	13
Energy <sup>2</sup>	9	166	13	13	10	190	14	14
Offroad Equipment <sup>3</sup>	6	2	0	0	4	3	0	0
Consumer Products <sup>4</sup>	1,274				676			
<b>Total</b>	<b>1,300</b>	<b>218</b>	<b>14</b>	<b>26</b>	<b>701</b>	<b>240</b>	<b>16</b>	<b>27</b>
BAAQMD THRESHOLD	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	Yes	No	No	Yes	Yes	Yes	Yes

### NET CHANGE (from Existing)

Phase	Net Change (2040-Existing) Criteria Air Pollutant Emissions(lbs/day)				Net Change (2040-Existing) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	-158	-849	-52	7	-27	-147	-9	1
Energy <sup>2</sup>	9	166	13	13	2	30	2	2
Offroad Equipment <sup>3</sup>	6	2	0	0	1	0	0	0
Consumer Products <sup>4</sup>	1,274	0	0	0	233	0	0	0
<b>Total</b>	<b>1,131</b>	<b>-682</b>	<b>-40</b>	<b>19</b>	<b>208</b>	<b>-117</b>	<b>-7</b>	<b>3</b>
BAAQMD THRESHOLD	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	No	No	No	Yes	No	No	No

## Residential Only - County of Contra Costa Community Criteria Air Pollutant Emissions Inventory and Forecast

### Sources

<sup>1</sup> Source: Fehr and Peers 2021; EMFAC2021 Version 1.0.2 Emissions Database (County - Contra Costa) VMT emissions from housing is an estimate based on VMT per service population.

<sup>2</sup> Sources: Natural Gas Use based on the Climate Action Plan Update. CalEEMod User's Guide for natural gas criteria air pollutant emission rates. Excludes criteria air pollutant emissions natural gas use from Permitted Sources within the County.

<sup>3</sup> Source: OFFROAD 2021<sup>1</sup> Housing is based on Lawn & Garden equipment use only.

<sup>4</sup> Source: CalEEMod User's Guide

### EXISTING

Phase	Existing Criteria Air Pollutant Emissions (lbs/day)				Existing Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	179	916	48	54	31	159	8	9
Energy <sup>2</sup>	41	759	58	58	8	138	11	11
Offroad Equipment <sup>3</sup>	12	1	0	0	2	0	0	0
Consumer Products <sup>4</sup>	2,432				444			
<b>Total</b>	<b>2,663</b>	<b>1,676</b>	<b>106</b>	<b>111</b>	<b>484</b>	<b>298</b>	<b>19</b>	<b>20</b>

### EXISTING LAND USES (2030 Emission Rates)

Phase	Existing (2030) Criteria Air Pollutant Emissions (lbs/day)				Existing (2030) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	62	281	7	48	11	49	1	8
Energy <sup>2</sup>	41	759	58	58	8	138	11	11
Offroad Equipment <sup>3</sup>	12	1	0	0	2	0	0	0
Consumer Products <sup>4</sup>	2,432				444			
<b>Total</b>	<b>2,546</b>	<b>1,041</b>	<b>65</b>	<b>106</b>	<b>464</b>	<b>188</b>	<b>12</b>	<b>19</b>

### Housing Element Year 2030

Phase	Project (2030) Criteria Air Pollutant Emissions (lbs/day)				Project (2030) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	68	312	8	53	12	54	1	9
Energy <sup>2</sup>	46	846	64	64	8	154	12	12
Offroad Equipment <sup>3</sup>	13	2	0	0	2	0	0	0
Consumer Products <sup>4</sup>	2,976				543			
<b>Total</b>	<b>3,104</b>	<b>1,160</b>	<b>72</b>	<b>118</b>	<b>566</b>	<b>209</b>	<b>13</b>	<b>21</b>

## Residential Only - County of Contra Costa Community Criteria Air Pollutant Emissions Inventory and Forecast

### NET CHANGE (No Project)

Phase	Net Change (2030-2030 No Project) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2030-2030 No Project) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	7	31	1	5	1	5	0	1
Energy <sup>2</sup>	5	88	7	7	1	16	1	1
Offroad Equipment <sup>3</sup>	2	0	0	0	0	0	0	0
Consumer Products <sup>4</sup>	544				99			
<b>Total</b>	<b>558</b>	<b>119</b>	<b>7</b>	<b>12</b>	<b>102</b>	<b>21</b>	<b>1</b>	<b>2</b>
BAAQMD THRESHOLD	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	Yes	No	No	Yes	Yes	No	No

### NET CHANGE (from Existing)

Phase	Net Change (2030-Existing) Criteria Air Pollutant Emissions (lbs/day)				Net Change (2030-Existing) Criteria Air Pollutant Emissions (tons/year)			
	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	VOC	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Transportation <sup>1</sup>	-110	-604	-40	0	-19	-105	-7	0
Energy <sup>2</sup>	5	88	7	7	1	16	1	1
Offroad Equipment <sup>3</sup>	2	0	0	0	0	0	0	0
Consumer Products <sup>4</sup>	544				99			
<b>Total</b>	<b>441</b>	<b>-517</b>	<b>-33</b>	<b>6</b>	<b>81</b>	<b>-89</b>	<b>-6</b>	<b>1</b>
BAAQMD THRESHOLD	54	54	82	54	10	10	15	10
Exceeds Threshold	Yes	No	No	No	Yes	No	No	No

## Criteria Air Pollutants from Natural Gas

Rate	lbs/MMBTU					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Natural Gas						
Residential	0.005	0.092	0.039	0.001	0.007	0.007
Non-Residential	0.005	0.098	0.082	0.001	0.007	0.007
Sources CalEEMod Version 2022.1, 2022, Appendix C. <a href="https://www.caleemod.com/documents/handbook/appendices/appendix_c.pdf">https://www.caleemod.com/documents/handbook/appendices/appendix_c.pdf</a>						

Contra Costa	With State Actions		
	Existing	Year 2030	Year 2040
	<b>Therms</b>		
Residential	30,100,640	33,572,740	35,873,000
Nonresidential	4,340,910	4,946,620	5,104,860
<b>Total</b>	<b>34,441,550</b>	<b>38,519,360</b>	<b>40,977,860</b>

Natural Gas	Existing tons/year					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Residential	8	138	59	2	11	11
Nonresidential	1	21	18	0	2	2
<b>TOTAL</b>	<b>9</b>	<b>160</b>	<b>76</b>	<b>2</b>	<b>12</b>	<b>12</b>

Natural Gas	2030 tons/year					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Residential	8	154	65	2	12	12
Nonresidential	1	24	20	0	2	2
<b>TOTAL</b>	<b>10</b>	<b>179</b>	<b>86</b>	<b>2</b>	<b>13</b>	<b>13</b>

Natural Gas	2040 tons/year					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Residential	9	165	70	2	13	13
Nonresidential	1	25	21	0	2	2
<b>TOTAL</b>	<b>10</b>	<b>190</b>	<b>91</b>	<b>2</b>	<b>14</b>	<b>14</b>



## Area Sources - Residential Consumer Product Use<sup>a</sup>

$$\text{Emissions} = \text{EF} \times \text{Building Area}$$

$$\text{EF} = 2.14\text{E-}05 \text{ lbs/sqft/day}$$

Sources/Notes:

a. California Emissions Estimator Model, Version 2020.4, Users Guide. Appendix A.

### AVERAGE HOUSING SQFT ASSUMPTIONS

Year Structure was Built	Percent of Housing Stock <sup>a</sup>	Average Square Feet of New Single Family Homes <sup>b</sup>	Average Square Feet (Weighted)
2014 or Later	1.4%	2,617	37
2010 to 2013	1.8%	2,467	44
2000 to 2009	11.8%	2,404	284
1990 to 1999	12.4%	2,116	262
1980 to 1989	15.9%	1,819	289
1970 to 1979	18.9%	1,699	321
1960 to 1969	14.1%	1,715	242
1950 to 1959	12.8%	1,715	220
1940 to 1949	6.5%	1,715	111
1939 or earlier	4.3%	1,715	74
	100%		1,884

Sources/Notes: <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/>

a. United States Census Bureau, Selected Housing Characteristics, Contra Costa County, 2019. Table DP04. American Community Survey 5-Year Estimates, Year structure built.

<https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2019/>

b. United States Census Bureau, Characteristics of New Housing, Characteristics of New Single-Family Houses Completed, Median and Average Square Feet by Location. <https://www.census.gov/construction/chars/pdf/c25ann2016.pdf>

	2019	2030	2040
<b>Existing</b>			
<b>Housing Units</b>	<b>TOTAL</b>	<b>TOTAL</b>	<b>TOTAL</b>
	60,320	70,040	83,080
<b>Residential SQFT</b>	113,646,640	139,080,640	173,201,973
<b>lbs VOC per day</b>	2,432	2,976	3,707
<b>tons VOC/year</b>	444	543	676

Notes:

<sup>1</sup> New housing units constructed post-2014 assumed to be 2,617 square feet (based on Source 2).

<sup>2</sup> Daily emissions converted to annual emissions by multiplying by 365 days/year.

## Area Sources

Source: OFFROAD2021. <https://arb.ca.gov/emfac/emissions-inventory/2f6c8fa1b8ec8bd9f8a4f23b3d84c74a77f77161>

### OFFROAD2021 Estimate based on:

#### Agricultural Equipment

Based on agricultural acreage within Contra Costa County (Contra Costa 2019)

#### Construction Equipment

Based on housing permits in Contra Costa County (HUD 2022)

#### Light Commercial and Industrial Equipment

Based on employment in Contra Costa County (Fehr and Peers 2021)

#### Lawn & Garden

Based on housing units in Contra Costa County (US Census 2022)

Sources

#### Farmland Acreage

Source: Department of Conservation and Development, Contra Costa County, 2022. 2019 Report on Agriculture.

<https://www.contracosta.ca.gov/DocumentCenter/View/70326/2019-Crop-Report>

Source: Department of Conservation and Development, Contra Costa General Plan Land Use Element Map.

<https://www.contracosta.ca.gov/DocumentCenter/View/30949/Land-Use-Element-Map-PDF?bidId=>.

Source: Buildout Land Use Map.

Existing Farmland 117,306

Farmland Acreage at Buildout at 2030 112,903 96%

Percent Reduction -3.75%

Farmland Acreage at Buildout at 2040 108,501 92%

Percent Reduction -7.51%

#### Construction (Housing Permits)

Source: Housing and Urban Development (HUD). 2022, Accessed June 23. SOCDs Building Permits Database.

<https://socds.huduser.gov/permits/>

#### Employment

Source: Fehr and Peers 2021

2019 Existing	ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust*
	Tons/year					
Agricultural	0.04	0.24	0.24	0.00	0.01	0.01
Construction Equipment	0.20	1.69	2.45	0.00	0.09	0.08
Lawn & Garden	2.12	0.25	20.96	0.00	0.02	0.02
Light Commercial / Industrial Equipment	0.78	0.75	31.60	0.00	0.02	0.01
<b>TOTAL</b>	<b>3</b>	<b>3</b>	<b>55</b>	<b>0</b>	<b>0.14</b>	<b>0.12</b>

2030	ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust*
	Tons/year					
Agricultural	0.04	0.23	0.23	0.00	0.01	0.01
Construction Equipment	0.20	1.69	2.45	0.00	0.09	0.08
Lawn & Garden	2.46	0.29	24.34	0.00	0.03	0.02
Light Commercial / Industrial Equipment	0.92	0.89	37.25	0.00	0.02	0.02
<b>TOTAL</b>	<b>4</b>	<b>3</b>	<b>64</b>	<b>0</b>	<b>0.15</b>	<b>0.13</b>

2040	ROG Exhaust	NO <sub>x</sub> Exhaust	CO Exhaust	SO <sub>2</sub> Exhaust	PM <sub>10</sub> Exhaust	PM <sub>2.5</sub> Exhaust*
	Tons/year					
Agricultural	0.04	0.22	0.22	0.00	0.01	0.01
Construction Equipment	0.20	1.69	2.45	0.00	0.09	0.08
Lawn & Garden	2.92	0.35	28.87	0.00	0.03	0.03
Light Commercial / Industrial Equipment	1.01	0.98	41.25	0.00	0.02	0.02
<b>TOTAL</b>	<b>4</b>	<b>3</b>	<b>73</b>	<b>0</b>	<b>0.16</b>	<b>0.14</b>

# Contra Costa County OFFROAD2021

Source: <https://arb.ca.gov/emfac/emissions-inventory/2f6c8fa1b8ec8bd9f8a4f23b3d84c74a77f77161>

Construction includes: Over 25 horsepower, self-propelled, diesel equipment only subjected to In-Use Regulation; AND Under 25 horsepower equipment not subject to the In-Use Regulation

Model Output: OFFROAD2021 (v1.0.2) Emissions Inventory

Region Type: County

Region: Contra Costa

Calendar Year: 2019

Scenario: All Adopted Rules - Exhaust

Vehicle Classification: OFFROAD2021 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

## Agriculture

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	Fuel Consumption (g/yr)	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd
Contra Costa	2019	Agricultural - Agricultural Tractors	Aggregate	Aggregate	Gasoline	46.599	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Agricultural Tractors	Aggregate	Aggregate	Diesel	775,488.169	0.030	0.186	0.141	0.000	0.011	0.010
Contra Costa	2019	Agricultural - ATVs	Aggregate	Aggregate	Gasoline	20,703.139	0.006	0.003	0.060	0.000	0.000	0.000
Contra Costa	2019	Agricultural - ATVs	Aggregate	Aggregate	Diesel	10,088.287	0.000	0.002	0.002	0.000	0.000	0.000
Contra Costa	2019	Agricultural - ATVs	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Bale Wagons (Self Propelled)	Aggregate	Aggregate	Diesel	2,582.452	0.000	0.001	0.000	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Balers (Self Propelled)	Aggregate	Aggregate	Diesel	203.530	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Combine Harvesters	Aggregate	Aggregate	Diesel	37,171.700	0.001	0.008	0.005	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Construction Equipment	Aggregate	Aggregate	Diesel	19,338.362	0.001	0.005	0.003	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Cotton Pickers	Aggregate	Aggregate	Diesel	723.517	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Forage & Silage Harvesters	Aggregate	Aggregate	Diesel	7,061.408	0.000	0.002	0.001	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Forklifts	Aggregate	Aggregate	Diesel	15,732.147	0.001	0.004	0.003	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Hay Squeeze/Stack Retriever	Aggregate	Aggregate	Diesel	2,469.114	0.000	0.001	0.000	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Nut Harvester	Aggregate	Aggregate	Diesel	20,251.292	0.001	0.006	0.004	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Other Harvesters	Aggregate	Aggregate	Diesel	30,376.555	0.001	0.007	0.005	0.000	0.000	0.000
Contra Costa	2019	Agricultural - Sprayers/Spray Rigs	Aggregate	Aggregate	Diesel	41,548.475	0.002	0.012	0.008	0.000	0.001	0.001
Contra Costa	2019	Agricultural - Swathers/Windrowers/Hay Conditioners	Aggregate	Aggregate	Diesel	7,975.782	0.000	0.002	0.001	0.000	0.000	0.000
TOTAL AGRICULTURAL OFFROAD (tons/yr)						991,760.528	0.042	0.238	0.235	0.000	0.014	0.013
ESTIMATED Contra Costa County (lbs/year)							84.3	476.3	470.8	0.6	27.9	25.7

AGRICULTURAL ACREAGE	2019
Farmland Acreage in Contra Costa County	173,924

**Construction and Mining**

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	Fuel Consumption (g/yr)	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd
Contra Costa	2019	Construction and Mining - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	81,901.417	0.001	0.010	0.008	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Cranes	Aggregate	Aggregate	Diesel	194,908.423	0.005	0.056	0.032	0.000	0.003	0.002
Contra Costa	2019	Construction and Mining - Crawler Tractors	Aggregate	Aggregate	Diesel	481,723.300	0.012	0.129	0.068	0.000	0.006	0.006
Contra Costa	2019	Construction and Mining - Excavators	Aggregate	Aggregate	Diesel	866,786.580	0.011	0.118	0.096	0.000	0.005	0.005
Contra Costa	2019	Construction and Mining - Graders	Aggregate	Aggregate	Diesel	326,083.726	0.009	0.096	0.041	0.000	0.004	0.004
Contra Costa	2019	Construction and Mining - Misc - Asphalt Pavers	Aggregate	Aggregate	Gasoline	5,011.175	0.000	0.001	0.018	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Gasoline	3,783.827	0.000	0.000	0.005	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	Aggregate	Diesel	29.079	0.000	0.001	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Gasoline	7,415.464	0.004	0.002	0.117	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Cement And Mortar Mixers	Aggregate	Aggregate	Diesel	42.381	0.000	0.001	0.001	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Gasoline	16,131.027	0.003	0.003	0.111	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	Aggregate	Diesel	1,417.242	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Cranes	Aggregate	Aggregate	Gasoline	3,420.050	0.000	0.000	0.006	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Crushing/Proc. Equipment	Aggregate	Aggregate	Gasoline	44.119	0.000	0.000	0.001	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Gasoline	5,644.449	0.001	0.001	0.048	0.000	0.001	0.000
Contra Costa	2019	Construction and Mining - Misc - Dumpers/Tenders	Aggregate	Aggregate	Diesel	3.394	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Excavators	Aggregate	Aggregate	Diesel	24.291	0.000	0.001	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Other	Aggregate	Aggregate	Gasoline	5,186.650	0.000	0.000	0.004	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Other	Aggregate	Aggregate	Diesel	6,506.415	0.000	0.003	0.002	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Pavers	Aggregate	Aggregate	Diesel	6.373	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Gasoline	16,171.089	0.007	0.005	0.201	0.000	0.002	0.002
Contra Costa	2019	Construction and Mining - Misc - Paving Equipment	Aggregate	Aggregate	Diesel	10.849	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Gasoline	37,749.934	0.010	0.007	0.324	0.000	0.003	0.002
Contra Costa	2019	Construction and Mining - Misc - Plate Compactors	Aggregate	Aggregate	Diesel	1,924.664	0.000	0.001	0.001	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Gasoline	15,381.507	0.002	0.002	0.069	0.000	0.001	0.000
Contra Costa	2019	Construction and Mining - Misc - Rollers	Aggregate	Aggregate	Diesel	186.465	0.001	0.003	0.002	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	Aggregate	Gasoline	24,119.200	0.001	0.003	0.031	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Gasoline	12,738.500	0.000	0.001	0.019	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	3.958	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Gasoline	1,145.405	0.000	0.000	0.010	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Signal Boards	Aggregate	Aggregate	Diesel	30,728.813	0.002	0.014	0.012	0.000	0.001	0.000
Contra Costa	2019	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Gasoline	38,112.542	0.003	0.003	0.103	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	Aggregate	Diesel	1,283.012	0.004	0.027	0.015	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Surfacing Equipment	Aggregate	Aggregate	Gasoline	5,921.492	0.004	0.003	0.093	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Tampers/Rammers	Aggregate	Aggregate	Gasoline	6,793.058	0.001	0.001	0.057	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Gasoline	8,176.000	0.000	0.000	0.012	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	115.746	0.000	0.002	0.001	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Gasoline	28,545.023	0.003	0.004	0.132	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Misc - Trenchers	Aggregate	Aggregate	Diesel	156.568	0.000	0.003	0.002	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Off-Highway Tractors	Aggregate	Aggregate	Diesel	183,253.256	0.004	0.032	0.026	0.000	0.002	0.002
Contra Costa	2019	Construction and Mining - Off-Highway Trucks	Aggregate	Aggregate	Diesel	1,099,345.885	0.019	0.209	0.106	0.000	0.007	0.007
Contra Costa	2019	Construction and Mining - Other	Aggregate	Aggregate	Diesel	245,374.907	0.005	0.051	0.032	0.000	0.003	0.002
Contra Costa	2019	Construction and Mining - Pavers	Aggregate	Aggregate	Diesel	57,796.645	0.001	0.012	0.009	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Paving Equipment	Aggregate	Aggregate	Diesel	33,624.852	0.001	0.006	0.005	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Rollers	Aggregate	Aggregate	Diesel	149,852.204	0.004	0.031	0.029	0.000	0.002	0.002
Contra Costa	2019	Construction and Mining - Rough Terrain Forklifts	Aggregate	Aggregate	Diesel	162,677.987	0.002	0.024	0.030	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Rubber Tired Dozers	Aggregate	Aggregate	Diesel	96,167.373	0.003	0.035	0.024	0.000	0.002	0.002
Contra Costa	2019	Construction and Mining - Rubber Tired Loaders	Aggregate	Aggregate	Diesel	1,321,485.960	0.027	0.288	0.164	0.000	0.013	0.012
Contra Costa	2019	Construction and Mining - Scrapers	Aggregate	Aggregate	Diesel	860,698.145	0.018	0.213	0.126	0.000	0.009	0.008
Contra Costa	2019	Construction and Mining - Skid Steer Loaders	Aggregate	Aggregate	Diesel	157,579.978	0.002	0.025	0.030	0.000	0.001	0.001
Contra Costa	2019	Construction and Mining - Surfacing Equipment	Aggregate	Aggregate	Diesel	18,084.284	0.000	0.003	0.002	0.000	0.000	0.000
Contra Costa	2019	Construction and Mining - Tractors/Loaders/Backhoes	Aggregate	Aggregate	Diesel	1,204,115.588	0.024	0.242	0.222	0.000	0.014	0.013
Contra Costa	2019	Construction and Mining - Trenchers	Aggregate	Aggregate	Diesel	49,764.313	0.002	0.013	0.010	0.000	0.001	0.001
TOTAL CONSTRUCTION OFFROAD (tons/yr)						7,875,154.583	0.199	1.686	2.454	0.002	0.089	0.079
ESTIMATED Contra Costa (lbs/year)							38.0	322.8	469.7	0.4	17.0	15.1

TOTAL UNITS: <a href="https://socds.huduser.gov/permits/">https://socds.huduser.gov/permits/</a>	2015	2016	2017	2018	2019	Average
Housing Permits in Contra Costa County	2610	2921	1,984	2,607	2,687	2,562

### Industrial and Light Commercial

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	Fuel Consumption (g/yr)	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd
Contra Costa	2019	Industrial - Aerial Lifts	Aggregate	Aggregate	Diesel	40,739.806	0.000	0.005	0.007	0.000	0.000	0.000
Contra Costa	2019	Industrial - Forklifts	Aggregate	Aggregate	Diesel	171,531.023	0.005	0.044	0.037	0.000	0.003	0.003
Contra Costa	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Gasoline	27,350.160	0.003	0.002	0.087	0.000	0.001	0.001
Contra Costa	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Diesel	50.830	0.000	0.001	0.001	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Electric	680.230	0.000	0.000	0.012	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Aerial Lifts	Aggregate	Aggregate	Nat Gas	6,197.700	0.000	0.000	0.016	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Forklifts	Aggregate	Aggregate	Gasoline	849,275.406	0.019	0.086	2.081	0.000	0.001	0.001
Contra Costa	2019	Industrial - Misc - Forklifts	Aggregate	Aggregate	Electric	75.221	0.000	0.000	0.001	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Forklifts	Aggregate	Aggregate	Nat Gas	1,686,500.750	0.000	0.134	1.236	0.000	0.003	0.000
Contra Costa	2019	Industrial - Misc - Other General Industrial Equipment	Aggregate	Aggregate	Gasoline	14,998.942	0.001	0.001	0.083	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Other General Industrial Equipment	Aggregate	Aggregate	Diesel	39.324	0.000	0.001	0.000	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Other Material Handling Equipment	Aggregate	Aggregate	Gasoline	6,365.600	0.000	0.001	0.007	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Sweepers/Scrubbers	Aggregate	Aggregate	Gasoline	48,600.070	0.001	0.004	0.116	0.000	0.000	0.000
Contra Costa	2019	Industrial - Misc - Sweepers/Scrubbers	Aggregate	Aggregate	Diesel	10.074	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Industrial - Other General Industrial Equipment	Aggregate	Aggregate	Diesel	82,844.563	0.002	0.017	0.015	0.000	0.001	0.001
Contra Costa	2019	Industrial - Other Material Handling Equipment	Aggregate	Aggregate	Diesel	48,571.971	0.001	0.010	0.007	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Gasoline	1,112,785.886	0.137	0.085	7.311	0.000	0.001	0.001
Contra Costa	2019	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Diesel	27,665.687	0.001	0.007	0.007	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Air Compressors	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Gas Compressors	Aggregate	Aggregate	Nat Gas	334,624.700	0.000	0.019	0.223	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Gasoline	1,799,298.008	0.394	0.152	10.681	0.000	0.002	0.002
Contra Costa	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Diesel	151,301.596	0.005	0.035	0.028	0.000	0.001	0.002
Contra Costa	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Generator Sets	Aggregate	Aggregate	Nat Gas	10,760.200	0.000	0.001	0.006	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Gasoline	786,217.814	0.099	0.045	5.370	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Diesel	800.157	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Pressure Washers	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Gasoline	231,905.284	0.031	0.016	1.070	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Diesel	82,584.476	0.003	0.019	0.016	0.000	0.001	0.001
Contra Costa	2019	Light Commercial - Misc - Pumps	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Welders	Aggregate	Aggregate	Gasoline	488,565.970	0.068	0.033	3.147	0.000	0.000	0.000
Contra Costa	2019	Light Commercial - Misc - Welders	Aggregate	Aggregate	Diesel	150,267.006	0.006	0.035	0.034	0.000	0.002	0.002
Contra Costa	2019	Light Commercial - Misc - Welders	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL LIGHT COMMERCIAL + INDUSTRIAL OFFROAD (tons/yr)						8,160,608.454	0.777	0.752	31.598	0.002	0.017	0.015
ESTIMATED Contra Costa (lbs/year)							1,553.62	1,504.66	63,195.98	3.19	34.77	29.19

EMPLOYMENT	2019
Employment in Contra Costa County	38,760

**Lawn and Garden**

Region	Calendar Year	Vehicle Category	Model Year	Horsepower Bin	Fuel	Fuel Consumption (g/yr)	ROG_tpd	NOx_tpd	CO_tpd	SOx_tpd	PM10_tpd	PM2.5_tpd
Contra Costa	2019	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Gasoline	303,129.698	0.380	0.011	1.024	0.000	0.005	0.003
Contra Costa	2019	Lawn and Garden - Misc - Chainsaws	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Gasoline	178,035.748	0.330	0.010	0.552	0.000	0.002	0.002
Contra Costa	2019	Lawn and Garden - Misc - Chainsaws Preempt	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Gasoline	3,056.980	0.000	0.000	0.020	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Diesel	193.196	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Chippers/Stump Grinders	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Gasoline	717,684.957	0.115	0.058	4.108	0.000	0.003	0.003
Contra Costa	2019	Lawn and Garden - Misc - Lawn Mowers	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Gasoline	786,503.248	0.627	0.020	2.812	0.000	0.008	0.006
Contra Costa	2019	Lawn and Garden - Misc - Leaf Blowers/Vacuums	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Gasoline	14,647.182	0.002	0.001	0.093	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Other	Aggregate	Aggregate	Diesel	96.904	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Gasoline	1,350,073.976	0.230	0.103	9.284	0.000	0.002	0.001
Contra Costa	2019	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Diesel	77,634.324	0.003	0.018	0.011	0.000	0.001	0.000
Contra Costa	2019	Lawn and Garden - Misc - Rear Engine Riding Mowers	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Gasoline	497.356	0.000	0.000	0.004	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Snowblowers	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Gasoline	13,731.922	0.005	0.001	0.076	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Tillers	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Gasoline	594,440.686	0.403	0.022	2.172	0.000	0.003	0.002
Contra Costa	2019	Lawn and Garden - Misc - Trimmers/Edgers/Brush Cutters	Aggregate	Aggregate	Electric	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Contra Costa	2019	Lawn and Garden - Misc - Wood Splitters	Aggregate	Aggregate	Gasoline	126,998.940	0.024	0.009	0.804	0.000	0.000	0.000
TOTAL LAWN & GARDEN (tons/yr)						4,166,725.117	2.119	0.253	20.958	0.001	0.024	0.018
ESTIMATED Contra Costa (lbs/day)							618	74	6,111	0	7	5

HOUSING UNITS	0
Housing Units in Contra Costa County (2019)	413,719

## Contra Costa County VMT

Source: Fehr and Peers 2021. Based on the County of Contra Costa Transportation Analysis Guidelines.

	Daily VMT			Total Daily VMT	Total with RTAC	Residents	Jobs	Service Population	VMT/SP	VMT/SP w RTAC	% VMT from Housing
	IX	XI	II								
Existing	3,022,316	2,981,772	274,357	6,278,444	3,276,401	174,150	38,760	212,910	29.5	15.4	82%
2030	3,340,840	3,311,868	327,422	6,980,130	3,653,776	199,600	45,690	245,290	28.5	14.9	81%
2040	3,659,365	3,641,965	380,487	7,681,816	4,031,152	242,070	50,600	292,670	26.2	13.8	83%

Notes: Total may not add to 100% due to rounding.

IX = Internal-External

XI = External- Internal

II = Internal-Internal

Modeling of vehicle miles traveled (VMT) is provided by Fehr and Peers is based on the Contra Costa Country Transportation Authority's Contra Costa Transportation Analysis Guidelines. VMT from passenger vehicles and trucks that have an origin or destination in the County using a transportation origin-destination methodology. Accounting of VMT is based on the recommendations of CARB's Regional Targets Advisory Committee (RTAC) created under Senate Bill 375 (SB 375). For accounting purposes, there are three types of trips:

- » Vehicle trips that originated and terminated within the County (Internal-Internal, I-I). Using the accounting rules established by RTAC, 100 percent of the length of these trips, and their emissions, are attributed to the County.
- » Vehicle trips that either originated or terminated (but not both) within the County (Internal-External or External-Internal, I-X and X-I). Using the accounting rules established by RTAC, 50 percent of the trip length for these trips
- » Vehicle trips that neither originated nor terminated within the County. These trips are commonly called pass-through trips (External-External, X-X). Using the accounting rules established by RTAC, these trips are not counted

Percent VMT from Housing assumes trip lengths for residential and non-residential land uses are similar.

## Contra Costa — TRANSPORTATION SECTOR

Source: EMFAC2021 V. 1.0.2 , Web Database - Emissions Rates. Contra Costa County. Based on the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Global Warming Potentials (GWPs)

Note: MTons = metric tons; CO<sub>2</sub>e = carbon dioxide-equivalent.

Criteria Air Pollutant Emissions						
	lbs/day					
	ROG	NOx	CO	SOx	PM10	PM2.5
Existing	218	1,120	8,992	25	59	66
Existing in year 2030	75	344	4,384	19	9	59
2030	84	383	4,889	22	10	65
Change from Existing Conditions (2019-2030)	-134	-737	-4,102	-4	-49	0
Change from Existing Land Uses (2030 Emission Rates)	-9	-40	-505	-2	-1	-7
Existing in year 2040	49	220	3,569	17	5	59
2040	60	271	4,391	21	6	72
Change from Existing Conditions (2019-2040)	-158	-849	-4,601	-4	-52	7
Change from Existing Land Uses (2040 Emission Rates)	-11	-51	-822	-4	-1	-14

	Tons/year					
	ROG	NOx	CO	SOx	PM10	PM2.5
Existing	38	194	1,560	4	10	11
Existing in year 2030	13	60	761	3	1	10
2030	15	67	848	4	2	11
Change from Existing Conditions (2019-2030)	-23	-128	-712	-1	-9	0
Change from Existing Land Uses (2030 Emission Rates)	-2	-7	-88	0	0	-1
Existing in year 2040	9	38	619	3	1	10
2040	10	47	762	4	1	13
Change from Existing Conditions (2019-2040)	-27	-147	-798	-1	-9	1
Change from Existing Land Uses (2040 Emission Rates)	-2	-9	-143	-1	0	-2

lbs to Tons 2000

Daily vehicles miles traveled (VMT) multiplied by 347 days/year to account for reduced traffic on weekends and holidays. This assumption is consistent with the California Air Resources Board's (CARB) methodology within the 2008 Climate Change Scoping Plan Measure Documentation Supplement.



# Year 2019 Existing: Criteria Air Pollutants

Source: EMFAC2021 (v1.0.2) Emission Rates, Contra Costa County, Average Speed, Average Fleet

	Small Trucks	Medium Trucks	Heavy Trucks	Passenger Vehicles
Source: F&P 2021				
Truck Trip Percentage	1.3%	0.1%	0.4%	98.2%
EMFAC Default	3.66%	1.00%	2.63%	92.71%

Daily VMT		3,276,401		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent VMT	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.00%	0.18	1.73	0.43	0.00	0.00	0.01
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
LDA	Gasoline	48.63%	51.51%	63.94	292.06	3,838.30	11.04	29.77	27.02
LDA	Diesel	0.22%	0.23%	0.56	5.44	6.10	0.04	0.13	0.12
LDA	Electricity	1.15%	1.22%	0.00	0.00	0.00	0.00	0.71	0.38
LDA	Plug-in Hybrid	0.83%	0.88%	0.09	0.22	14.43	0.09	0.51	0.24
LDT1	Gasoline	5.00%	5.30%	18.24	81.77	800.48	1.33	3.06	3.34
LDT1	Diesel	0.00%	0.00%	0.04	0.19	0.23	0.00	0.00	0.00
LDT1	Electricity	0.01%	0.01%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Plug-in Hybrid	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT2	Gasoline	21.94%	23.24%	31.67	208.18	1,940.80	6.29	13.43	14.18
LDT2	Diesel	0.09%	0.10%	0.11	0.52	0.93	0.02	0.06	0.06
LDT2	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT2	Plug-in Hybrid	0.03%	0.04%	0.00	0.01	0.57	0.00	0.02	0.01
LHD1	Gasoline	1.79%	0.64%	3.14	13.72	70.45	0.44	0.37	3.58
LHD1	Diesel	1.22%	0.43%	7.73	88.84	22.90	0.19	0.38	2.44
LHD2	Gasoline	0.20%	0.07%	0.31	1.49	7.21	0.05	0.04	0.47
LHD2	Diesel	0.45%	0.16%	2.44	23.53	6.57	0.09	0.14	1.05
MCY	Gasoline	0.41%	0.43%	44.98	22.02	520.13	0.06	0.12	0.37
MDV	Gasoline	14.08%	14.92%	38.61	226.50	1,711.08	4.90	8.62	9.39
MDV	Diesel	0.25%	0.27%	0.26	1.80	3.90	0.08	0.16	0.16
MDV	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
MDV	Plug-in Hybrid	0.05%	0.06%	0.01	0.01	0.92	0.01	0.03	0.02
MH	Gasoline	0.08%	0.01%	0.10	0.48	2.73	0.02	0.01	0.04
MH	Diesel	0.03%	0.00%	0.04	1.54	0.14	0.00	0.01	0.01
Motor Coach	Diesel	0.01%	0.00%	0.03	0.64	0.09	0.00	0.00	0.01
OBUS	Gasoline	0.06%	0.01%	0.07	0.53	1.69	0.01	0.01	0.03
PTO	Diesel	0.05%	0.01%	0.26	4.05	0.97	0.01	0.00	0.00
SBUS	Gasoline	0.01%	0.00%	0.07	0.13	1.59	0.00	0.00	0.01
SBUS	Diesel	0.04%	0.01%	0.02	1.53	0.07	0.00	0.01	0.02
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.26	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.01%	0.00%	0.01	0.15	0.02	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.03%	0.00%	0.14	1.75	0.36	0.00	0.00	0.01
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.03%	0.00%	0.06	0.79	0.15	0.00	0.00	0.01
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.06%	0.01%	0.19	2.44	0.50	0.01	0.01	0.02
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.01%	0.00%	0.03	0.49	0.09	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.10%	0.01%	0.35	5.33	0.97	0.01	0.01	0.03
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.22%	0.02%	0.27	4.62	0.82	0.02	0.02	0.07
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 6	Diesel	0.17%	0.02%	0.36	5.75	1.05	0.01	0.01	0.06
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.11%	0.01%	0.19	3.32	0.53	0.01	0.01	0.03
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.01	0.10	0.02	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.02%	0.00%	0.02	0.48	0.05	0.00	0.00	0.01

T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.00%	0.00	0.10	0.01	0.00	0.00	0.00
T6 Public Class 4	Diesel	0.01%	0.00%	0.01	0.62	0.02	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.02%	0.00%	0.01	0.48	0.02	0.00	0.00	0.01
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.02%	0.00%	0.01	0.97	0.03	0.00	0.00	0.01
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.03%	0.00%	0.03	2.24	0.07	0.00	0.00	0.01
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.01%	0.00%	0.00	0.09	0.01	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.03	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.14%	0.01%	0.26	1.34	5.81	0.02	0.01	0.05
T7 CAIRP Class 8	Diesel	0.45%	0.07%	0.44	17.76	1.61	0.08	0.18	0.38
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.54%	0.08%	0.86	22.71	3.38	0.09	0.21	0.46
T7 NOOS Class 8	Diesel	0.20%	0.03%	0.22	8.03	0.80	0.03	0.08	0.17
T7 Other Port Class 8	Diesel	0.04%	0.01%	0.05	1.81	0.15	0.01	0.01	0.04
T7 POAK Class 8	Diesel	0.14%	0.02%	0.22	7.55	0.71	0.02	0.05	0.15
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.07%	0.01%	0.14	10.27	0.44	0.02	0.03	0.10
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Diesel	0.02%	0.00%	0.04	0.93	0.14	0.00	0.01	0.02
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.12%	0.02%	0.26	6.81	0.98	0.02	0.05	0.11
T7 Single Dump Class 8	Natural Gas	0.01%	0.00%	0.00	0.03	0.48	0.00	0.00	0.01
T7 Single Other Class 8	Diesel	0.11%	0.02%	0.30	6.81	1.12	0.02	0.05	0.11
T7 Single Other Class 8	Natural Gas	0.01%	0.00%	0.00	0.02	0.42	0.00	0.00	0.00
T7 SWCV Class 8	Diesel	0.05%	0.01%	0.02	5.06	0.05	0.02	0.02	0.12
T7 SWCV Class 8	Natural Gas	0.04%	0.01%	0.06	1.18	11.16	0.00	0.02	0.09
T7 Tractor Class 8	Diesel	0.39%	0.06%	0.63	20.73	2.29	0.06	0.15	0.36
T7 Tractor Class 8	Natural Gas	0.03%	0.00%	0.01	0.20	3.44	0.00	0.01	0.03
T7 Utility Class 8	Diesel	0.01%	0.00%	0.00	0.20	0.02	0.00	0.00	0.01
T7IS	Gasoline	0.00%	0.00%	0.02	0.06	0.57	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.00%	0.00	0.02	0.09	0.00	0.00	0.02
UBUS	Diesel	0.09%	0.01%	0.11	2.01	0.15	0.01	0.03	0.11
UBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL	100.00%	100.00%	218	1,120	8,992	25	59	66



T6 Public Class 5	Natural Gas	1.22E-02	1.31E-01	3.08E+00	0.00E+00	1.45E-03	1.20E-02	4.62E-02	5.96E-02	1.33E-03	3.00E-03	1.62E-02	2.05E-02	1.06E+03	8.52E-01	2.16E-01	272	0.00%
T6 Public Class 6	Diesel	1.18E-01	7.79E+00	2.64E-01	1.22E-02	5.19E-02	1.20E-02	4.62E-02	1.10E-01	4.97E-02	3.00E-03	1.62E-02	6.88E-02	1.29E+03	5.50E-03	2.03E-01	4,495	0.02%
T6 Public Class 6	Natural Gas	1.19E-02	1.76E-01	3.09E+00	0.00E+00	1.24E-03	1.20E-02	4.62E-02	5.94E-02	1.14E-03	3.00E-03	1.62E-02	2.03E-02	1.05E+03	8.33E-01	2.13E-01	76	0.00%
T6 Public Class 7	Diesel	1.48E-01	9.61E+00	3.12E-01	1.24E-02	6.92E-02	1.20E-02	4.62E-02	1.27E-01	6.62E-02	3.00E-03	1.62E-02	8.54E-02	1.31E+03	6.86E-03	2.07E-01	8,450	0.03%
T6 Public Class 7	Natural Gas	1.19E-02	1.81E-01	3.10E+00	0.00E+00	1.21E-03	1.20E-02	4.62E-02	5.94E-02	1.11E-03	3.00E-03	1.62E-02	2.03E-02	1.04E+03	8.31E-01	2.12E-01	154	0.00%
T6 Utility Class 5	Diesel	2.45E-02	1.27E+00	9.54E-02	1.08E-02	6.14E-03	1.20E-02	4.55E-02	6.36E-02	5.88E-03	3.00E-03	1.59E-02	2.48E-02	1.14E+03	1.14E-03	1.79E-01	2,429	0.01%
T6 Utility Class 5	Natural Gas	9.34E-03	2.70E-01	2.89E+00	0.00E+00	5.18E-04	1.20E-02	4.55E-02	5.80E-02	4.76E-04	3.00E-03	1.59E-02	1.94E-02	1.01E+03	6.54E-01	2.06E-01	35	0.00%
T6 Utility Class 6	Diesel	3.71E-02	2.08E+00	1.24E-01	1.10E-02	1.08E-02	1.20E-02	4.55E-02	6.83E-02	1.03E-02	3.00E-03	1.59E-02	2.92E-02	1.17E+03	1.72E-03	1.83E-01	461	0.00%
T6 Utility Class 6	Natural Gas	9.34E-03	2.70E-01	2.89E+00	0.00E+00	5.18E-04	1.20E-02	4.55E-02	5.80E-02	4.76E-04	3.00E-03	1.59E-02	1.94E-02	9.95E+02	6.54E-01	2.03E-01	4	0.00%
T6 Utility Class 7	Diesel	2.80E-02	1.92E+00	1.00E-01	1.10E-02	1.03E-02	1.20E-02	4.55E-02	6.78E-02	9.87E-03	3.00E-03	1.59E-02	2.88E-02	1.17E+03	1.30E-03	1.83E-01	635	0.00%
T6 Utility Class 7	Natural Gas	9.34E-03	2.70E-01	2.89E+00	0.00E+00	5.18E-04	1.20E-02	4.55E-02	5.80E-02	4.76E-04	3.00E-03	1.59E-02	1.94E-02	1.00E+03	6.54E-01	2.04E-01	13	0.00%
T6TS	Gasoline	2.58E-01	1.33E+00	5.81E+00	1.88E-02	2.08E-03	1.20E-02	4.50E-02	5.91E-02	1.92E-03	3.00E-03	1.58E-02	2.07E-02	1.90E+03	4.74E-02	5.56E-02	36,239	0.14%
T7 CAIRP Class 8	Diesel	8.81E-02	3.58E+00	3.24E-01	1.51E-02	6.62E-02	3.60E-02	7.73E-02	1.80E-01	6.33E-02	9.00E-03	2.71E-02	9.94E-02	1.60E+03	4.09E-03	2.52E-01	118,223	0.45%
T7 CAIRP Class 8	Natural Gas	1.32E-02	2.62E-01	4.60E+00	0.00E+00	1.74E-03	3.60E-02	7.41E-02	1.12E-01	1.60E-03	9.00E-03	2.59E-02	3.65E-02	1.18E+03	9.23E-01	2.41E-01	201	0.00%
T7 NNOOS Class 8	Diesel	1.45E-01	3.84E+00	5.72E-01	1.52E-02	1.09E-01	3.60E-02	7.82E-02	2.24E-01	1.05E-01	9.00E-03	2.74E-02	1.41E-01	1.61E+03	6.74E-03	2.54E-01	140,606	0.54%
T7 NOOS Class 8	Diesel	1.03E-01	3.74E+00	3.75E-01	1.51E-02	7.38E-02	3.60E-02	7.75E-02	1.87E-01	7.06E-02	9.00E-03	2.71E-02	1.07E-01	1.60E+03	4.78E-03	2.52E-01	51,092	0.20%
T7 Other Port Class 8	Diesel	1.19E-01	4.46E+00	3.80E-01	1.63E-02	3.11E-02	3.60E-02	9.40E-02	1.61E-01	2.98E-02	9.00E-03	3.29E-02	7.17E-02	1.72E+03	5.53E-03	2.71E-01	9,668	0.04%
T7 POAK Class 8	Diesel	1.47E-01	4.97E+00	4.69E-01	1.63E-02	4.14E-02	3.60E-02	9.60E-02	1.73E-01	3.96E-02	9.00E-03	3.36E-02	8.22E-02	1.73E+03	6.85E-03	2.72E-01	36,148	0.14%
T7 POAK Class 8	Natural Gas	1.70E-02	7.05E-01	1.10E+01	0.00E+00	1.36E-03	3.60E-02	8.52E-02	1.23E-01	1.25E-03	9.00E-03	2.98E-02	4.01E-02	1.49E+03	1.19E+00	3.04E-01	79	0.00%
T7 Public Class 8	Diesel	1.73E-01	1.27E+01	5.50E-01	1.87E-02	8.30E-02	3.60E-02	1.21E-01	2.40E-01	7.94E-02	9.00E-03	4.24E-02	1.31E-01	1.98E+03	8.01E-03	3.12E-01	19,202	0.07%
T7 Public Class 8	Natural Gas	2.61E-02	7.55E-01	1.07E+01	0.00E+00	2.46E-03	3.60E-02	1.07E-01	1.45E-01	2.26E-03	9.00E-03	3.75E-02	4.87E-02	1.68E+03	1.83E+00	3.43E-01	61	0.00%
T7 Single Concrete/Transit Mix Class 8	Diesel	1.73E-01	4.05E+00	6.29E-01	1.62E-02	1.11E-01	3.60E-02	8.68E-02	2.33E-01	1.06E-01	9.00E-03	3.04E-02	1.45E-01	1.71E+03	8.02E-03	2.69E-01	5,440	0.02%
T7 Single Concrete/Transit Mix Class 8	Natural Gas	1.51E-02	4.28E-01	7.58E+00	0.00E+00	1.68E-03	3.60E-02	8.16E-02	1.19E-01	1.54E-03	9.00E-03	2.86E-02	3.91E-02	1.28E+03	1.06E+00	2.60E-01	249	0.00%
T7 Single Dump Class 8	Diesel	2.06E-01	5.33E+00	7.69E-01	1.60E-02	1.31E-01	3.60E-02	8.91E-02	2.56E-01	1.25E-01	9.00E-03	3.12E-02	1.65E-01	1.69E+03	9.58E-03	2.67E-01	30,417	0.12%
T7 Single Dump Class 8	Natural Gas	1.51E-02	4.26E-01	7.57E+00	0.00E+00	1.68E-03	3.60E-02	8.24E-02	1.20E-01	1.54E-03	9.00E-03	2.88E-02	3.94E-02	1.32E+03	1.06E+00	2.68E-01	1,525	0.01%
T7 Single Other Class 8	Diesel	2.37E-01	5.43E+00	8.92E-01	1.61E-02	1.56E-01	3.60E-02	8.97E-02	2.82E-01	1.49E-01	9.00E-03	3.14E-02	1.90E-01	1.70E+03	1.10E-02	2.68E-01	29,887	0.11%
T7 Single Other Class 8	Natural Gas	1.51E-02	4.26E-01	7.59E+00	0.00E+00	1.68E-03	3.60E-02	8.29E-02	1.21E-01	1.54E-03	9.00E-03	2.90E-02	3.96E-02	1.31E+03	1.06E+00	2.67E-01	1,308	0.01%
T7 SWCV Class 8	Diesel	3.05E-02	8.80E+00	8.25E-02	3.90E-02	1.36E-02	3.60E-02	2.10E-01	2.60E-01	1.30E-02	9.00E-03	7.35E-02	9.55E-02	4.12E+03	1.42E-03	6.49E-01	13,676	0.05%
T7 SWCV Class 8	Natural Gas	1.30E-01	2.64E+00	2.50E+01	0.00E+00	2.74E-03	3.60E-02	2.10E-01	2.49E-01	2.52E-03	9.00E-03	7.35E-02	8.50E-02	1.72E+03	5.48E+00	3.51E-01	10,621	0.04%
T7 Tractor Class 8	Diesel	1.49E-01	4.88E+00	5.39E-01	1.51E-02	8.69E-02	3.60E-02	8.54E-02	2.08E-01	8.32E-02	9.00E-03	2.99E-02	1.22E-01	1.60E+03	6.91E-03	2.51E-01	101,106	0.39%
T7 Tractor Class 8	Natural Gas	1.42E-02	5.64E-01	9.76E+00	0.00E+00	1.24E-03	3.60E-02	7.85E-02	1.16E-01	1.14E-03	9.00E-03	2.75E-02	3.76E-02	1.22E+03	9.96E-01	2.49E-01	8,401	0.03%
T7 Utility Class 8	Diesel	4.10E-02	2.46E+00	1.98E-01	1.68E-02	1.14E-02	3.60E-02	9.84E-02	1.46E-01	1.09E-02	9.00E-03	3.44E-02	5.43E-02	1.78E+03	1.90E-03	2.80E-01	1,945	0.01%
T7IS	Gasoline	9.28E+00	2.69E+01	2.61E+02	2.92E-02	1.82E-02	2.00E-02	1.18E-01	1.56E-01	1.71E-02	5.00E-03	4.13E-02	6.34E-02	2.95E+03	1.10E+00	5.76E-01	52	0.00%
UBUS	Gasoline	1.03E-02	9.66E-02	4.08E-01	1.37E-02	1.22E-03	1.00E-02	1.01E-01	1.12E-01	1.12E-03	2.50E-03	3.52E-02	3.88E-02	1.39E+03	3.24E-03	1.03E-02	5,509	0.02%
UBUS	Diesel	1.12E-01	2.03E+00	1.53E-01	1.33E-02	7.36E-03	3.09E-02	1.10E-01	1.48E-01	7.04E-03	7.73E-03	3.85E-02	5.33E-02	1.41E+03	5.20E-03	2.21E-01	23,552	0.09%
UBUS	Electricity	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-02	5.50E-02	7.80E-02	0.00E+00	5.75E-03	1.93E-02	2.50E-02	0.00E+00	0.00E+00	0.00E+00	336	0.00%



2.68E-05	2.90E-04	6.78E-03	0.00E+00	2.65E-05	1.02E-04	3.19E-06	1.31E-04	6.61E-06	3.56E-05	2.93E-06	4.52E-05	2.34E+00	1.88E-03	4.76E-04
2.61E-04	1.72E-02	5.82E-04	2.69E-05	2.65E-05	1.02E-04	1.14E-04	2.43E-04	6.61E-06	3.56E-05	1.10E-04	1.52E-04	2.84E+00	1.21E-05	4.47E-04
2.63E-05	3.88E-04	6.81E-03	0.00E+00	2.65E-05	1.02E-04	2.73E-06	1.31E-04	6.61E-06	3.56E-05	2.51E-06	4.47E-05	2.31E+00	1.84E-03	4.70E-04
3.26E-04	2.12E-02	6.89E-04	2.74E-05	2.65E-05	1.02E-04	1.53E-04	2.81E-04	6.61E-06	3.56E-05	1.46E-04	1.88E-04	2.89E+00	1.51E-05	4.55E-04
2.62E-05	3.99E-04	6.83E-03	0.00E+00	2.65E-05	1.02E-04	2.67E-06	1.31E-04	6.61E-06	3.56E-05	2.46E-06	4.47E-05	2.29E+00	1.83E-03	4.68E-04
5.40E-05	2.80E-03	2.10E-04	2.38E-05	2.65E-05	1.00E-04	1.35E-05	1.40E-04	6.61E-06	3.51E-05	1.30E-05	5.47E-05	2.51E+00	2.51E-06	3.95E-04
2.06E-05	5.94E-04	6.38E-03	0.00E+00	2.65E-05	1.00E-04	1.14E-06	1.28E-04	6.61E-06	3.51E-05	1.05E-06	4.28E-05	2.23E+00	1.44E-03	4.54E-04
8.18E-05	4.59E-03	2.73E-04	2.43E-05	2.65E-05	1.00E-04	2.37E-05	1.50E-04	6.61E-06	3.51E-05	2.27E-05	6.44E-05	2.57E+00	3.80E-06	4.04E-04
2.06E-05	5.94E-04	6.38E-03	0.00E+00	2.65E-05	1.00E-04	1.14E-06	1.28E-04	6.61E-06	3.51E-05	1.05E-06	4.28E-05	2.19E+00	1.44E-03	4.47E-04
6.17E-05	4.23E-03	2.21E-04	2.43E-05	2.65E-05	1.00E-04	2.27E-05	1.49E-04	6.61E-06	3.51E-05	2.17E-05	6.35E-05	2.57E+00	2.86E-06	4.04E-04
2.06E-05	5.94E-04	6.38E-03	0.00E+00	2.65E-05	1.00E-04	1.14E-06	1.28E-04	6.61E-06	3.51E-05	1.05E-06	4.28E-05	2.21E+00	1.44E-03	4.50E-04
5.70E-04	2.94E-03	1.28E-02	4.15E-05	2.65E-05	9.92E-05	4.59E-06	1.30E-04	6.61E-06	3.47E-05	4.24E-06	4.56E-05	4.20E+00	1.04E-04	1.22E-04
1.94E-04	7.89E-03	7.14E-04	3.34E-05	7.94E-05	1.70E-04	1.46E-04	3.96E-04	1.98E-05	5.97E-05	1.40E-04	2.19E-04	3.53E+00	9.02E-06	5.56E-04
2.91E-05	5.77E-04	1.01E-02	0.00E+00	7.94E-05	1.63E-04	3.83E-06	2.47E-04	1.98E-05	5.72E-05	3.52E-06	8.05E-05	2.60E+00	2.04E-03	5.31E-04
3.20E-04	8.48E-03	1.26E-03	3.36E-05	7.94E-05	1.72E-04	2.41E-04	4.93E-04	1.98E-05	6.03E-05	2.31E-04	3.11E-04	3.55E+00	1.49E-05	5.59E-04
2.27E-04	8.25E-03	8.27E-04	3.34E-05	7.94E-05	1.71E-04	1.63E-04	4.13E-04	1.98E-05	5.98E-05	1.56E-04	2.35E-04	3.53E+00	1.05E-05	5.56E-04
2.63E-04	9.84E-03	8.38E-04	3.59E-05	7.94E-05	2.07E-04	6.86E-05	3.55E-04	1.98E-05	7.26E-05	6.56E-05	1.58E-04	3.80E+00	1.22E-05	5.98E-04
3.25E-04	1.10E-02	1.03E-03	3.60E-05	7.94E-05	2.12E-04	9.13E-05	3.82E-04	1.98E-05	7.41E-05	8.73E-05	1.81E-04	3.80E+00	1.51E-05	5.99E-04
3.74E-05	1.55E-03	2.43E-02	0.00E+00	7.94E-05	1.88E-04	2.99E-06	2.70E-04	1.98E-05	6.58E-05	2.75E-06	8.84E-05	3.29E+00	2.62E-03	6.71E-04
3.80E-04	2.81E-02	1.21E-03	4.13E-05	7.94E-05	2.67E-04	1.83E-04	5.30E-04	1.98E-05	9.35E-05	1.75E-04	2.88E-04	4.37E+00	1.77E-05	6.87E-04
5.76E-05	1.67E-03	2.35E-02	0.00E+00	7.94E-05	2.36E-04	5.42E-06	3.21E-04	1.98E-05	8.26E-05	4.98E-06	1.07E-04	3.71E+00	4.03E-03	7.56E-04
3.81E-04	8.93E-03	1.39E-03	3.56E-05	7.94E-05	1.91E-04	2.44E-04	5.14E-04	1.98E-05	6.69E-05	2.33E-04	3.20E-04	3.77E+00	1.77E-05	5.93E-04
3.34E-05	9.43E-04	1.67E-02	0.00E+00	7.94E-05	1.80E-04	3.69E-06	2.63E-04	1.98E-05	6.30E-05	3.40E-06	8.62E-05	2.81E+00	2.34E-03	5.74E-04
4.55E-04	1.18E-02	1.69E-03	3.53E-05	7.94E-05	1.96E-04	2.88E-04	5.64E-04	1.98E-05	6.87E-05	2.76E-04	3.64E-04	3.74E+00	2.11E-05	5.88E-04
3.34E-05	9.39E-04	1.67E-02	0.00E+00	7.94E-05	1.82E-04	3.70E-06	2.65E-04	1.98E-05	6.36E-05	3.40E-06	8.68E-05	2.90E+00	2.34E-03	5.92E-04
5.23E-04	1.20E-02	1.97E-03	3.55E-05	7.94E-05	1.98E-04	3.44E-04	6.21E-04	1.98E-05	6.92E-05	3.29E-04	4.18E-04	3.75E+00	2.43E-05	5.91E-04
3.34E-05	9.39E-04	1.67E-02	0.00E+00	7.94E-05	1.83E-04	3.69E-06	2.66E-04	1.98E-05	6.40E-05	3.40E-06	8.72E-05	2.88E+00	2.34E-03	5.88E-04
6.73E-05	1.94E-02	1.82E-04	8.60E-05	7.94E-05	4.63E-04	3.00E-05	5.72E-04	1.98E-05	1.62E-04	2.87E-05	2.11E-04	9.09E+00	3.13E-06	1.43E-03
2.87E-04	5.83E-03	5.52E-02	0.00E+00	7.94E-05	4.63E-04	6.05E-06	5.48E-04	1.98E-05	1.62E-04	5.56E-06	1.87E-04	3.80E+00	1.21E-02	7.74E-04
3.28E-04	1.08E-02	1.19E-03	3.33E-05	7.94E-05	1.88E-04	1.92E-04	4.59E-04	1.98E-05	6.59E-05	1.83E-04	2.69E-04	3.52E+00	1.52E-05	5.54E-04
3.14E-05	1.24E-03	2.15E-02	0.00E+00	7.94E-05	1.73E-04	2.74E-06	2.55E-04	1.98E-05	6.05E-05	2.51E-06	8.29E-05	2.69E+00	2.19E-03	5.49E-04
9.04E-05	5.43E-03	4.37E-04	3.71E-05	7.94E-05	2.17E-04	2.51E-05	3.21E-04	1.98E-05	7.59E-05	2.40E-05	1.20E-04	3.92E+00	4.20E-06	6.17E-04
2.04E-02	5.92E-02	5.76E-01	6.44E-05	4.41E-05	2.60E-04	4.01E-05	3.45E-04	1.10E-05	9.11E-05	3.77E-05	1.40E-04	6.51E+00	2.44E-03	1.27E-03
2.27E-05	2.13E-04	9.00E-04	3.03E-05	2.21E-05	2.22E-04	2.70E-06	2.46E-04	5.52E-06	7.76E-05	2.48E-06	8.56E-05	3.06E+00	7.14E-06	2.27E-05
2.47E-04	4.48E-03	3.38E-04	2.93E-05	6.82E-05	2.43E-04	1.62E-05	3.27E-04	1.71E-05	8.49E-05	1.55E-05	1.17E-04	3.10E+00	1.15E-05	4.88E-04
0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.07E-05	1.21E-04	0.00E+00	1.72E-04	1.27E-05	4.24E-05	0.00E+00	5.51E-05	0.00E+00	0.00E+00	0.00E+00



1.22E-08	1.31E-07	3.08E-06	0.00E+00	1.20E-08	4.62E-08	1.45E-09	5.96E-08	3.00E-09	1.62E-08	1.33E-09	2.05E-08	1.06E-03	8.52E-07	2.16E-07
1.18E-07	7.79E-06	2.64E-07	1.22E-08	1.20E-08	4.62E-08	5.19E-08	1.10E-07	3.00E-09	1.62E-08	4.97E-08	6.88E-08	1.29E-03	5.50E-09	2.03E-07
1.19E-08	1.76E-07	3.09E-06	0.00E+00	1.20E-08	4.62E-08	1.24E-09	5.94E-08	3.00E-09	1.62E-08	1.14E-09	2.03E-08	1.05E-03	8.33E-07	2.13E-07
1.48E-07	9.61E-06	3.12E-07	1.24E-08	1.20E-08	4.62E-08	6.92E-08	1.27E-07	3.00E-09	1.62E-08	6.62E-08	8.54E-08	1.31E-03	6.86E-09	2.07E-07
1.19E-08	1.81E-07	3.10E-06	0.00E+00	1.20E-08	4.62E-08	1.21E-09	5.94E-08	3.00E-09	1.62E-08	1.11E-09	2.03E-08	1.04E-03	8.31E-07	2.12E-07
2.45E-08	1.27E-06	9.54E-08	1.08E-08	1.20E-08	4.55E-08	6.14E-09	6.36E-08	3.00E-09	1.59E-08	5.88E-09	2.48E-08	1.14E-03	1.14E-09	1.79E-07
9.34E-09	2.70E-07	2.89E-06	0.00E+00	1.20E-08	4.55E-08	5.18E-10	5.80E-08	3.00E-09	1.59E-08	4.76E-10	1.94E-08	1.01E-03	6.54E-07	2.06E-07
3.71E-08	2.08E-06	1.24E-07	1.10E-08	1.20E-08	4.55E-08	1.08E-08	6.83E-08	3.00E-09	1.59E-08	1.03E-08	2.92E-08	1.17E-03	1.72E-09	1.83E-07
9.34E-09	2.70E-07	2.89E-06	0.00E+00	1.20E-08	4.55E-08	5.18E-10	5.80E-08	3.00E-09	1.59E-08	4.76E-10	1.94E-08	9.95E-04	6.54E-07	2.03E-07
2.80E-08	1.92E-06	1.00E-07	1.10E-08	1.20E-08	4.55E-08	1.03E-08	6.78E-08	3.00E-09	1.59E-08	9.87E-09	2.88E-08	1.17E-03	1.30E-09	1.83E-07
9.34E-09	2.70E-07	2.89E-06	0.00E+00	1.20E-08	4.55E-08	5.18E-10	5.80E-08	3.00E-09	1.59E-08	4.76E-10	1.94E-08	1.00E-03	6.54E-07	2.04E-07
2.58E-07	1.33E-06	5.81E-06	1.88E-08	1.20E-08	4.50E-08	2.08E-09	5.91E-08	3.00E-09	1.58E-08	1.92E-09	2.07E-08	1.90E-03	4.74E-08	5.56E-08
8.81E-08	3.58E-06	3.24E-07	1.51E-08	3.60E-08	7.73E-08	6.62E-08	1.80E-07	9.00E-09	2.71E-08	6.33E-08	9.94E-08	1.60E-03	4.09E-09	2.52E-07
1.32E-08	2.62E-07	4.60E-06	0.00E+00	3.60E-08	7.41E-08	1.74E-09	1.12E-07	9.00E-09	2.59E-08	1.60E-09	3.65E-08	1.18E-03	9.23E-07	2.41E-07
1.45E-07	3.84E-06	5.72E-07	1.52E-08	3.60E-08	7.82E-08	1.09E-07	2.24E-07	9.00E-09	2.74E-08	1.05E-07	1.41E-07	1.61E-03	6.74E-09	2.54E-07
1.03E-07	3.74E-06	3.75E-07	1.51E-08	3.60E-08	7.75E-08	7.38E-08	1.87E-07	9.00E-09	2.71E-08	7.06E-08	1.07E-07	1.60E-03	4.78E-09	2.52E-07
1.19E-07	4.46E-06	3.80E-07	1.63E-08	3.60E-08	9.40E-08	3.11E-08	1.61E-07	9.00E-09	3.29E-08	2.98E-08	7.17E-08	1.72E-03	5.53E-09	2.71E-07
1.47E-07	4.97E-06	4.69E-07	1.63E-08	3.60E-08	9.60E-08	4.14E-08	1.73E-07	9.00E-09	3.36E-08	3.96E-08	8.22E-08	1.73E-03	6.85E-09	2.72E-07
1.70E-08	7.05E-07	1.10E-05	0.00E+00	3.60E-08	8.52E-08	1.36E-09	1.23E-07	9.00E-09	2.98E-08	1.25E-09	4.01E-08	1.49E-03	1.19E-06	3.04E-07
1.73E-07	1.27E-05	5.50E-07	1.87E-08	3.60E-08	1.21E-07	8.30E-08	2.40E-07	9.00E-09	4.24E-08	7.94E-08	1.31E-07	1.98E-03	8.01E-09	3.12E-07
2.61E-08	7.55E-07	1.07E-05	0.00E+00	3.60E-08	1.07E-07	2.46E-09	1.45E-07	9.00E-09	3.75E-08	2.26E-09	4.87E-08	1.68E-03	1.83E-06	3.43E-07
1.73E-07	4.05E-06	6.29E-07	1.62E-08	3.60E-08	8.68E-08	1.11E-07	2.33E-07	9.00E-09	3.04E-08	1.06E-07	1.45E-07	1.71E-03	8.02E-09	2.69E-07
1.51E-08	4.28E-07	7.58E-06	0.00E+00	3.60E-08	8.16E-08	1.68E-09	1.19E-07	9.00E-09	2.86E-08	1.54E-09	3.91E-08	1.28E-03	1.06E-06	2.60E-07
2.06E-07	5.33E-06	7.69E-07	1.60E-08	3.60E-08	8.91E-08	1.31E-07	2.56E-07	9.00E-09	3.12E-08	1.25E-07	1.65E-07	1.69E-03	9.58E-09	2.67E-07
1.51E-08	4.26E-07	7.57E-06	0.00E+00	3.60E-08	8.24E-08	1.68E-09	1.20E-07	9.00E-09	2.88E-08	1.54E-09	3.94E-08	1.32E-03	1.06E-06	2.68E-07
2.37E-07	5.43E-06	8.92E-07	1.61E-08	3.60E-08	8.97E-08	1.56E-07	2.82E-07	9.00E-09	3.14E-08	1.49E-07	1.90E-07	1.70E-03	1.10E-08	2.68E-07
1.51E-08	4.26E-07	7.59E-06	0.00E+00	3.60E-08	8.29E-08	1.68E-09	1.21E-07	9.00E-09	2.90E-08	1.54E-09	3.96E-08	1.31E-03	1.06E-06	2.67E-07
3.05E-08	8.80E-06	8.25E-08	3.90E-08	3.60E-08	2.10E-07	1.36E-08	2.60E-07	9.00E-09	7.35E-08	1.30E-08	9.55E-08	4.12E-03	1.42E-09	6.49E-07
1.30E-07	2.64E-06	2.50E-05	0.00E+00	3.60E-08	2.10E-07	2.74E-09	2.49E-07	9.00E-09	7.35E-08	2.52E-09	8.50E-08	1.72E-03	5.48E-06	3.51E-07
1.49E-07	4.88E-06	5.39E-07	1.51E-08	3.60E-08	8.54E-08	8.69E-08	2.08E-07	9.00E-09	2.99E-08	8.32E-08	1.22E-07	1.60E-03	6.91E-09	2.51E-07
1.42E-08	5.64E-07	9.76E-06	0.00E+00	3.60E-08	7.85E-08	1.24E-09	1.16E-07	9.00E-09	2.75E-08	1.14E-09	3.76E-08	1.22E-03	9.96E-07	2.49E-07
4.10E-08	2.46E-06	1.98E-07	1.68E-08	3.60E-08	9.84E-08	1.14E-08	1.46E-07	9.00E-09	3.44E-08	1.09E-08	5.43E-08	1.78E-03	1.90E-09	2.80E-07
9.28E-06	2.69E-05	2.61E-04	2.92E-08	2.00E-08	1.18E-07	1.82E-08	1.56E-07	5.00E-09	4.13E-08	1.71E-08	6.34E-08	2.95E-03	1.10E-06	5.76E-07
1.03E-08	9.66E-08	4.08E-07	1.37E-08	1.00E-08	1.01E-07	1.22E-09	1.12E-07	2.50E-09	3.52E-08	1.12E-09	3.88E-08	1.39E-03	3.24E-09	1.03E-08
1.12E-07	2.03E-06	1.53E-07	1.33E-08	3.09E-08	1.10E-07	7.36E-09	1.48E-07	7.73E-09	3.85E-08	7.04E-09	5.33E-08	1.41E-03	5.20E-09	2.21E-07
0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.30E-08	5.50E-08	0.00E+00	7.80E-08	5.75E-09	1.93E-08	0.00E+00	2.50E-08	0.00E+00	0.00E+00	0.00E+00



## Existing in Year 2030: Criteria Air Pollutants

Source: EMFAC2021 (v1.0.2) Emission Rates, Contra Costa County, Average Speed, Average Fleet

	Small Trucks	Medium Trucks	Heavy Trucks	Passenger Vehicles
Source: F&P 2021				
Truck Trip Percentage	1.2%	0.1%	0.4%	98.3%
EMFAC Default	3.49%	1.00%	2.60%	92.91%

Daily VMT		3,276,401		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent of VMT	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.00%	0.03	0.42	0.08	0.00	0.01	0.00
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
LDA	Gasoline	44.01%	46.56%	16.82	91.78	1,853.89	8.19	3.21	26.90
LDA	Diesel	0.07%	0.08%	0.07	0.50	1.31	0.01	0.04	0.04
LDA	Electricity	4.98%	5.27%	0.00	0.00	0.00	0.00	0.00	3.04
LDA	Plug-in Hybrid	1.93%	2.04%	0.18	0.42	27.55	0.18	0.06	1.18
LDT1	Gasoline	3.36%	3.55%	3.49	17.13	228.59	0.76	0.33	2.05
LDT1	Diesel	0.00%	0.00%	0.00	0.01	0.01	0.00	0.00	0.00
LDT1	Electricity	0.04%	0.04%	0.00	0.00	0.00	0.00	0.00	0.02
LDT1	Plug-in Hybrid	0.03%	0.03%	0.00	0.01	0.37	0.00	0.00	0.02
LDT2	Gasoline	23.25%	24.60%	11.82	71.15	1,125.70	5.31	1.79	14.21
LDT2	Diesel	0.09%	0.10%	0.08	0.23	0.89	0.02	0.03	0.06
LDT2	Electricity	0.33%	0.34%	0.00	0.00	0.00	0.00	0.00	0.20
LDT2	Plug-in Hybrid	0.40%	0.42%	0.04	0.08	5.51	0.04	0.01	0.25
LHD1	Gasoline	1.55%	0.53%	0.75	3.76	31.18	0.31	0.06	0.31
LHD1	Diesel	1.04%	0.36%	3.73	28.17	10.21	0.15	0.81	0.31
LHD1	Electricity	0.22%	0.08%	0.00	0.00	0.00	0.00	0.00	0.04
LHD2	Gasoline	0.18%	0.06%	0.05	0.36	2.88	0.04	0.01	0.04
LHD2	Diesel	0.45%	0.15%	1.54	9.79	4.03	0.08	0.33	0.13
LHD2	Electricity	0.05%	0.02%	0.00	0.00	0.00	0.00	0.00	0.01
MCY	Gasoline	0.35%	0.37%	26.12	14.54	318.04	0.05	0.05	0.11
MDV	Gasoline	13.33%	14.11%	9.83	60.38	742.76	3.74	1.05	8.15
MDV	Diesel	0.19%	0.20%	0.13	0.50	2.70	0.05	0.05	0.12
MDV	Electricity	0.32%	0.34%	0.00	0.00	0.00	0.00	0.00	0.20
MDV	Plug-in Hybrid	0.24%	0.26%	0.02	0.05	3.36	0.02	0.01	0.15
MH	Gasoline	0.05%	0.01%	0.01	0.11	0.21	0.01	0.00	0.01
MH	Diesel	0.02%	0.00%	0.03	1.03	0.10	0.00	0.02	0.00
Motor Coach	Diesel	0.01%	0.00%	0.00	0.20	0.01	0.00	0.00	0.00
OBUS	Gasoline	0.03%	0.00%	0.02	0.13	0.35	0.01	0.00	0.00
OBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
PTO	Diesel	0.05%	0.01%	0.01	1.43	0.11	0.01	0.00	0.00
PTO	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.00%	0.00	0.04	0.08	0.00	0.00	0.00
SBUS	Diesel	0.03%	0.01%	0.02	0.84	0.05	0.00	0.00	0.00
SBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.22	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.01%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.03%	0.00%	0.01	0.19	0.03	0.00	0.00	0.00
T6 Instate Delivery Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.02%	0.00%	0.00	0.11	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.05%	0.01%	0.01	0.29	0.03	0.00	0.00	0.00
T6 Instate Delivery Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.01%	0.00%	0.00	0.10	0.01	0.00	0.00	0.00

T6 Instate Delivery Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.08%	0.01%	0.02	0.45	0.06	0.01	0.01	0.01
T6 Instate Other Class 4	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.20%	0.02%	0.01	0.67	0.08	0.01	0.01	0.02
T6 Instate Other Class 5	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Other Class 6	Diesel	0.15%	0.02%	0.02	0.63	0.08	0.01	0.01	0.01
T6 Instate Other Class 6	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.10%	0.01%	0.01	0.58	0.05	0.01	0.00	0.01
T6 Instate Other Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.01%	0.00%	0.00	0.09	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Public Class 4	Diesel	0.01%	0.00%	0.00	0.19	0.01	0.00	0.00	0.00
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.02%	0.00%	0.00	0.17	0.01	0.00	0.00	0.00
T6 Public Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.23	0.01	0.00	0.00	0.00
T6 Public Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.03%	0.00%	0.01	0.48	0.02	0.00	0.00	0.00
T6 Public Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.01%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.13%	0.01%	0.03	0.20	0.58	0.02	0.00	0.01
T6TS	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Diesel	0.42%	0.06%	0.06	6.21	0.20	0.06	0.15	0.17
T7 CAIRP Class 8	Electricity	0.04%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.54%	0.08%	0.07	8.37	0.25	0.08	0.18	0.22
T7 NOOS Class 8	Diesel	0.20%	0.03%	0.03	3.12	0.09	0.03	0.07	0.08
T7 Other Port Class 8	Diesel	0.05%	0.01%	0.01	0.70	0.04	0.01	0.01	0.02
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 POAK Class 8	Diesel	0.15%	0.02%	0.02	2.29	0.12	0.02	0.03	0.06
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.06%	0.01%	0.06	4.00	0.21	0.01	0.02	0.03
T7 Public Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Diesel	0.02%	0.00%	0.00	0.17	0.01	0.00	0.00	0.01
T7 Single Concrete/Transit Mix Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.10%	0.02%	0.01	1.50	0.09	0.02	0.02	0.04
T7 Single Dump Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Dump Class 8	Natural Gas	0.01%	0.00%	0.00	0.02	0.40	0.00	0.00	0.00

T7 Single Other Class 8	Diesel	0.10%	0.02%	0.01	1.28	0.07	0.02	0.02	0.04
T7 Single Other Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Other Class 8	Natural Gas	0.01%	0.00%	0.00	0.02	0.33	0.00	0.00	0.00
T7 SWCV Class 8	Diesel	0.02%	0.00%	0.01	1.79	0.02	0.01	0.00	0.01
T7 SWCV Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 SWCV Class 8	Natural Gas	0.06%	0.01%	0.03	0.67	10.64	0.00	0.00	0.02
T7 Tractor Class 8	Diesel	0.37%	0.06%	0.05	5.72	0.26	0.06	0.09	0.15
T7 Tractor Class 8	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 Tractor Class 8	Natural Gas	0.04%	0.01%	0.01	0.16	3.01	0.00	0.00	0.02
T7 Utility Class 8	Diesel	0.01%	0.00%	0.00	0.09	0.01	0.00	0.00	0.00
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	0.00	0.01	0.10	0.00	0.00	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.00%	0.00	0.01	0.08	0.00	0.00	0.00
UBUS	Diesel	0.05%	0.01%	0.04	0.20	0.04	0.01	0.00	0.02
UBUS	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
UBUS	Natural Gas	0.01%	0.00%	0.01	0.01	6.91	0.00	0.00	0.00
		100%	100%	75	344	4,384	19	9	59

## Year 2030: Criteria Air Pollutants

Source: EMFAC2021 (v1.0.2) Emission Rates, Contra Costa County, Average Speed, Average Fleet

	Small Trucks	Medium Trucks	Heavy Trucks	Passenger Vehicles
Source: F&P 2021				
Truck Trip Percentage	1.2%	0.1%	0.4%	98.3%
EMFAC Default	3.49%	1.00%	2.60%	92.91%

Daily VMT		3,653,776		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent of VMT	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.00%	0.03	0.47	0.09	0.00	0.01	0.00
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
LDA	Gasoline	44.01%	46.56%	18.75	102.35	2,067.42	9.14	3.58	30.00
LDA	Diesel	0.07%	0.08%	0.08	0.55	1.47	0.01	0.04	0.05
LDA	Electricity	4.98%	5.27%	0.00	0.00	0.00	0.00	0.00	3.39
LDA	Plug-in Hybrid	1.93%	2.04%	0.20	0.47	30.72	0.20	0.07	1.31
LDT1	Gasoline	3.36%	3.55%	3.89	19.10	254.92	0.84	0.37	2.29
LDT1	Diesel	0.00%	0.00%	0.00	0.01	0.01	0.00	0.00	0.00
LDT1	Electricity	0.04%	0.04%	0.00	0.00	0.00	0.00	0.00	0.02
LDT1	Plug-in Hybrid	0.03%	0.03%	0.00	0.01	0.41	0.00	0.00	0.02
LDT2	Gasoline	23.25%	24.60%	13.19	79.35	1,255.36	5.92	2.00	15.85
LDT2	Diesel	0.09%	0.10%	0.09	0.25	0.99	0.02	0.03	0.06
LDT2	Electricity	0.33%	0.34%	0.00	0.00	0.00	0.00	0.00	0.22
LDT2	Plug-in Hybrid	0.40%	0.42%	0.04	0.09	6.14	0.04	0.01	0.27
LHD1	Gasoline	1.55%	0.53%	0.84	4.19	34.77	0.35	0.06	0.34
LHD1	Diesel	1.04%	0.36%	4.16	31.42	11.38	0.17	0.90	0.34
LHD1	Electricity	0.22%	0.08%	0.00	0.00	0.00	0.00	0.00	0.05
LHD2	Gasoline	0.18%	0.06%	0.06	0.40	3.21	0.04	0.01	0.04
LHD2	Diesel	0.45%	0.15%	1.72	10.92	4.49	0.09	0.37	0.15
LHD2	Electricity	0.05%	0.02%	0.00	0.00	0.00	0.00	0.00	0.01
MCY	Gasoline	0.35%	0.37%	29.13	16.21	354.68	0.06	0.06	0.12
MDV	Gasoline	13.33%	14.11%	10.97	67.34	828.31	4.17	1.17	9.09
MDV	Diesel	0.19%	0.20%	0.14	0.56	3.01	0.06	0.06	0.13
MDV	Electricity	0.32%	0.34%	0.00	0.00	0.00	0.00	0.00	0.22
MDV	Plug-in Hybrid	0.24%	0.26%	0.02	0.06	3.74	0.02	0.01	0.17
MH	Gasoline	0.05%	0.01%	0.01	0.12	0.23	0.01	0.00	0.01
MH	Diesel	0.02%	0.00%	0.04	1.15	0.12	0.00	0.03	0.00
Motor Coach	Diesel	0.01%	0.00%	0.00	0.23	0.01	0.00	0.00	0.00
OBUS	Gasoline	0.03%	0.00%	0.02	0.14	0.39	0.01	0.00	0.00
OBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
PTO	Diesel	0.05%	0.01%	0.01	1.60	0.12	0.01	0.00	0.00
PTO	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.00%	0.00	0.04	0.09	0.00	0.00	0.00
SBUS	Diesel	0.03%	0.01%	0.02	0.93	0.06	0.00	0.01	0.00
SBUS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.24	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.01%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.03%	0.00%	0.01	0.21	0.03	0.00	0.00	0.00
T6 Instate Delivery Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.02%	0.00%	0.00	0.12	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.05%	0.01%	0.01	0.32	0.04	0.00	0.00	0.01
T6 Instate Delivery Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.01%	0.00%	0.00	0.11	0.01	0.00	0.00	0.00

T6 Instate Delivery Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.08%	0.01%	0.02	0.50	0.07	0.01	0.01	0.01
T6 Instate Other Class 4	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.20%	0.02%	0.01	0.75	0.08	0.02	0.01	0.02
T6 Instate Other Class 5	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Other Class 6	Diesel	0.15%	0.02%	0.02	0.71	0.08	0.01	0.01	0.01
T6 Instate Other Class 6	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.10%	0.01%	0.01	0.65	0.05	0.01	0.00	0.01
T6 Instate Other Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.01%	0.00%	0.00	0.10	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Public Class 4	Diesel	0.01%	0.00%	0.00	0.21	0.01	0.00	0.00	0.00
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.02%	0.00%	0.00	0.19	0.01	0.00	0.00	0.00
T6 Public Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.26	0.01	0.00	0.00	0.00
T6 Public Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.03%	0.00%	0.01	0.53	0.02	0.00	0.00	0.00
T6 Public Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.01%	0.00%	0.00	0.02	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.13%	0.01%	0.03	0.22	0.65	0.02	0.00	0.01
T6TS	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 CAIRP Class 8	Diesel	0.42%	0.06%	0.06	6.93	0.22	0.07	0.16	0.19
T7 CAIRP Class 8	Electricity	0.04%	0.01%	0.00	0.00	0.00	0.00	0.00	0.02
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.54%	0.08%	0.08	9.33	0.28	0.08	0.20	0.24
T7 NOOS Class 8	Diesel	0.20%	0.03%	0.03	3.48	0.10	0.03	0.08	0.09
T7 Other Port Class 8	Diesel	0.05%	0.01%	0.01	0.78	0.04	0.01	0.01	0.02
T7 Other Port Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 POAK Class 8	Diesel	0.15%	0.02%	0.02	2.56	0.13	0.03	0.03	0.07
T7 POAK Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.06%	0.01%	0.07	4.47	0.23	0.01	0.03	0.03
T7 Public Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Diesel	0.02%	0.00%	0.00	0.18	0.01	0.00	0.00	0.01
T7 Single Concrete/Transit Mix Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.06	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.10%	0.02%	0.02	1.67	0.10	0.02	0.02	0.04
T7 Single Dump Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Dump Class 8	Natural Gas	0.01%	0.00%	0.00	0.02	0.44	0.00	0.00	0.00

T7 Single Other Class 8	Diesel	0.10%	0.02%	0.01	1.43	0.08	0.02	0.02	0.05
T7 Single Other Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 Single Other Class 8	Natural Gas	0.01%	0.00%	0.00	0.02	0.37	0.00	0.00	0.00
T7 SWCV Class 8	Diesel	0.02%	0.00%	0.01	2.00	0.03	0.01	0.00	0.01
T7 SWCV Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 SWCV Class 8	Natural Gas	0.06%	0.01%	0.03	0.75	11.86	0.00	0.00	0.03
T7 Tractor Class 8	Diesel	0.37%	0.06%	0.06	6.38	0.29	0.06	0.10	0.16
T7 Tractor Class 8	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 Tractor Class 8	Natural Gas	0.04%	0.01%	0.01	0.18	3.36	0.00	0.00	0.02
T7 Utility Class 8	Diesel	0.01%	0.00%	0.00	0.10	0.01	0.00	0.00	0.00
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	0.00	0.01	0.11	0.00	0.00	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.02%	0.00%	0.00	0.02	0.09	0.00	0.00	0.00
UBUS	Diesel	0.05%	0.01%	0.04	0.22	0.05	0.01	0.00	0.02
UBUS	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
UBUS	Natural Gas	0.01%	0.00%	0.01	0.01	7.71	0.00	0.00	0.01
		100%	100%	84	383	4,889	22	10	65















## Existing in Year 2040: Criteria Air Pollutants

Source: EMFAC2021 (v1.0.2) Emission Rates, Contra Costa County, Average Speed, Average Fleet

	Small Trucks	Medium Trucks	Heavy Trucks	Passenger Vehicles
Source: F&P 2021				
Truck Trip Percentage	1.4%	0.1%	0.5%	98.0%
EMFAC Default	3.46%	1.06%	2.83%	92.65%

Daily VMT		3,276,401		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent of VMT	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.00%	0.02	0.34	0.07	0.00	0.01	0.00
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
LDA	Gasoline	42.99%	45.47%	10.07	67.65	1,540.89	7.31	1.82	26.28
LDA	Diesel	0.03%	0.03%	0.01	0.08	0.34	0.00	0.00	0.02
LDA	Electricity	6.07%	6.42%	0.00	0.00	0.00	0.00	0.00	3.71
LDA	Plug-in Hybrid	2.05%	2.17%	0.18	0.42	27.41	0.18	0.04	1.26
LDT1	Gasoline	2.76%	2.92%	0.92	5.65	113.83	0.55	0.14	1.69
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.07%	0.08%	0.00	0.00	0.00	0.00	0.00	0.05
LDT1	Plug-in Hybrid	0.06%	0.06%	0.00	0.01	0.75	0.00	0.00	0.03
LDT2	Gasoline	22.99%	24.32%	7.67	45.41	975.32	4.73	1.03	14.05
LDT2	Diesel	0.09%	0.09%	0.08	0.19	0.82	0.02	0.03	0.05
LDT2	Electricity	0.59%	0.63%	0.00	0.00	0.00	0.00	0.00	0.36
LDT2	Plug-in Hybrid	0.60%	0.63%	0.05	0.12	7.90	0.05	0.01	0.36
LHD1	Gasoline	1.08%	0.44%	0.15	0.96	18.71	0.24	0.04	0.25
LHD1	Diesel	0.71%	0.29%	2.14	9.66	5.69	0.12	0.47	0.25
LHD1	Electricity	0.98%	0.40%	0.00	0.00	0.00	0.00	0.00	0.23
LHD2	Gasoline	0.12%	0.05%	0.01	0.10	2.13	0.03	0.00	0.03
LHD2	Diesel	0.33%	0.13%	1.12	5.20	3.00	0.06	0.25	0.11
LHD2	Electricity	0.23%	0.10%	0.00	0.00	0.00	0.00	0.00	0.05
MCY	Gasoline	0.33%	0.35%	20.86	12.38	260.68	0.05	0.05	0.10
MDV	Gasoline	12.96%	13.71%	5.21	32.48	588.08	3.26	0.61	7.92
MDV	Diesel	0.15%	0.16%	0.06	0.16	1.65	0.04	0.02	0.09
MDV	Electricity	0.54%	0.57%	0.00	0.00	0.00	0.00	0.00	0.33
MDV	Plug-in Hybrid	0.36%	0.38%	0.03	0.07	4.79	0.03	0.01	0.22
MH	Gasoline	0.04%	0.01%	0.01	0.06	0.08	0.01	0.00	0.01
MH	Diesel	0.02%	0.00%	0.03	0.80	0.08	0.00	0.01	0.00
Motor Coach	Diesel	0.01%	0.00%	0.00	0.16	0.01	0.00	0.00	0.00
OBUS	Gasoline	0.02%	0.00%	0.01	0.06	0.18	0.00	0.00	0.00
OBUS	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
PTO	Diesel	0.03%	0.01%	0.01	1.12	0.08	0.01	0.00	0.00
PTO	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.00%	0.00	0.03	0.04	0.00	0.00	0.00
SBUS	Diesel	0.02%	0.00%	0.01	0.27	0.03	0.00	0.00	0.00
SBUS	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.17	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.01%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.02%	0.00%	0.00	0.06	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 4	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.02%	0.00%	0.00	0.05	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.04%	0.00%	0.00	0.11	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 6	Electricity	0.03%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.01%	0.00%	0.00	0.05	0.00	0.00	0.00	0.00

T6 Instate Delivery Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.06%	0.01%	0.00	0.13	0.02	0.00	0.00	0.00
T6 Instate Other Class 4	Electricity	0.04%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.14%	0.01%	0.01	0.29	0.04	0.01	0.00	0.01
T6 Instate Other Class 5	Electricity	0.10%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Other Class 6	Diesel	0.10%	0.01%	0.00	0.23	0.03	0.01	0.00	0.01
T6 Instate Other Class 6	Electricity	0.08%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.07%	0.01%	0.00	0.30	0.03	0.01	0.00	0.01
T6 Instate Other Class 7	Electricity	0.04%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.01%	0.00%	0.00	0.05	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Public Class 4	Diesel	0.01%	0.00%	0.00	0.05	0.00	0.00	0.00	0.00
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.01%	0.00%	0.00	0.06	0.01	0.00	0.00	0.00
T6 Public Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.06	0.00	0.00	0.00	0.00
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.02%	0.00%	0.00	0.11	0.01	0.00	0.00	0.00
T6 Public Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.09%	0.01%	0.01	0.06	0.14	0.01	0.00	0.01
T6TS	Electricity	0.07%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T7 CAIRP Class 8	Diesel	0.41%	0.07%	0.06	6.36	0.20	0.06	0.16	0.19
T7 CAIRP Class 8	Electricity	0.11%	0.02%	0.00	0.00	0.00	0.00	0.00	0.05
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.61%	0.11%	0.09	10.46	0.30	0.09	0.23	0.28
T7 NOOS Class 8	Diesel	0.22%	0.04%	0.03	3.91	0.11	0.03	0.09	0.10
T7 Other Port Class 8	Diesel	0.05%	0.01%	0.01	0.72	0.04	0.01	0.01	0.02
T7 Other Port Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 POAK Class 8	Diesel	0.15%	0.03%	0.02	2.47	0.12	0.02	0.03	0.07
T7 POAK Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.05%	0.01%	0.02	1.69	0.10	0.01	0.01	0.02
T7 Public Class 8	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Diesel	0.01%	0.00%	0.00	0.10	0.01	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.07%	0.01%	0.01	1.04	0.05	0.01	0.02	0.03
T7 Single Dump Class 8	Electricity	0.04%	0.01%	0.00	0.00	0.00	0.00	0.00	0.02
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.26	0.00	0.00	0.00

T7 Single Other Class 8	Diesel	0.08%	0.01%	0.01	1.05	0.05	0.01	0.02	0.04
T7 Single Other Class 8	Electricity	0.05%	0.01%	0.00	0.00	0.00	0.00	0.00	0.02
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.26	0.00	0.00	0.00
T7 SWCV Class 8	Diesel	0.01%	0.00%	0.00	0.76	0.01	0.00	0.00	0.00
T7 SWCV Class 8	Electricity	0.03%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 SWCV Class 8	Natural Gas	0.05%	0.01%	0.01	0.32	8.00	0.00	0.00	0.02
T7 Tractor Class 8	Diesel	0.38%	0.07%	0.05	5.97	0.24	0.06	0.11	0.17
T7 Tractor Class 8	Electricity	0.06%	0.01%	0.00	0.00	0.00	0.00	0.00	0.03
T7 Tractor Class 8	Natural Gas	0.03%	0.01%	0.01	0.09	1.94	0.00	0.00	0.02
T7 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.06	0.01	0.00	0.00	0.00
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	0.00	0.01	0.12	0.00	0.00	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.01%	0.00%	0.00	0.00	0.07	0.00	0.00	0.00
UBUS	Diesel	0.01%	0.00%	0.01	0.07	0.01	0.00	0.00	0.01
UBUS	Electricity	0.07%	0.01%	0.00	0.00	0.00	0.00	0.00	0.02
UBUS	Natural Gas	0.01%	0.00%	0.00	0.00	3.52	0.00	0.00	0.00
		100%	100%	49	220	3,569	17	5	59

## Year 2040: Criteria Air Pollutants

Source: EMFAC2021 (v1.0.2) Emission Rates, Contra Costa County, Average Speed, Average Fleet

	Small Trucks	Medium Trucks	Heavy Trucks	Passenger Vehicles
Source: F&P 2021				
Truck Trip Percentage	1.4%	0.1%	0.5%	98.0%
EMFAC Default	3.46%	1.06%	2.83%	92.65%

Daily VMT		4,031,152		lbs/day					
Vehicle Type	Fuel Type	Percent of VMT	Adjusted Percent of VMT	ROG	NOx	CO	SOx	PM10	PM2.5
All Other Buses	Diesel	0.02%	0.00%	0.03	0.42	0.08	0.00	0.01	0.00
All Other Buses	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
LDA	Gasoline	42.99%	45.47%	12.39	83.23	1,895.85	8.99	2.24	32.33
LDA	Diesel	0.03%	0.03%	0.02	0.10	0.42	0.00	0.01	0.02
LDA	Electricity	6.07%	6.42%	0.00	0.00	0.00	0.00	0.00	4.57
LDA	Plug-in Hybrid	2.05%	2.17%	0.22	0.52	33.73	0.22	0.04	1.54
LDT1	Gasoline	2.76%	2.92%	1.13	6.96	140.05	0.68	0.17	2.08
LDT1	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
LDT1	Electricity	0.07%	0.08%	0.00	0.00	0.00	0.00	0.00	0.06
LDT1	Plug-in Hybrid	0.06%	0.06%	0.01	0.01	0.93	0.01	0.00	0.04
LDT2	Gasoline	22.99%	24.32%	9.44	55.87	1,199.99	5.82	1.26	17.29
LDT2	Diesel	0.09%	0.09%	0.10	0.23	1.01	0.02	0.03	0.07
LDT2	Electricity	0.59%	0.63%	0.00	0.00	0.00	0.00	0.00	0.45
LDT2	Plug-in Hybrid	0.60%	0.63%	0.06	0.15	9.72	0.06	0.01	0.45
LHD1	Gasoline	1.08%	0.44%	0.19	1.18	23.02	0.30	0.05	0.31
LHD1	Diesel	0.71%	0.29%	2.63	11.89	7.00	0.15	0.58	0.31
LHD1	Electricity	0.98%	0.40%	0.00	0.00	0.00	0.00	0.00	0.28
LHD2	Gasoline	0.12%	0.05%	0.02	0.13	2.62	0.04	0.01	0.04
LHD2	Diesel	0.33%	0.13%	1.38	6.40	3.69	0.08	0.30	0.14
LHD2	Electricity	0.23%	0.10%	0.00	0.00	0.00	0.00	0.00	0.07
MCY	Gasoline	0.33%	0.35%	25.67	15.23	320.73	0.06	0.07	0.13
MDV	Gasoline	12.96%	13.71%	6.41	39.96	723.55	4.01	0.75	9.74
MDV	Diesel	0.15%	0.16%	0.07	0.20	2.03	0.04	0.02	0.11
MDV	Electricity	0.54%	0.57%	0.00	0.00	0.00	0.00	0.00	0.41
MDV	Plug-in Hybrid	0.36%	0.38%	0.04	0.09	5.90	0.04	0.01	0.27
MH	Gasoline	0.04%	0.01%	0.01	0.07	0.10	0.01	0.00	0.01
MH	Diesel	0.02%	0.00%	0.03	0.99	0.10	0.00	0.02	0.01
Motor Coach	Diesel	0.01%	0.00%	0.00	0.19	0.01	0.00	0.00	0.00
OBUS	Gasoline	0.02%	0.00%	0.01	0.07	0.22	0.00	0.00	0.00
OBUS	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
PTO	Diesel	0.03%	0.01%	0.01	1.37	0.10	0.01	0.00	0.00
PTO	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Gasoline	0.02%	0.00%	0.00	0.04	0.05	0.00	0.00	0.00
SBUS	Diesel	0.02%	0.00%	0.01	0.33	0.03	0.00	0.00	0.00
SBUS	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
SBUS	Natural Gas	0.00%	0.00%	0.00	0.01	0.21	0.00	0.00	0.00
T6 CAIRP Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Diesel	0.01%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 CAIRP Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Diesel	0.02%	0.00%	0.00	0.08	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 4	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Diesel	0.02%	0.00%	0.00	0.06	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 6	Diesel	0.04%	0.00%	0.00	0.14	0.02	0.00	0.00	0.00
T6 Instate Delivery Class 6	Electricity	0.03%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Instate Delivery Class 7	Diesel	0.01%	0.00%	0.00	0.06	0.01	0.00	0.00	0.00



T6 Instate Delivery Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Delivery Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Diesel	0.06%	0.01%	0.00	0.16	0.02	0.00	0.00	0.01
T6 Instate Other Class 4	Electricity	0.04%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Instate Other Class 5	Diesel	0.14%	0.01%	0.01	0.36	0.05	0.01	0.00	0.01
T6 Instate Other Class 5	Electricity	0.10%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T6 Instate Other Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Instate Other Class 6	Diesel	0.10%	0.01%	0.01	0.28	0.04	0.01	0.00	0.01
T6 Instate Other Class 6	Electricity	0.08%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T6 Instate Other Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Instate Other Class 7	Diesel	0.07%	0.01%	0.01	0.37	0.04	0.01	0.00	0.01
T6 Instate Other Class 7	Electricity	0.04%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Other Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T6 Instate Tractor Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Diesel	0.01%	0.00%	0.00	0.06	0.01	0.00	0.00	0.00
T6 Instate Tractor Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Instate Tractor Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 OOS Class 4	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 5	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 OOS Class 7	Diesel	0.01%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Public Class 4	Diesel	0.01%	0.00%	0.00	0.06	0.00	0.00	0.00	0.00
T6 Public Class 4	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 4	Natural Gas	0.00%	0.00%	0.00	0.00	0.01	0.00	0.00	0.00
T6 Public Class 5	Diesel	0.01%	0.00%	0.00	0.07	0.01	0.00	0.00	0.00
T6 Public Class 5	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 6	Diesel	0.01%	0.00%	0.00	0.07	0.01	0.00	0.00	0.00
T6 Public Class 6	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.02	0.00	0.00	0.00
T6 Public Class 7	Diesel	0.02%	0.00%	0.00	0.13	0.01	0.00	0.00	0.00
T6 Public Class 7	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Public Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T6 Utility Class 5	Diesel	0.00%	0.00%	0.00	0.01	0.00	0.00	0.00	0.00
T6 Utility Class 5	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 5	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 6	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Diesel	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6 Utility Class 7	Natural Gas	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T6TS	Gasoline	0.09%	0.01%	0.01	0.07	0.18	0.01	0.00	0.01
T6TS	Electricity	0.07%	0.01%	0.00	0.00	0.00	0.00	0.00	0.01
T7 CAIRP Class 8	Diesel	0.41%	0.07%	0.07	7.83	0.25	0.08	0.19	0.23
T7 CAIRP Class 8	Electricity	0.11%	0.02%	0.00	0.00	0.00	0.00	0.00	0.06
T7 CAIRP Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 NNOOS Class 8	Diesel	0.61%	0.11%	0.11	12.87	0.37	0.11	0.29	0.35
T7 NOOS Class 8	Diesel	0.22%	0.04%	0.04	4.81	0.14	0.04	0.11	0.13
T7 Other Port Class 8	Diesel	0.05%	0.01%	0.01	0.89	0.05	0.01	0.01	0.03
T7 Other Port Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 POAK Class 8	Diesel	0.15%	0.03%	0.02	3.03	0.15	0.03	0.04	0.08
T7 POAK Class 8	Electricity	0.03%	0.01%	0.00	0.00	0.00	0.00	0.00	0.02
T7 POAK Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.03	0.00	0.00	0.00
T7 Public Class 8	Diesel	0.05%	0.01%	0.03	2.08	0.13	0.01	0.01	0.03
T7 Public Class 8	Electricity	0.02%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 Public Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.05	0.00	0.00	0.00
T7 Single Concrete/Transit Mix Class 8	Diesel	0.01%	0.00%	0.00	0.12	0.01	0.00	0.00	0.01
T7 Single Concrete/Transit Mix Class 8	Electricity	0.01%	0.00%	0.00	0.00	0.00	0.00	0.00	0.01
T7 Single Concrete/Transit Mix Class 8	Natural Gas	0.00%	0.00%	0.00	0.00	0.04	0.00	0.00	0.00
T7 Single Dump Class 8	Diesel	0.07%	0.01%	0.01	1.28	0.07	0.02	0.02	0.04
T7 Single Dump Class 8	Electricity	0.04%	0.01%	0.00	0.00	0.00	0.00	0.00	0.02
T7 Single Dump Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.32	0.00	0.00	0.00

T7 Single Other Class 8	Diesel	0.08%	0.01%	0.01	1.29	0.06	0.02	0.02	0.04
T7 Single Other Class 8	Electricity	0.05%	0.01%	0.00	0.00	0.00	0.00	0.00	0.03
T7 Single Other Class 8	Natural Gas	0.00%	0.00%	0.00	0.01	0.32	0.00	0.00	0.00
T7 SWCV Class 8	Diesel	0.01%	0.00%	0.00	0.93	0.01	0.01	0.00	0.01
T7 SWCV Class 8	Electricity	0.03%	0.00%	0.00	0.00	0.00	0.00	0.00	0.02
T7 SWCV Class 8	Natural Gas	0.05%	0.01%	0.02	0.39	9.84	0.00	0.00	0.03
T7 Tractor Class 8	Diesel	0.38%	0.07%	0.06	7.34	0.30	0.07	0.13	0.21
T7 Tractor Class 8	Electricity	0.06%	0.01%	0.00	0.00	0.00	0.00	0.00	0.04
T7 Tractor Class 8	Natural Gas	0.03%	0.01%	0.01	0.11	2.38	0.00	0.00	0.02
T7 Utility Class 8	Diesel	0.00%	0.00%	0.00	0.08	0.01	0.00	0.00	0.00
T7 Utility Class 8	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
T7IS	Gasoline	0.00%	0.00%	0.00	0.01	0.15	0.00	0.00	0.00
T7IS	Electricity	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
UBUS	Gasoline	0.01%	0.00%	0.00	0.00	0.08	0.00	0.00	0.00
UBUS	Diesel	0.01%	0.00%	0.01	0.08	0.02	0.00	0.00	0.01
UBUS	Electricity	0.07%	0.01%	0.00	0.00	0.00	0.00	0.00	0.03
UBUS	Natural Gas	0.01%	0.00%	0.01	0.01	4.33	0.00	0.00	0.00
		100%	100%	60	271	4,391	21	6	72















1

You will need to obtain an Excel file with data from PG&E to complete the inventory. Data from this file will need to be added below for the tool to conduct the necessary analysis.

Contact your PG&E representative. Request the report named "Community-wide GHG Inventory". PG&E will process the request and should make it available within a short period of time as an Excel file.

Find the tab in the Excel file labeled "Data".

Paste the complete table from this tab into the space below, directly under the green arrow. The cell directly below the green arrow should read "TOTCOUNTY". If not, please contact StopWaste for assistance.

Please make sure that any data pasted here includes data for the calendar year 2019. The data table may include data for additional years. 2019 data should be available by mid-2020.

[Click here to return to the Table of Contents](#)

[Click here to return to the Data Entry tab.](#)



TOTCOUNTY	TOTCITY	YEAR	CATEGORY	RES ELEC AVG (KWH)	RES ELEC USE (KWH)	RES ELEC CO2 (metric tonnes)	COM ELEC AVG (KWH)	COM ELEC USE (KWH)	COM ELEC CO2 (metric tonnes)
CONTRA COSTA	UNINC CONTRA COSTA CO	2019	(3) COUNTY				2	130	0
CONTRA COSTA	UNINC CONTRA COSTA CO	2019	(4) CITY				7000	4784649	514
CONTRA COSTA	UNINC CONTRA COSTA CO	2019	(5) DISTRICT		771	18486	41790	23921009	2572
CONTRA COSTA	UNINC CONTRA COSTA CO	2019	NONGOVENT		601	46139839	4960		

1

To calculate emissions associated with direct access electricity (electricity purchased by a large facility or institution directly from a third party, rather than a utility company or agency), the tool must know what proportion of California's total electricity comes from which power sources.

[Click here to return](#)

At the time this tool was developed, data was not available for the calendar years 2019-2022, so this information must be entered. Data for previous years (2005, 2010, 2015, 2017, and 2018) is already entered into this tool.

[Click here to return](#)

To access this information, visit the link below or search for "California Total System Power" online.  
[https://ww2.energy.ca.gov/almanac/electricity\\_data/total\\_system\\_power.html](https://ww2.energy.ca.gov/almanac/electricity_data/total_system_power.html)

2

You will see a table showing California's total power use for the most recent available year. Tables for previous years will be available below the table.

3

Enter the proportions of electricity supplied by each source under the "California Power Mix" column in the table below for each year.

**Total System Electric Generation**

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	California Energy (GWh)	California Power Mix
Coal	284	0.15%	389	5,740	6,413	3.30%
Large Hydro	22,096	11.34%	7,418	985	30,499	10.68%
Natural Gas	90,691	46.54%	49	8,904	99,644	34.91%
Nuclear	15,269	7.73%	0	7,573	22,841	7.95%
Oil	35	0.02%	0	0	35	0.01%
Other (Petroleum, Coal/Waste Heat)	430	0.22%	0	9	439	0.15%
Renewables	63,028	32.39%	14,074	12,400	89,502	31.36%
Biomass	3,100	1.59%	772	29	3,901	1.35%
Geothermal	11,528	5.92%	771	1,289	13,588	4.74%
Small Hydro	4,249	2.19%	334	7	4,990	1.73%
Solar	27,255	13.90%	174	8,094	35,523	12.40%
Wind	14,078	7.23%	12,833	6,010	32,711	11.42%
Unspecified Sources of Power	N/A	N/A	17,576	12,819	30,395	10.54%
<b>Total</b>	<b>194,842</b>	<b>100.00%</b>	<b>39,817</b>	<b>51,130</b>	<b>285,439</b>	<b>100.00%</b>

**Almanac Information**

- Electricity
- Natural Gas/LNG
- Petroleum
- Power Plants
- Renewable Energy
- Transportation Energy

Percent of electricity by source, to be entered in the table below.

Links to tables for previous years.

Additional Years - Total System Electric Generation

Current | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000

Note: 2002 - 2006 called "Gross System Power"

	2019	2020	2021	2022
Biomass and waste	2%			
Geothermal	5%			
Small hydroelectric	2%			
Solar	12%			
Wind	10%			
Coal	3%			
Large hydroelectric	15%			
Natural gas	34%			
Nuclear	9%			
Oil	0%			
Other	0%			
Unspecified	7%			

Source: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation>

STOP

This tab contains the calculations necessary for the GHG inventory. Unless you need to correct an error, please avoid making changes to this tab.

STOP

If you have accidentally arrived at this tab, please click

Inventory calculations

	2005	2010	2015	2017	2018	2019
<b>Electricity</b>						
PG&E residential electricity (kWh)	487,016,439	480,477,177	455,630,425	461,970,677	#N/A	46,158,325
PG&E nonresidential electricity (kWh)	580,428,554	694,466,971	249,107,423	266,216,660	#N/A	29,062,252
PG&E electricity coefficient (MTCO <sub>2</sub> e/kWh)	0.000223	0.000203	0.000185	0.000096	0.000094	0.000108
PG&E residential electricity emissions (MTCO <sub>2</sub> e)	108,685	97,507	84,112	44,513	#N/A	5,004
PG&E nonresidential electricity emissions (MTCO <sub>2</sub> e)	129,531	140,933	45,987	25,651	#N/A	3,151
<b>Direct access electricity (kWh)</b>						
Direct access electricity (kWh)	0	0	0	0	#N/A	396,805,935
Direct access electricity coefficient (MTCO <sub>2</sub> e/kWh)	0.000385796	0.000284649	0.000297122	0.000202719	0.000204895	0.000186809
Direct access electricity emissions (MTCO <sub>2</sub> e)	0	0	0	0	#N/A	74,127
<b>Other provider Tier 1 residential electricity (kWh)</b>						
Other provider Tier 1 residential electricity (kWh)	0	0	0	307,820	0	244,521,394
Other provider Tier 1 nonresidential electricity (kWh)	0	0	0	28,730	0	199,978,255
Other provider Tier 1 electricity coefficient (MTCO <sub>2</sub> e/kWh)	0	0	0	0.000064	0.000000	0.000045
Other provider Tier 2 residential electricity (kWh)	0	0	0	0	0	2,839,316
Other provider Tier 2 nonresidential electricity (kWh)	0	0	0	0	0	203,469
Other provider Tier 2 electricity coefficient (MTCO <sub>2</sub> e/kWh)	0	0	0	0	0	0
Other provider Tier 3 residential electricity (kWh)	0	0	0	0	0	42,259
Other provider Tier 3 nonresidential electricity (kWh)	0	0	0	0	0	0
Other provider Tier 3 electricity coefficient (MTCO <sub>2</sub> e/kWh)	0	0	0	0	0	0
Other provider residential electricity emissions (MTCO <sub>2</sub> e)	0	0	0	20	0	11,055
Other provider nonresidential electricity emissions (MTCO <sub>2</sub> e)	0	0	0	2	0	9,041
<b>Natural gas</b>						
Residential natural gas (therms)	30,919,164	32,189,863	26,418,159	28,634,423	#N/A	30,100,637
Nonresidential natural gas (therms)	621,939,363	831,133,921	4,534,645	4,340,914	#N/A	4,340,914
Natural gas coefficient (MTCO <sub>2</sub> e/therms)	0.00531051	0.00531051	0.00531051	0.00531051	0.00531051	0.00531051
Residential natural gas emissions (MTCO <sub>2</sub> e)	164,197	170,945	140,294	152,063	#N/A	159,850
Nonresidential natural gas emissions (MTCO <sub>2</sub> e)	3,302,815	4,413,745	24,081	23,052	#N/A	23,052
<b>Propane</b>						
Propane use (gallons)	1,525,329	0	1,106,902	0	1,043,275	0
Propane coefficient (MTCO <sub>2</sub> e/gallon)	0.00584	0.00584	0.00584	0.00584	0.00584	0.00584
Propane emissions (MTCO <sub>2</sub> e)	8,915	0	6,469	0	6,097	0
<b>Kerosene</b>						
Kerosene use (gallons)	13,158	0	10,955	0	8,033	0
Kerosene coefficient (MTCO <sub>2</sub> e/gallon)	0.010569	0.010569	0.010569	0.010569	0.010569	0.010569
Kerosene emissions (MTCO <sub>2</sub> e)	139	0	116	0	85	0
<b>Wood</b>						
Wood use (MMBtu)	117,004	0	165,834	0	100,962	0
Wood coefficient (MTCO <sub>2</sub> e/MMBtu)	0.095624	0.095624	0.095624	0.095624	0.095624	0.095624
Wood emissions (MTCO <sub>2</sub> e)	11,188	0	15,858	0	9,654	0
<b>Transportation</b>						
	2005		2010		2015	
	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial
Annual VMT	0	0	0	0	0	0
Emissions factor (MTCO <sub>2</sub> e/VMT)	0.000404	0.001339	0.000397	0.001321	0.000367	0.001302
Emissions from VMT	0	0	0	0	0	0
	2017		2018		2019	
	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial
Annual VMT	0	0	0	0	0	0
Emissions factor (MTCO <sub>2</sub> e/VMT)	0.000355	0.001265	0.000343	0.001242	0.000337	0.001258
Emissions from VMT	0	0	0	0	0	0
	2020		2021		2022	
	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial
Annual VMT	0	0	0	0	0	0
Emissions factor (MTCO <sub>2</sub> e/VMT)	0.000337	0.001258	0.000330	0.001226	0.000323	0.001212
Emissions from VMT	0	0	0	0	0	0
<b>Solid waste</b>						
Solid waste generation (tons)	0	0	0	79,525	0	79,338
ADC waste generation (tons)	0	0	0	11,474	0	7,582
Waste emissions factor (MTCO <sub>2</sub> e/tons)	0.293240941	0.296180583	0.28604673	0.28604673	0.261683772	0.261683772
ADC emissions factor (MTCO <sub>2</sub> e/tons)	0.245693584	0.245693584	0.245693584	0.245693584	0.245693584	0.245693584
Solid waste emissions (MTCO <sub>2</sub> e)	0	0	0	22,748	0	20,761
ADC waste emissions (MTCO <sub>2</sub> e)	0	0	0	2,819	0	1,863
<b>Waste in place</b>						
Total (MTCO <sub>2</sub> e)	196,831	0	0	196,004	0	196,606
<b>Landfill Flaring</b>						
Biogas Flared (metric tons)	5,272	0	0	5,250	0	5,266
SCF Gas Combusted	275,673,001	0	0	274,515,334	0	275,358,821
Anthropogenic MTCO <sub>2</sub> e (MTCO <sub>2</sub> e)	1,536	0	0	1,529	0	1,534
Biogenic MTCO <sub>2</sub> e (MTCO <sub>2</sub> e)	12,074	0	0	12,024	0	12,061
Total (MTCO <sub>2</sub> e)	13,610	0	0	13,553	0	13,595

BART		2005	2010	2013	2015	2017	2018
Station name		Passenger miles					
#DIV/0!	Antioch	0	0	0	0	0	0
18.08%	Concord	536,497	555,915	664,299	722,286	699,937	690,987
10.84%	Downtown Berkeley	319,814	356,832	424,719	435,808	407,282	394,635
9.72%	El Cerrito del Norte	1,039,841	1,005,522	1,232,292	1,294,711	1,264,812	1,228,412
31.82%	El Cerrito Plaza	1,199,270	1,326,379	1,572,212	1,643,436	1,672,059	1,616,513
19.55%	Lafayette	143,676	159,748	183,297	191,167	183,425	168,531
26.32%	North Berkeley	208,755	230,322	288,376	309,741	290,549	273,764
35.07%	North Concord/Martinez	702,838	856,152	1,229,172	1,294,661	1,295,719	1,286,153
13.02%	Orinda	341,089	347,785	381,941	401,507	403,854	391,620
-15.20%	Pittsburg/Bay Point	4,821,349	4,952,447	5,885,060	6,522,460	6,795,125	7,039,096
#DIV/0!	Pittsburg Center	0	0	0	0	0	0
25.22%	Richmond	467,015	459,301	553,121	635,260	593,467	575,530
23.98%	Walnut Creek	1,451,723	1,596,415	1,813,931	1,900,060	1,922,613	1,850,821
	None	0	0	0	0	0	0
	None	0	0	0	0	0	0
	<b>Total</b>	<b>11,231,867</b>	<b>11,846,819</b>	<b>14,228,420</b>	<b>15,351,098</b>	<b>15,528,843</b>	<b>15,516,063</b>
	BART emissions (MTCO <sub>2</sub> e)	1,042	1,099	1,320	1,424	1,440	206
	<b>Offroad</b>	<b>2005</b>	<b>2010</b>	<b>2013</b>	<b>2015</b>	<b>2017</b>	<b>2018</b>
	Source	MTCO <sub>2</sub> e					
	Agricultural Equipment	1,201	19,016	1,185	18,521	1,178	18,228
	Airport Ground Support Equipment	0	0	0	0	0	0
	Cargo Handling Equipment	900		385		327	
	Commercial Harbor Craft	0		0		0	
	Construction and Mining Equipment	6,783	47,762	7,171	47,506	8,881	17,978
	Dredging	0	0	0	0	0	0
	Entertainment Equipment	0	70	0	71	0	70
	Industrial Equipment	8,319	13,720	8,842	14,749	9,470	15,291
	Lawn and Garden Equipment	3,579	3,089	3,284	3,245	3,763	3,294
	Light Commercial Equipment	2,234	3,129	2,777	2,990	3,056	3,100
	Locomotive	3,166		3,256		3,543	
	Logging Equipment	0	0	0	0	0	0
	Military Tactical Support Equip	0	0	0	0	0	0
	Ocean Going Vessels	0		0		0	
	Oil Drilling	19	160	19	160	19	160
	Pleasure Craft	1,889	7,410	1,814	8,563	1,800	9,246
	Portable Equipment	4,826		6,244		6,703	
	Recreational Equipment	647	907	670	1,089	612	1,198
	Transport Refrigeration Units	590	5,887	652	9,225	3,495	8,053
	<b>Total</b>	<b>34,152</b>	<b>101,149</b>	<b>36,299</b>	<b>106,119</b>	<b>42,847</b>	<b>76,618</b>
	<b>Water</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
	Million Gallons Delivered	0	0	0	7,377	0	8,012
	Electricity use	0	0	0	19,137,622	0	20,783,935
	Indirect water use (MTCO <sub>2</sub> e)	0	0	0	1,840	0	2,250
	<b>Wastewater</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
	Indirect wastewater treatment (MTCO <sub>2</sub> e)	0	0	0	410	0	470
	Direct wastewater treatment (MTCO <sub>2</sub> e)	0	0	0	2,155	0	2,155
	<b>Agriculture</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
	Crop Fertilizer Emissions (MTCO <sub>2</sub> e)	0	0	0	4,446	0	4,337
	Livestock Emissions (MTCO <sub>2</sub> e)	0	0	0	40,431	0	31,786
	<b>Fire</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
	Total area burned (acres)	839.15	404.25	0.00	0.00	0.00	742.31
	Total emissions (MTCO <sub>2</sub> e)	14,271.06	7,518.85	0.00	0.00	0.00	10,099.48
	<b>Land Use</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
	Annual increase in biomass carbon stock (MTCO <sub>2</sub> e)	-70,862	-70,862	-70,862	-70,862	-70,862	-70,862
	Total loss of carbon stocks	0	0	0	0	0	0



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2019 eGRID calculator

Customized

Source	Percent	Adjusted percent	Emission factor
Coal	0.00%	0.00%	0.000525
Large hydro	29.10%	29.10%	0.000000
Natural gas	0.00%	0.00%	0.000389
Nuclear	0.99%	0.99%	0.000000
Oil	0.00%	0.00%	0.000846
Other/unspecified	9.63%	9.63%	0.000428
Biomass	1.59%	1.59%	0.000079
Geothermal	3.28%	3.28%	0.000083
Small hydro	6.06%	6.06%	0.000000
Solar	20.21%	20.21%	0.000000
Wind	29.14%	29.14%	0.000000
	100.00%	100.00%	

Direct access

Source	Percent	Adjusted percent	Emission factor
Coal	2.96%	2.96%	0.000525
Large hydro	14.62%	14.62%	0.000000
Natural gas	34.23%	34.24%	0.000389
Nuclear	8.98%	8.98%	0.000000
Oil	0.01%	0.01%	0.000846
Other/unspecified	7.49%	7.49%	0.000428
Biomass	2.44%	2.44%	0.000079
Geothermal	4.77%	4.77%	0.000083
Small hydro	2.03%	2.03%	0.000000
Solar	12.28%	12.28%	0.000000
Wind	10.17%	10.17%	0.000000
	99.98%	100.00%	0.000000

2018 eGRID factors are used, as more current factors were not available at the time the tool was prepared.

Emission factor (MTCO <sub>2</sub> e/kWh)	4.5212E-05
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Emission factor (MTCO <sub>2</sub> e/kWh)	0.000186809
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Standard emission factors

PG&E electricity	2005	2010	2015	2017	2018	2019	2020	2021
PG&E electricity	0.000223	0.000203	0.000185	0.000096	0.000094	0.000108	0.000001	0.000001
PG&E lbs CO <sub>2</sub> /kWh	0.489	0.445	0.405	0.210	0.206	0.237	0.000	0.000
Regional lbs CH <sub>4</sub> /MWh	0.030	0.028	0.033	0.033	0.034	0.034	0.034	0.034
Regional lbs N <sub>2</sub> O/MWh	0.008	0.006	0.004	0.004	0.004	0.004	0.004	0.004

Natural gas	2005	2010	2015	2017	2018	2019	2020	2021
PG&E natural gas lbs CO <sub>2</sub> /therm	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
US natural gas kg CH <sub>4</sub> /MMBtu	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
US natural gas lbs CH <sub>4</sub> /therm	0.000226742	0.000226742	0.000226742	0.000226742	0.000226742	0.000226742	0.000226742	0.000226742
US natural gas kg N <sub>2</sub> O/MMBtu	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
US natural gas lbs N <sub>2</sub> O/therm	0.000004535	0.000004535	0.000004535	0.000004535	0.000004535	0.000004535	0.000004535	0.000004535
PG&E natural gas MTCO <sub>2</sub> e/therm	0.00531051	0.00531051	0.00531051	0.00531051	0.00531051	0.00531051	0.00531051	0.00531051

Note: Natural gas factors are constant for all years. Values are shown for transparency and easier disclosure for ClearPath



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Miles	2005	2010	2015	2017	2018
Alameda Co local roads	3,447.42	3,454.12	4,012.70	3,670.82	3,603.38
Contra Costa co local roads	3,019.34	3,233.50	3,825.71	3,619.72	3,460.49
Alameda Co state highways	212.08	210.83	204.49	208.57	208.57
Contra Costa co state highways	111.17	110.92	111.31	110.36	110.36

Data from Caltrans HPMS tables

<https://dot.ca.gov/programs/research-innovation-system-information/highway-performance-monitoring-system>

MTC data (passenger)	2005	2010	2015	2017	2018	2019	2020	2021	2022
Daily VMT (not including motorcycles)									
Daily VMT (all vehicles)									
Annual VMT (all vehicles)	0	0	0	0	0	0	0	0	0

MTC data (commercial)	2005	2010	2015	2017	2018	2019	2020	2021	2022
Daily VMT (not including motor homes and buses)	0	0	0	0	0	0	0	0	0
Daily VMT (all vehicles)	0	0	0	0	0	0	0	0	0
Annual VMT (all vehicles)	0	0	0	0	0	0	0	0	0

Caltrans (HPMS) data	2005	2010	2015	2017	2018	2019	2020	2021	2022
Local daily VMT (thousands)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Local annual VMT	0	0	0	0	0	0	0	0	0

Local road miles	656.38	662.56	961.63	650.84	654.22	654.22	654.22	654.22	654.22
Share of local road miles	21.74%	20.49%	25.14%	17.98%	18.91%	18.91%	18.91%	18.91%	18.91%
Estimated state highway daily VMT (thousands)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Estimated state highway annual VMT	0	0	0	0	0	0	0	0	0

Total annual VMT	0	0	0	0	0	0	0	0	0
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Other source	2005	2010	2015	2017	2018	2019	2020	2021	2022
Daily VMT	0	0	0	3,911,012	0	3,276,401	0	0	0
Annual VMT	0	0	0	1,357,121,164	0	1,136,911,093	0	0	0

MTC data interpolation

These calculations are only performed if the inventory requires interpolating VMT data for a year that MTC does not provide direct model results for

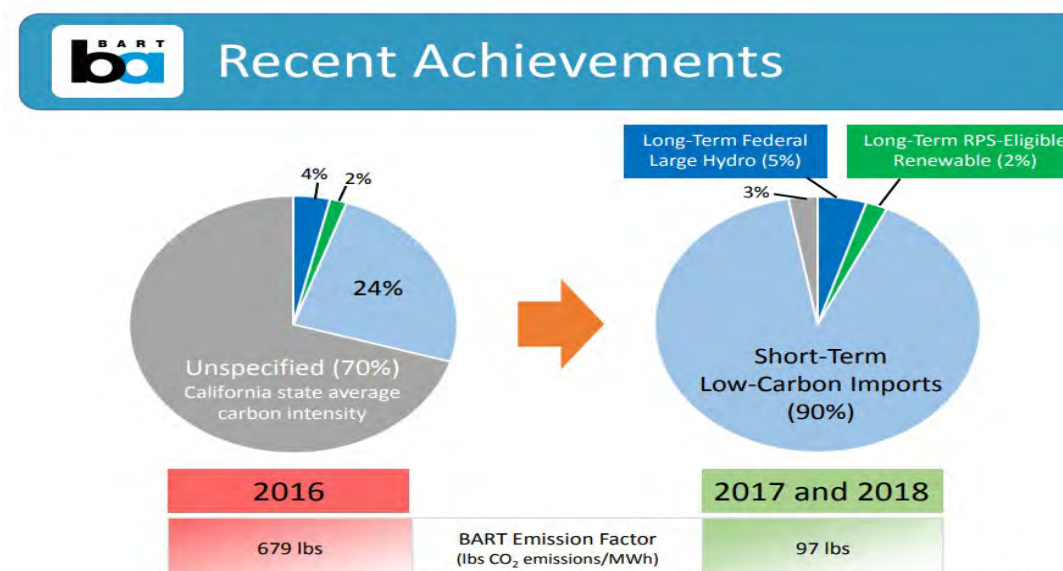
	2017		2018		2019	
	2015	2020	2017	2018	2015	2020
Live in area	5,127,938	5,391,191	5,233,239	0	5,127,938	5,391,191
Live in area	5,363,809	5,302,842	5,339,422	0	5,363,809	5,302,841.5
Live in area	3,696,825	3,893,856	3,775,637	0	3,696,824.5	3,893,856
Live out of area	2,187,745	2,275,270	2,222,755	0	2,187,744.5	2,275,270
Live out of area	473,339	461,359	468,547	0	473,338.5	461,358.5
Live out of area	443,508	470,721	454,393	0	443,508	470,720.5

Contra Costa County MTC <sub>2e</sub> /VMT factors	2005	2010	2015	2017	2018	2019	2020	2021	2022
Light-duty vehicles	0.000404	0.000397	0.000367	0.000355	0.091562	0.000343	0.000337	0.000330	0.000323
Heavy-duty vehicles	0.001339	0.001321	0.001302	0.001265	0.321156	0.001242	0.001258	0.001226	0.001212
All vehicles	0.000480	0.000466	0.000430	0.000421	0.108226	0.000408	0.000408	0.000395	0.000387

BART	2005	2010	2013	2015	2017	2018	2019	2020	2021
BART coefficient	0.000093	0.000093	0.000093	0.000093	0.000093	0.000093	0.00001325	0.00001325	0.00001325

BART total emissions (2013 MTC <sub>2e</sub> )	152,979
BART total passenger miles (2013)	1,649,251,188

BART emissions factor in 2016	679
Assumed BART emissions factor in 2018	97
Decrease in emissions factor for 2018	-85.71%
Emissions factor in 2018 and future years	0.00001325



<https://www.bart.gov/sites/default/files/docs/BART%20Wholesale%20Electricity%20Portfolio%20Plan%2020170309.pdf>

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Landfill Flare Calculations - Method 1

Yearly MMBtu	2005	2010	2015	2017	2018	2019	2020
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C02 Emissions from Flaring Landfill Gas (tons)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CH4 Emissions from Flaring Landfill Gas (tons)	0	0	0	0	0	0	0
N2O Emissions from Flaring Landfill Gas (tons)	0	0	0	0	0	0	0
Total MTCO2e from Flaring	0	0	0	0	0	0	0

Landfill Flare Calculations - Method 2

Flaring totals	2005	2010	2013	2015	2017	2018	2019
Metric tons of methane biogas flared	5,272	0	5,258	0	5,250	0	5,266
Biogenic CO <sub>2</sub>	2005	2010	2013	2015	2017	2018	2019
SCF Gas Combusted	275,673,001	0	274,921,902	0	274,515,334	0	275,358,821
CO <sub>2</sub> Emissions from Flaring Landfill Gas	12,074	0	12,042	0	12,024	0	12,061
Total	12,074	0	12,042	0	12,024	0	12,061
Anthropogenic CO <sub>2</sub>	2005	2010	2013	2015	2017	2018	2019
CH <sub>4</sub> Uncombusted (MTCO <sub>2</sub> e)	1,476	0	1,472	0	1,470	0	1,475
CH <sub>4</sub> from Combustion - MMBtu of Flared Methane	231,841	0	231,209	0	230,867	0	231,577
CH <sub>4</sub> from Combustion (MTCO <sub>2</sub> e)	20,772,953,05	0	20,716,355,03	0	20,685,718,65	0	20,749,278,46
N <sub>2</sub> O Emissions from Flaring Landfill Gas - MMBtu of Flared Methane	231,840,993,8	0	231,209,319,5	0	230,867,395,6	0	231,576,768,5
N <sub>2</sub> O Emissions from Flaring Landfill Gas (Metric Tons MCO <sub>2</sub> e)	38,705,853,92	0	38,600,395,89	0	38,543,311,7	0	38,661,741,51
MTCO <sub>2</sub> e from Flaring	2005	2010	2013	2015	2017	2018	2019
Anthropogenic MTCO <sub>2</sub> e	1,536	0	1,532	0	1,529	0	1,534
Biogenic MTCO <sub>2</sub> e	12,074	0	12,042	0	12,024	0	12,061
Total	13,610	0	13,573	0	13,553	0	13,595

Waste in Place (WIP) Calculations

MTCO <sub>2</sub> e from Waste in Place	2005	2010	2015	2017	2018	2019	2020
Outputs from CARB landfill tool (AR2 MTCO <sub>2</sub> e of CH <sub>4</sub> )	590,492	0	0	588,012	0	589,819	0
ARS MTCO <sub>2</sub> e of CH <sub>4</sub>	787,322	0	0	784,016	0	786,425	0
MTCO <sub>2</sub> e of CH <sub>4</sub> with landfill capture	196,831	0	0	196,004	0	196,606	0

Landfill Flaring data

Landfill Flaring Constants	
kg CO <sub>2</sub> / MMBtu	52.07
kg CH <sub>4</sub> / MMBtu	0.0032
kg N <sub>2</sub> O / MMBtu	0.00063

Source: Table G.2 of the LGOP; Table G.3 of the LGOP (methane)

Conversions	
kg per metric ton	1,000

Landfill Flaring Constants - Method 2	
Collection Efficiency	0.75
kg CO <sub>2</sub> /scf for biogas (captured)	0.0438
Methane destruction efficiency	0.99
MMBtu / scf of biogas	0.000841
kg CH <sub>4</sub> / MMBtu	0.0032
kg N <sub>2</sub> O / MMBtu	0.00063

Source: LGOP Equation 9.3, pag 103, LGOP Table G.2, LGOP Table G.3

Conversions - Method 2	
Unit conversions of million std cubic	19.125

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Water calculations

Water Sources	2005 supply (MG)	2010 supply (MG)	2015 supply (MG)	2017 supply (MG)	2018 supply (MG)	2019 supply (MG)
Aggregate	0.00	0.00	0.00	7,377.13	0.00	8,011.75
	0	0.00	0.00	0.00	0.00	0.00
	0	0.00	0.00	0.00	0.00	0.00
	0	0.00	0.00	0.00	0.00	0.00
	0	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>7,377.13</b>	<b>0.00</b>	<b>8,011.75</b>

Water Sources	2005 energy (kWh/MG)	2010 energy (kWh/MG)	2015 energy (kWh/MG)	2017 energy (kWh/MG)	2018 energy (kWh/MG)	2019 energy (kWh/MG)
Aggregate	0.00	0.00	0.00	2,594.18	0.00	2,594.18
	0	0.00	0.00	0.00	0.00	0.00
	0	0.00	0.00	0.00	0.00	0.00
	0	0.00	0.00	0.00	0.00	0.00
	0	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2,594.18</b>	<b>0.00</b>	<b>2,594.18</b>

Water Sources	2005 energy (kWh)	2010 energy (kWh)	2015 energy (kWh)	2017 energy (kWh)	2018 energy (kWh)	2019 energy (kWh)
Aggregate	0	0	0	19,137,622	0	20,783,935
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>19,137,622</b>	<b>0</b>	<b>20,783,935</b>

Wastewater calculations

Wastewater providers	2005 supply (MG)	2010 supply (MG)	2015 supply (MG)	2017 supply (MG)	2018 supply (MG)	2019 supply (MG)
Activated Sludge	0	0	0	2,722	0	2,740
Advanced	0	0	0	391	0	393
Advanced with Nitrification	0	0	0	35	0	35
	0	0	0	0	0	0
	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,148</b>	<b>0</b>	<b>3,169</b>

Estimated percent of total water use that is used indoors 40%

Wastewater providers	2005 energy (kWh/MG)	2010 energy (kWh/MG)	2015 energy (kWh/MG)	2017 energy (kWh/MG)	2018 energy (kWh/MG)	2019 energy (kWh/MG)
Activated Sludge	0	0	0	1,322	0	1,322
Advanced	0	0	0	1,541	0	1,541
Advanced with Nitrification	0	0	0	1,911	0	1,911
	0	0	0	0	0	0
	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,268,050</b>	<b>0</b>	<b>4,295,796</b>

Wastewater providers	2005 energy (kWh)	2010 energy (kWh)	2015 energy (kWh)	2017 energy (kWh)	2018 energy (kWh)	2019 energy (kWh)
Activated Sludge	0	0	0	3,599,027	0	3,622,424
Advanced	0	0	0	602,331	0	606,247
Advanced with Nitrification	0	0	0	66,692	0	67,126
	0	0	0	0	0	0
	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,268,050</b>	<b>0</b>	<b>4,295,796</b>

	2005	2010	2015	2017	2018	2019
Population served by wastewater provider 1	0	0	0	150,559	0	150,593
Population served by wastewater provider 2	0	0	0	21,617	0	21,621
Population served by wastewater provider 3	0	0	0	1,930	0	1,930
Population served by wastewater provider 4	0	0	0	0	0	0
Population served by wastewater provider 5	0	0	0	0	0	0

Digester calculations	2005	2010	2015	2017	2018	2019
Population served	0	0	0	174,106	0	174,145
Standard cubic feet of digester gas per day	1	1	1	1	1	1
Fraction of CH <sub>4</sub> in digester gas	0.65	0.65	0.65	0.65	0.65	0.65
BTU content of CH <sub>4</sub>	1028	1028	1028	1028	1028	1028
kg CH <sub>4</sub> per MMBTU	0.0032	0.0032	0.0032	0.0032	0.0032	0.0032
kg N <sub>2</sub> O per MMBTU	0.00063	0.00063	0.00063	0.00063	0.00063	0.00063

kg CH <sub>4</sub>	0	0	0	135.975421	0	136.0058797
MTCH <sub>4</sub>	0	0	0	0.135975421	0	0.13600588

kg N <sub>2</sub> O	0	0	0	26.77016101	0	26.77615757
MTN <sub>2</sub> O	0	0	0	0.026770161	0	0.026776158

Lagoon calculations	2005	2010	2015	2017	2018	2019
Population served	0	0	0	0	0	0
Discharge fraction	1	1	1	1	1	1
kg BOD <sub>5</sub> per person per day	0.09	0.09	0.09	0.09	0.09	0.09
Fraction of BOD <sub>5</sub> removed	0.325	0.325	0.325	0.325	0.325	0.325
Maximum CH <sub>4</sub> production capacity	0.6	0.6	0.6	0.6	0.6	0.6
MCF correction factor	0.8	0.8	0.8	0.8	0.8	0.8

kg CH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00
MTCH <sub>4</sub>	0.00	0.00	0.00	0.00	0.00	0.00

Systems with nitrification	2005	2010	2015	2017	2018	2019
Population served by systems with nitrification	0	0	0	1,930	0	1,930
Nitrogen loading factor	1	1	1	1	1	1
Emissions factor (g/N <sub>2</sub> O/year)	7	7	7	7	7	7

g N <sub>2</sub> O	0	0	0	13510.35385	0	13513.38019
MTN <sub>2</sub> O	0	0	0	0.013510354	0	0.01351338

Systems without nitrification	2005	2010	2015	2017	2018	2019
Population served by systems without nitrification	0	0	0	172,176	0	172,215
Nitrogen loading factor	1	1	1	1	1	1
Emissions factor (g/N <sub>2</sub> O/year)	3.2	3.2	3.2	3.2	3.2	3.2

g N <sub>2</sub> O	0	0	0	550,963	0	551,086
MTN <sub>2</sub> O	0	0	0	0.550963038	0	0.551086455



Septic tanks	2005	2010	2015	2017	2018	2019
Number of septic tanks	0	0	0	900	0	900
Average population per household	2.74829423	2.769484026	2.871958011	2.890205843	2.889637616	2.887258559
Persons served by septic tanks	0	0	0	2,601	0	2,599
kg BOD <sub>5</sub> per person per day	0.09	0.09	0.09	0.09	0.09	0.09
Maximum CH <sub>4</sub> production capacity	0.6	0.6	0.6	0.6	0.6	0.6
CH <sub>4</sub> correction for septic systems	0.22	0.22	0.22	0.22	0.22	0.22
kg CH <sub>4</sub>	0.00	0.00	0.00	11,286.99	0.00	11,275.48
MTCH <sub>4</sub>	0.00	0.00	0.00	11.29	0.00	11.28

Effluent discharge	2005	2010	2015	2017	2018	2019
Population	154,270	158,985	170,175	174,106	173,673	174,145
Discharge factor	1	1	1	1	1	1
N-load (kg N/person/day)	0.026	0.026	0.026	0.026	0.026	0.026
N uptake (kg N/kg BOD <sub>5</sub> (for anaerobic or lagoon systems))	0.005	0.005	0.005	0.005	0.005	0.005
kg BOD <sub>5</sub> /person/day	0.09	0.09	0.09	0.09	0.09	0.09
Emission factor	#DIV/0!	#DIV/0!	#DIV/0!	0.0025	#DIV/0!	0.0025
Molecular weight of N <sub>2</sub> O to N <sub>2</sub>	1.571428571	1.571428571	1.571428571	1.571428571	1.571428571	1.571428571
Fraction of nitrogen removed	#DIV/0!	#DIV/0!	#DIV/0!	0.007759844	#DIV/0!	0.007759844
kg N <sub>2</sub> O	#DIV/0!	#DIV/0!	#DIV/0!	6.334	#DIV/0!	6.335
MTCO <sub>2</sub> e	#DIV/0!	#DIV/0!	#DIV/0!	1.678	#DIV/0!	1.679

kg BOD <sub>5</sub> /person/day	
River or stream discharge	0.005
Direct ocean discharge	0.0025 << Assumed to include Bay discharge

Weighted average	2005	2010	2015	2017	2018	2019
	#DIV/0!	#DIV/0!	#DIV/0!	0.0025	#DIV/0!	0.0025

Fraction of nitrogen removed	
With nitrification/denitrification	0.7
Without nitrification/denitrification	0

Weighted average	2005	2010	2015	2017	2018	2019
	#DIV/0!	#DIV/0!	#DIV/0!	0.007759844	#DIV/0!	0.007759844

Water and wastewater embodied energy data

Table 12. Urban water intensity matrix (kWh/MG)

Supply	Conveyance	Treatment	Distribution	Wastewater Collection	Wastewater Treatment	Wastewater Disposal
Surface Water (0)	SWP-L.A. Basin (8,325)	EPRI Avg. (100)	EPRI Avg. (1,200)	Average of 140 is aggregated within treatment	Trickling Filter (955)	Gravity Discharge (0)
Groundwater (4.45/MG/Foot)	SWP-Bay Area (3,150)		Flat Topography (proposed)		Activated Sludge (1,322)	Pump Discharge (400)
Ocean Desalination (13,800)	SWP-Central Coast (3,150)		Moderate Topography (proposed)		Advanced (1,541)	
Brackish Water Desal (1,240-5,220)	SWP-San Joaquin Valley (1,510)		Hilly Topography (proposed)		Advanced w/Nitrification (1,911)	
Recycled Water (0)	CRA-L.A. Basin (6,140)		Recycled Water (1,200-3,000)			
	Hetch-Hetchy Bay Area (0)					
	Mokelumne Aqueduct (160)					
	Local/Intrabasin (120)					

Water Supply	
Surface water (kWh/MG)	0
Groundwater (kWh/MG/ft)	4.45
Ocean desalination (kWh/MG)	13,800
Brackish water desalination (kWh/MG)	3,230
Recycled water (kWh/MG)	0

Water Conveyance	
SWP - Southern CA (kWh/MG)	8,325
SWP - Bay Area (kWh/MG)	3,150
SWP - Central Coast (kWh/MG)	3,150
SWP - San Joaquin Valley (kWh/MG)	1,510
Colorado River (kWh/MG)	6,140
Hetch-Hetchy (kWh/MG)	0
Mokelumne Aqueduct (kWh/MG)	160
Local/intrabasin (kWh/MG)	120

Water Treatment	
Average (kWh/MG)	100

Water Distribution	
Average (kWh/MG)	1,200
Recycled water (kWh/MG)	2,100

Wastewater Treatment	
Trickling filter (kWh/MG)	955
Activated sludge (kWh/MG)	1,322
Advanced (kWh/MG)	1,541
Advanced w/ nitrif. (kWh/MG)	1,911

Wastewater Disposal	
Gravity discharge (kWh/MG)	0
Pump discharge (kWh/MG)	400

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Livestock calculations

Local Population	2005	2010	2015	2017	2018	2019	2020
Calves	0	0	0	0	0	0	0
Growing Cattle	0	0	0	0	0	0	0
Dairy Cattle	0	0	0	0	0	0	0
Feedlot Cattle	0	0	0	0	0	0	0
Other Cattle	0	0	0	0	0	0	0
Cattle (type unknown)	0	0	0	22,062	0	17,345	0
Horses	0	0	0	0	0	0	0
Sheep	0	0	0	0	0	0	0
Goat	0	0	0	0	0	0	0
Hogs	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Total	0	0	0	22,062	0	17,345	0

Effective Annual Population	2005	2010	2015	2017	2018	2019	2020
Calves	0	0	0	0	0	0	0
Growing Cattle	0	0	0	0	0	0	0
Dairy Cattle	0	0	0	0	0	0	0
Feedlot Cattle	0	0	0	0	0	0	0
Other Cattle	0	0	0	0	0	0	0
Cattle (type unknown)	0	0	0	22,062	0	17,345	0
Horses	0	0	0	0	0	0	0
Sheep	0	0	0	0	0	0	0
Goat	0	0	0	0	0	0	0
Hogs	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Total	0	0	0	22,062	0	17,345	0

Enteric Fermentation (kg CH4/year)	2005	2010	2015	2017	2018	2019	2020
Calves	0	0	0	0	0	0	0
Growing Cattle	0	0	0	0	0	0	0
Dairy Cattle	0	0	0	0	0	0	0
Feedlot Cattle	0	0	0	0	0	0	0
Other Cattle	0	0	0	0	0	0	0
Cattle (type unknown)	0	0	0	1,398,731	0	1,099,644	0
Horses	0	0	0	0	0	0	0
Sheep	0	0	0	0	0	0	0
Goat	0	0	0	0	0	0	0
Hogs	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Total	0	0	0	1,398,731	0	1,099,644	0

Manure Management (kg CH4/year)	2005	2010	2015	2017	2018	2019	2020
Calves	0	0	0	0	0	0	0
Growing Cattle	0	0	0	0	0	0	0
Dairy Cattle	0	0	0	0	0	0	0
Feedlot Cattle	0	0	0	0	0	0	0
Other Cattle	0	0	0	0	0	0	0
Cattle (type unknown)	0	0	0	45,227	0	35,556	0
Horses	0	0	0	0	0	0	0
Sheep	0	0	0	0	0	0	0
Goat	0	0	0	0	0	0	0
Hogs	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Total	0	0	0	45,227	0	35,556	0

Manure Management (kg N2O/year)	2005	2010	2015	2017	2018	2019	2020
Calves	0	0	0	0	0	0	0
Growing Cattle	0	0	0	0	0	0	0
Dairy Cattle	0	0	0	0	0	0	0
Feedlot Cattle	0	0	0	0	0	0	0
Other Cattle	0	0	0	0	0	0	0
Cattle (type unknown)	0	0	0	0	0	0	0
Horses	0	0	0	0	0	0	0
Sheep	0	0	0	0	0	0	0
Goat	0	0	0	0	0	0	0
Hogs	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0

Total Emissions (MTCO2e/year)	2005	2010	2015	2017	2018	2019	2020
Calves	0	0	0	0	0	0	0
Growing Cattle	0	0	0	0	0	0	0
Dairy Cattle	0	0	0	0	0	0	0
Feedlot Cattle	0	0	0	0	0	0	0
Other Cattle	0	0	0	0	0	0	0
Cattle (type unknown)	0	0	0	40,431	0	31,786	0
Horses	0	0	0	0	0	0	0
Sheep	0	0	0	0	0	0	0
Goat	0	0	0	0	0	0	0
Hogs	0	0	0	0	0	0	0
Poultry	0	0	0	0	0	0	0
Total	0	0	0	40,431	0	31,786	0

Crop and Livestock Constants

**Fertilizer Assumptions**

Crop	Average lbs N Applied per acre/yr	Source
Grapes	25	San Luis Obispo County, UC Cost Studies
Wine grapes	15	Mono County and Santa Rosa, UC Cost Studies
Avocodos (Hass)	120	San Luis Obispo County, as confirmed by UCCE
English Walnuts	0	San Luis Obispo County, as confirmed by UCCE
Apricot	42.05	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/11/db/11db02ad-4605-46b9-8b7e-3895a07ce4ee/apricotprod">http://coststudyfiles.ucdavis.edu/uploads/cs_public/11/db/11db02ad-4605-46b9-8b7e-3895a07ce4ee/apricotprod</a>
Nectarine	131.4	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/39/b6/39b6cb12-0c79-4b66-bb92-b1012bdbbf02">http://coststudyfiles.ucdavis.edu/uploads/cs_public/39/b6/39b6cb12-0c79-4b66-bb92-b1012bdbbf02</a>
Walnuts	88	Tulare CAP, UC Cost Studies, assuming average for annual lifespan
Olives	43.05	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/86/39/863998b0-db3a-4a2d-8181-507f0fbac30/olivetb1sv20">http://coststudyfiles.ucdavis.edu/uploads/cs_public/86/39/863998b0-db3a-4a2d-8181-507f0fbac30/olivetb1sv20</a>
Cherries	45	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/61/9b/619b0993-163b-4060-ba94-8a3fc689e97d/cherryv201">http://coststudyfiles.ucdavis.edu/uploads/cs_public/61/9b/619b0993-163b-4060-ba94-8a3fc689e97d/cherryv201</a>
Peaches	70.5555556	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/67/04/6704c84a-02fa-45a4-8026-508bd019a357/peacheslatesv2011.pdf">http://coststudyfiles.ucdavis.edu/uploads/cs_public/67/04/6704c84a-02fa-45a4-8026-508bd019a357/peacheslatesv2011.pdf</a>
Almonds	134	Tulare CAP, UC Cost Studies, assuming average for annual lifespan
Plums	115.25	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/11/c1/11c19037-f6ec-4719-bffa-a731663081c2/plums2000.pdf">http://coststudyfiles.ucdavis.edu/uploads/cs_public/11/c1/11c19037-f6ec-4719-bffa-a731663081c2/plums2000.pdf</a>
Berries	64	San Mateo County, UC Cost Studies
Misc or unknown - Fruits and Nuts	35.5	San Luis Obispo County
Misc or unknown - Fruits	95	San Mateo County, UC Cost Studies
Broccoli	220	San Luis Obispo County, UC Cost Studies
Lettuce	172	San Luis Obispo County, UC Cost Studies
Squash	316.8	UC Davis Cost Studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/9c/2f/9c2f18e4-a530-4da6-b786-8a0c6a7ca00c/squashsv2009">http://coststudyfiles.ucdavis.edu/uploads/cs_public/9c/2f/9c2f18e4-a530-4da6-b786-8a0c6a7ca00c/squashsv2009</a>
Beans	100	80-120, UC Davis Study <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/eb/30/eb30eff3-7e34-48d1-a633-e1d87ef13d03/beansv2011">http://coststudyfiles.ucdavis.edu/uploads/cs_public/eb/30/eb30eff3-7e34-48d1-a633-e1d87ef13d03/beansv2011</a>
Com	425	UC Davis Cost Studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/27/d3/27d35016-08b4-435c-9d0c-1c66c63d5ea8/cornsilagev">http://coststudyfiles.ucdavis.edu/uploads/cs_public/27/d3/27d35016-08b4-435c-9d0c-1c66c63d5ea8/cornsilagev</a>
Tomatoes	200	UC Davis Cost Studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/3e/62/3e625c07-cf86-4591-a51d-6609fdd1f89f/process-toma">http://coststudyfiles.ucdavis.edu/uploads/cs_public/3e/62/3e625c07-cf86-4591-a51d-6609fdd1f89f/process-toma</a>
Cauliflower	240	San Luis Obispo County, UC Cost Studies
Garlic	270	Mono County, <a href="http://usda01.library.cornell.edu/usa/nass/AnniChemLkVeg/1990s/">http://usda01.library.cornell.edu/usa/nass/AnniChemLkVeg/1990s/</a>
Potatoes	225	Mono County, UC Davis Cost Studies
Vegetables	104	Santa Rosa, UC Cost Studies
Misc or unknown - Vegetables	207.8	San Luis Obispo County, UC Cost Studies
Barley	50	San Luis Obispo County, local crop practices.
Grain hay	41	San Luis Obispo County, local crop practices.
All other Field Crops	45.9	San Luis Obispo County, UC Cost Studies
Wheat	210	UC Davis cost studies <a href="http://coststudyfiles.ucdavis.edu/uploads/cs_public/a3/e8/a3e8ade8-082c-4b49-9095-a21569cc85a7/wheatsv2013.pdf">http://coststudyfiles.ucdavis.edu/uploads/cs_public/a3/e8/a3e8ade8-082c-4b49-9095-a21569cc85a7/wheatsv2013.pdf</a>
Field Crops - Average	150	Santa Rosa, UC Cost Studies, only available average for San Joaquin, Vallejo, and Intermountain regions
Rangeland Pasture	0	
Field Corn	45.9	
Alfalfa Hay	0	
Cereal Hay	45.9	
Irrigated Pasture	0	

**Constants**

GWP of N2O	265
GWP of CH4	28
Grams per pound	453.5970244
Grams per MT	1,000,000
g/g Nitrogen vs kg per MT	0.01
	1000

<< Units of N<sub>2</sub>O released per units of N<sub>2</sub>O applied

**Enteric Fermentation Methane Emission Factor (kg CH<sub>4</sub>/head/yr)**

Category	Emission Factor	Notes
Calves	0.000	Calves are those under 1 months in age and primarily consume milk, which does not result in enteric fermentation. See IPCC Guidance for more details. Assumes average factor for all "Replacement" cattle from 7 > 23 months old, including dairy, beef, and stockers (similar emissions factors). Dairy cattle emissions factor (excludes growing dairy cattle <23 months)
Growing Cattle	51.49	
Dairy Cattle	128.74	
Feedlot Cattle	38.63	Average for heifer feedlot and stocker feedlot.
Other Cattle	63.40	Average for beef cows and bulls
Cattle (type unknown)	63.40	
Horses	18.00	
Sheep	8.00	
Goat	5.00	
Hogs	1.50	
Poultry	0	

**Manure Management**

Category	kg CH <sub>4</sub> /year/head	kg N <sub>2</sub> O/year/head
Calves	0	0
Growing Cattle	2.36700	0.54625
Dairy Cattle	171.46	0.243
Feedlot Cattle	4	1.45
Other Cattle	2	0
Cattle (type unknown)	2	0
Horses	5	0
Sheep	0.78100	0.00661
Goat	0	0
Hogs	18.9180000	0.0185020
Poultry	0.4599200	0.0019854

Source: [http://www.arb.ca.gov/cc/inventory/archive/doc90/doc\\_index.php](http://www.arb.ca.gov/cc/inventory/archive/doc90/doc_index.php)

STOP This tab contains the calculations necessary for the GHG inventory. Unless you need to correct an error, please avoid making changes to this STOP

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Demographics Reported by MTC

Table with 14 columns: Community, 2018 (Population, Households, Jobs, Persons per Household), 2019 (Population, Households, Jobs, Persons per Household), and Change (2018-2019) (Population, Households, Jobs, Persons per Household). Rows include Alameda, Alameda County (Unincorporated), Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Contra Costa County (Unincorporated), Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Oakland, Oakley, Orinda, Piedmont, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, Alameda County (All), Contra Costa County (All), and Total.

Table with 4 columns: Jobs (Census 2018), Jobs (MTC 2015), Jobs (MTC 2020), and Job growth rate (MTC). Rows correspond to the communities listed in the previous table.

Table with 3 columns: Agricultural acres, Industrial acres, and Active oil wells. Rows correspond to the communities listed in the previous tables.

Population and household data comes from the California Department of Finance's E-5 dataset (https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/), which is one of the sources of data used in the MTC VMT modeling. Job numbers are determined by starting with 2015 job numbers as reported by the US Census (https://anfrmap.census.gov/), and applying the growth rate for jobs as assumed by MTC. At time of tool preparation, the US Census does not have 2019 job numbers for individual communities, as the MTC job numbers are sometimes inconsistent with local understanding, so an alternative approach was selected.

Land use data from MTC https://opendata.mtc.co.gov/datasets/planned-land-use-2006 Active well data from the California Department of Conservation http://www.conservation.ca.gov/dag/maps/Pages/GISMapping2.aspx Data dated September 17, 2018

Demographics to use (MTC or user-entered)

Table with 4 columns: Community, 2019 (Population, Households, Jobs, Persons per Household). Rows include Alameda, Alameda County (Unincorporated), Albany, Antioch, Berkeley, Brentwood, Clayton, Concord, Contra Costa County (Unincorporated), Danville, Dublin, El Cerrito, Emeryville, Fremont, Hayward, Hercules, Lafayette, Livermore, Martinez, Moraga, Newark, Newark, Oakland, Oakley, Orinda, Piedmont, Pinole, Pittsburg, Pleasant Hill, Pleasanton, Richmond, San Leandro, San Pablo, San Ramon, Union City, Walnut Creek, Alameda County (All), Contra Costa County (All), and Total.



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Unless you need to correct an error, please avoid making changes to this



2020 Land Use Summary	TOTHH	TOTPOP	SFDU	MFDU	TOTEMP	RETEMP	SEREMP	OTHEMP	AGREMP	MFGEMP	TRDEMP	HSENROLL	COLL_FTE	COLL_PTE	GMSENROLL
Area															
Unincorporated Area (internal)	56,989	157,132	46,339	10,650	40,785	3,230	10,324	21,102	113	4,000	2,008	2,008	760	12	17
Other (external)	2,781,133	7,562,288	3,782,175	1,674,065	1,107,068	3,948,967	599,045	1,631,011	1,131,766	25,533	393,546	168,036	302,718	191,080	245,113
		2.76	pop per HH												
<b>2030 Land Use Summary</b>															
Area															
Unincorporated Area (internal)	70,037	199,600	50,126	19,911	45,693	3,605	11,097	21,742	113	7,070	2,059	2,059	801	6	9
Other (external)	3,073,401	8,499,891	4,177,331	1,758,729	1,313,957	4,298,236	667,330	1,867,634	1,208,966	25,800	368,918	156,949	326,490	213,378	272,130
<b>2040 Land Use Summary</b>															
Area															
Unincorporated Area (internal)	83,084	242,068	53,912	29,171	50,601	3,980	11,869	22,382	113	10,139	2,110	2,110	842		
Other (external)	3,365,669	9,437,493	4,572,487	1,843,392	1,520,845	4,647,504	735,614	2,104,257	1,286,165	26,066	344,290	145,861	350,262	235,675	299,147

	Households	Population	Employment
		2030	2040
Households	70,037	83,084	
Population	199,600	242,068	
Employment	45,693	50,601	
			Growth rate
			2050
			0.017229593
			98,561
			0.019477592
			293,572
			0.010254847
			56,036

**2019**

Existing Land Use (Unincorporated Co)	Acreage
Agricultural	117,306
Single Family Residential	15,201
Multiple Family Residential	960
Commercial	479
Industrial	6,395
Institutional	20,374
Parks Watersheds other Open Spac	129,082
Recreational	2,673
Vacant	1,588

	2019	2030	2040	2050
Industrial	6,395	5,946	5,496.66	5,496.66
Open space	129,082	130,083	131,083.60	131,083.60
Agriculture	117,306	112,903	108,501.10	108,501.10

**2040**

Land Use	Acreage
AC (Agricultural Core):	11,901.95
AL (Agricultural):	96,599.14
CO (Commercial Office):	298,437,889
CR (Commercial Recreation):	1,838.35
HI (Heavy Industrial):	4,261.04
LI (Light Industrial):	1,235.62
MU* (Mixed Use):	9,620,154
MUH (Mixed Use - High):	107,348,046
MUL (Mixed Use - Low):	218,390,952
MUM (Mixed Use - Medium):	416,345,767
PR (Parks & Recreation):	73,131.27
12. PS (Public / Semi Public):	16,863.71
13. RC (Resource Conservation):	57,952.33
RH (Residential - High Density):	119,226,588
RL (Residential - Low Density):	6,293.17
RLM (Residential - Low Medium Density):	5,937.81
RM (Residential - Medium Density):	3,484.48
RMH (Residential - Medium High Density):	767,157,877
RVH (Residential - Very High Density):	54,624,933
RVL (Residential - Very Low Density):	2,527.81
WA (Water):	26,559.64

Developed	25,707	26,638	27,569.43	27,569.43
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Ports in Contra Costa County 5  
 Ports in unincorporated area 1  
<https://ww2.arb.ca.gov/our-work/programs/dravage-trucks-seaports-railyards/seaport-and-railyard-facilities>

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### Global Warming Potential

	AR2	AR4	AR5
CO <sub>2</sub>	1	1	1
CH <sub>4</sub>	21	25	28
N <sub>2</sub> O	310	298	265

### General constants

kWh per GWh	1,000,000
lbs per MT	2204.6
kWh per MWh, MWh per GWh	1,000
lbs per ton	2,000
grams per MT	1,000,000
pounds per MT	0.0004536
kg per MT	1,000
SCF to therms	0.0103700
VMT per thousands VMT	1,000
Days per year (standard)	365
Days per year (VMT)	347
Weekdays per week	5
Weeks per year	52
Attributed VMT for IX-XI	50%
Therms per BTU	0.0000100024
BTUs per MMBTU	1,000,000
pounds per kg	2.20462
gal per MG	1,000,000
gal per acre-foot	325,851
Days per year (water)	365.25
Acres per hectare	2.47
Years for carbon sequestration	20
gal per barrel	42
Units per thousand units	1,000
MMBTU per cord	20
Units per trillion units	1,000,000,000,000

### Waste characterization constants

LFG collection rate	75%
Oxidation rate of uncaptured gas	10%
Oxidation rate of captured methane to CO <sub>2</sub>	99%
Carbon to methane generation rate	1.33333
Decomposing carbon to methane rate	0.5

All values here from the Local Government Operations Protocol (LGOP)

Equation 9.1: Landfills with Comprehensive LFG Collection Systems

At time of writing, the LGOP is available at <https://www.arb.ca.gov/cc/protocols/localgov/localgov.htm>.

1 barrel = 42 gallons  
 1 thousand barrels = 1000 barrels  
 1 cord of wood = 20 MMBtu  
 thousand cords of wood = 1000 cords

<http://worldforestindustries.com/forest-biofuel/firewood/firewood-btu-ratings/>

Grams to pound	453.592
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## MEMORANDUM

DATE March 11, 2022

TO Jody London, Sustainability Coordinator, Contra Costa County Department of Conservation and Development  
Demian Hardman, Senior Planner, Contra Costa County Department of Conservation and Development

FROM Tammy L. Seale, PlaceWorks, Climate Action and Resilience Principal  
Eli Krispi, PlaceWorks, Climate Action and Resilience Senior Associate  
Jessica Robbins, PlaceWorks, Climate Action and Resilience Planner

SUBJECT Attachment 1: Community-Wide GHG Inventories – Summary of Results

Introduction .....	1
Methods .....	2
Community-Wide GHG Inventory.....	5
Next Steps .....	19

### Introduction

PlaceWorks is working with Contra Costa County (the County) to prepare an update to the County’s 2015 Climate Action Plan (CAP). The CAP is a plan to reduce greenhouse gas (GHG) emissions and improve community resilience to hazardous conditions associated with climate change. It is part of the overarching Envision Contra Costa 2040 project, the County’s ongoing General Plan update. Envision Contra Costa 2040 is the County’s document to guide future growth and development in the unincorporated area, as well as County operations and decisions through 2040. As part of this work, PlaceWorks has been preparing a set of new and revised GHG inventories, which are technical analyses to assess the total annual GHG emissions attributed to the unincorporated areas of Contra Costa County from various activities.

A GHG inventory is the first step in creating a strategy to reduce Contra Costa County’s annual emissions. Determining the annual level of GHG emissions will aid the County in establishing an attainable goal for continually reducing emissions. Furthermore, knowing which activities release GHG emissions allows the County to develop policies and programs that facilitate a decrease in emissions for each activity.

GHG emissions are generated by various activities that are largely commonplace in daily life. Some daily activities release GHG emissions in the location of the activity, such as gases released anytime an internal combustion engine is operated. Other activities cause GHG emissions to be released elsewhere, such as using non-renewable or non-carbon-free electricity to power a home, which generates GHG emissions in the location of the power plant that supplies the power, and not in the home itself. Therefore, Contra



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Costa County must consider the GHG emissions caused by activities attributed to the unincorporated community, including GHG emissions generated both inside and outside the County's jurisdictional boundaries.

The County has two types of GHG inventories: (1) community-wide inventories and (2) County operations inventories.

- A **community-wide GHG inventory** identifies GHG emissions that result from activities of unincorporated Contra Costa County residents, employees, visitors, and other community members. Examples include residents driving cars, homes using water, and businesses using electricity.
- A **County operations GHG inventory** summarizes emissions that are a direct result of Contra Costa County's government operations. Examples include electricity and water used in County buildings or the fuel used for County vehicles.

As part of the preparation of the 2015 CAP, Contra Costa County and its regional partners and technical consultants prepared community-wide and County operations GHG inventories for the calendar years 2005 and 2013. The 2015 CAP identified the year 2005 as the baseline year for emission reductions, as this was considered a year with good data availability at the time, consistent with State guidance, and without any unusual factors that might affect GHG emissions.

As part of the CAP update process, the project teams prepared inventories of community-wide emissions for the years 2017 and 2019 and of County operations for the 2019 calendar year. County staff made some updates to the 2005 and 2013 community-wide inventories in the 2015 CAP to ensure a consistent method and approach across all inventory years. County staff also prepared a 2017 County operations GHG emissions inventory, which staff have summarized in a separate memo available at [https://envisioncontracosta2040.org/wp-content/uploads/2020/08/2006\\_2017-County-GHG-Emissions-Summary.pdf](https://envisioncontracosta2040.org/wp-content/uploads/2020/08/2006_2017-County-GHG-Emissions-Summary.pdf). This memo presents the results of the updated and new Contra Costa County community-wide GHG inventories and is the most up-to-date summary of Contra Costa County's community-wide GHG emissions.

This memo contains a discussion of the methods used to prepare and update the GHG inventories (Section 2), selected results from the community-wide GHG inventory (Section 3), and next steps (Section 4). The new and revised draft inventory results show that between 2005 and 2019, unincorporated Contra Costa County saw an approximately 22-percent decline in total GHG emissions. The residential energy and transportation sources of GHG emissions are primarily responsible for this decrease.

## Methods

### PROTOCOLS

A series of guidance documents, called protocols, provide recommendations on how to adequately assess GHG emissions. The project team prepared the new GHG inventories and updates to past GHG inventories consistent with the guidance in widely adopted, standard protocol documents. These protocols provide guidance on what activities should be evaluated in the GHG inventories and how

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emissions from those activities should be assessed. Using standard methods also allows for an easy comparison of GHG emission levels across multiple years and communities.

- The County operations GHG inventory relies on the Local Government Operations Protocol (LGOP), which was first developed in 2008 and was updated in 2010. The LGOP is a tool for accounting and reporting GHG emissions of local government (municipal) operations and is used throughout California and the United States. The LGOP includes guidance from several existing programs as well as the state’s mandatory GHG reporting regulations.
- The community-wide GHG inventory uses the United States Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (U.S. Community Protocol), which was first developed in 2012 and updated most recently in 2019. The California Governor’s Office of Planning and Research encourages cities and counties in California to follow the U.S. Community Protocol for community-wide GHG emissions.
- A third protocol, the Global Protocol for Community-Scale Greenhouse Gas Inventories (Global Protocol) was first developed in 2014 and is intended for use in preparing international community-scale GHG inventories. It is largely consistent with the U.S. Community Protocol, although it contains additional guidance and resources to support a wider range of activities that may be found in other countries. The project team has used the Global Protocol to assess GHG emissions from sources that are not covered in the U.S. Community Protocol.

GHG inventories are estimates of GHG emissions based on these standard methods and verified datasets. While they are not direct measurements of GHG emissions, the use of the standard methods identified in the protocols, in combination with accurate data from appropriate sources, allows GHG inventories to provide reliable estimates of local emission levels. Due to potential data limitations, some inconsistencies in methods may remain. Any concerns about inconsistent methods are noted in the appropriate sector discussion.

## UNITS OF MEASUREMENT

GHG inventories assess emissions in a unit called carbon dioxide equivalent (CO<sub>2</sub>e), which is a combined unit of all GHGs analyzed in the inventory. As different GHGs have different effects on the processes that drive climate change, CO<sub>2</sub>e is a weighted unit that reflects the relative potency of the different GHGs. These inventories report amounts of GHGs in metric tons of CO<sub>2</sub>e (MTCO<sub>2</sub>e), equal to 1,000 kilograms or approximately 2,205 pounds.

## EMISSION FACTORS

An emissions factor describes how many MTCO<sub>2</sub>e are released per unit of an activity. For instance, an emissions factor for electricity describes the MTCO<sub>2</sub>e produced per kilowatt hours (kWh) of electricity used, or an emission factor for on-road transportation describes the MTCO<sub>2</sub>e produced per mile of driving. The project team calculated most of the GHG emissions using data on GHG-generating activities in combination with emission factors. Some sources of GHG emissions (known as sectors), including agriculture and off-road emissions, are calculated using formulae or models and do not have specific emission factors. **Table 1** shows the emissions factors for the inventory years for the unincorporated area.

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**Table 1: Inventory Emissions Factors, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE	SOURCE
PG&E electricity (MTCO <sub>2</sub> e/kWh)	0.000226	0.000195	0.000096	0.000108	-52%	PG&E
Direct access electricity (MTCO <sub>2</sub> e/kWh)	0.000388	0.000309	0.000208	0.000187	-52%	California Energy Commission
MCE electricity (MTCO <sub>2</sub> e/kWh)	N/A	N/A	0.000059	0.000045	-24% *	MCE
Natural gas (MTCO <sub>2</sub> e/therm)	0.005311	0.005311	0.005311	0.005311	0%	US Community Protocol
Propane (MTCO <sub>2</sub> e/gallon)	0.005844	0.005844	0.005844	0.005844	0%	US Community Protocol
Kerosene (MTCO <sub>2</sub> e/gallon)	0.010569	0.010569	0.010569	0.010569	0%	US Community Protocol
Wood (MTCO <sub>2</sub> e/MMBTU)	0.095624	0.095624	0.095624	0.095624	0%	US Community Protocol
On-road vehicles (MTCO <sub>2</sub> e/VMT)	0.000486	0.000483	0.000421	0.000408	-16%	California Air Resources Board
BART (MTCO <sub>2</sub> e/passenger mile)	0.000093	0.000093	0.000093	0.000013	-86%	BART
Municipal solid waste (MTCO <sub>2</sub> e/ton)	0.293179	0.293184	0.286047	0.261659	-11%	CalRecycle
Alternative daily cover (MTCO <sub>2</sub> e/ton)	0.191850	0.245890	0.245694	0.245693	28%	CalRecycle

\* MCE's percentage change is from 2017 to 2019.

## Community-Wide GHG Inventory

### SECTORS

The community-wide GHG inventory assessed GHG emissions from the following 11 categories of activities, known as sectors.

- **Transportation** includes GHG emissions created by driving on-road vehicles in the unincorporated county, including passenger and freight vehicles.
- **Residential energy** includes GHG emissions attributed to the use of electricity, natural gas, and other home heating fuels in residential buildings.
- **Solid waste** includes the GHG emissions released from trash collected in the unincorporated areas of Contra Costa County, as well as collective annual emissions from waste already in place at the Acme, Keller Canyon, and West Contra Costa Landfills.
- **Nonresidential energy** includes GHG emissions attributed to the use of electricity and natural gas in nonresidential buildings.
- **Agriculture** includes GHG emissions from various agricultural activities in the unincorporated county, including agricultural equipment, crop cultivation and harvesting, and livestock operations.
- **Off-road equipment** includes GHG emissions from equipment that does not provide on-road transportation (excluding agricultural equipment), such as tractors for construction or equipment used for landscape maintenance.
- **Water and wastewater** accounts for the electricity used to transport every gallon of water or wastewater to unincorporated county residents and businesses, as well as direct emissions resulting from the processing of waste material.
- **Bay Area Rapid Transit (BART)** includes GHG emissions associated with the operation of BART for unincorporated county residents.
- **Land Use and sequestration** includes GHG emissions absorbed and stored in trees and soils on locally controlled lands as part of healthy ecosystems and released into the atmosphere from development of previously undeveloped land.
- **Stationary sources** are emissions from fuel use at major industrial facilities, permitted by state and regional air quality authorities. These emissions are informational and are not counted as part of the community total.
- **Wildfire** includes emissions released as a result of wildfires. These emissions are informational and are not counted as part of the community total.

### INVENTORY RESULTS

**Table 2** and **Figure 1** show the overall amount of community-wide GHG emissions for the unincorporated area associated with each sector for the four inventory years. Total community-wide emissions declined 22 percent from 2005 to 2019. **Table 3** shows the proportion of GHG emissions from each sector for the unincorporated area for the four inventory years.

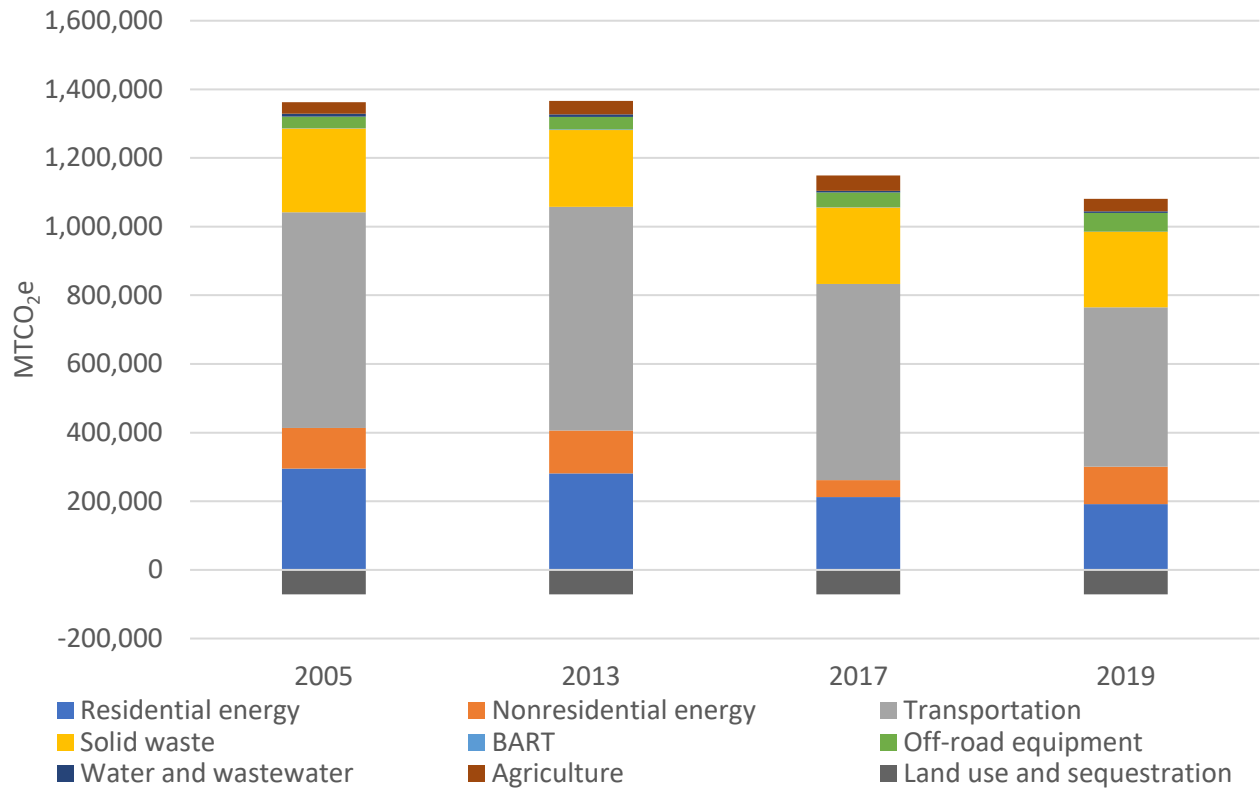
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**Table 2: Absolute Annual GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
Transportation	628,200	651,130	571,650	464,040	-26%
Residential energy	294,930	280,870	212,420	191,780	-35%
Nonresidential energy	118,740	125,350	48,700	109,370	-8%
Solid waste	243,940	224,570	223,100	220,760	-10%
Agriculture	33,350	39,300	44,880	36,130	8%
Off-road equipment	34,160	36,290	42,840	54,010	58%
Water and wastewater	8,080	7,400	4,400	4,870	-40%
BART	1,040	1,320	1,440	190	-82%
Land use and sequestration	-70,860	-70,860	-70,860	-70,860	0%
<b>Total Annual MTCO<sub>2e</sub></b>	<b>1,291,580</b>	<b>1,295,370</b>	<b>1,078,570</b>	<b>1,010,590</b>	<b>-22%</b>
<b>Informational Items</b>					
Stationary sources	13,983,030	11,956,000	11,232,290	10,867,670	-22%
Wildfire	14,270	66,080	0	10,100	N/A
All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.					

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**Figure 1: Absolute Annual GHG Emissions by Sector, 2005 to 2019**



**Table 3: Proportion of GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019
Transportation	49%	50%	53%	46%
Residential energy	23%	22%	20%	19%
Solid waste	19%	17%	21%	22%
Nonresidential energy	9%	10%	5%	11%
Agriculture	3%	3%	4%	4%
Off-road equipment	3%	3%	4%	5%
Water and wastewater	1%	1%	Less than 1%	Less than 1%
BART	Less than 1%	Less than 1%	Less than 1%	Less than 1%
Land use and sequestration	-5%	-5%	-7%	-7%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Totals may not equal the sum of individual rows.

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In all years, the transportation sector has remained the largest source of GHG emissions in unincorporated Contra Costa County, accounting for between 46 and 53 percent of total community-wide GHG emissions (excluding informational items). Residential energy and solid waste are the next-largest sources of GHG emissions, followed by nonresidential energy. Agriculture GHG emissions account for between 3 and 4 percent, while off-road equipment accounts for between 3 and 5 percent. GHG emissions from water and wastewater and BART are both 1 percent or less.

The sectors that experienced the largest decrease in annual GHG emissions between 2005 and 2019 were BART (82 percent decline), water and wastewater (40 percent decline), residential energy (35 percent), and transportation (26 percent). Emissions reductions also occurred in the solid waste sector (10 percent) and the nonresidential energy sector (8 percent). The reasons for these changes in emissions are discussed in more detail in the sector-specific sections below, but they are primarily due to an increase in renewable and carbon-free electricity and greater resource efficiency practices by community members. Two sectors, off-road equipment and agriculture, saw an increase in their emissions from 2005 to 2019.

**SECTOR DETAILS**

**Transportation**

Unincorporated Contra Costa County community members drove approximately 1.3 billion vehicle miles in 2005, decreasing 12 percent to approximately 1.1 billion vehicle miles in 2019. The VMT in 2005 resulted in GHG emissions of approximately 628,200 MTCO<sub>2</sub>e, which dropped to approximately 464,040 in 2019, a 26-percent decrease. GHG emissions decreased due to this reduction in VMT, increasingly fuel-efficient vehicles, and a wider adoption of electric vehicles. The average vehicle on the road in unincorporated Contra Costa County generated 16 percent fewer GHG emissions in 2019 than in 2005, as reported by Caltrans and as shown in **Table 1**. **Table 4** provides a breakdown of the activity data and emissions for on-road transportation for the unincorporated area by each individual year included in the updated community inventory.

**Table 4: Transportation Activity Data and GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Activity Data (VMT)</b>					
On-road transportation	1,291,819,230	1,349,279,980	1,357,121,160	1,136,911,090	-16%
<b>Emissions (MTCO<sub>2</sub>e)</b>					
On-road transportation	628,200	651,130	571,650	464,040	-19%
All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.					

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**Residential Energy**

Contra Costa County’s GHG emissions from residential energy totaled approximately 191,780 MTCO<sub>2</sub>e in 2019, compared to 294,930 MTCO<sub>2</sub>e in 2005, a decline of 35 percent. Residential electricity GHG emissions decreased due to a decrease in overall use and usage of cleaner sources of electricity. Residential electricity use fell 40 percent from 2005 to 2019, from 488,236,740 kWh to 293,561,300 kWh. Over this period, as seen in **Table 1**, electricity supplied by PG&E emitted 52 percent less GHGs in 2019 than in 2005. Electricity from MCE, which supplied electricity to community residents in 2017 and 2019, generated even fewer GHG emissions than PG&E-supplied electricity, which has also contributed to the decline in this sector. Natural gas use and GHG emissions saw a small decrease from 2005 to 2019 of 3 percent despite a growing population. Propane and wood use also declined, although GHG emissions from these fuels are only a small proportion of those from the residential energy sector. **Table 5** provides a breakdown of the activity data and GHG emissions for residential energy for the unincorporated area.

**Table 5: Residential Energy Activity Data and GHG Emissions by Subsector, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Activity Data</b>					
Residential PG&E electricity (kWh)	488,236,740	478,219,710	461,970,670	46,158,330	-91%
Residential MCE electricity (kWh)	-	-	307,820	247,402,970	80,273%*
Residential natural gas (therms)	30,919,160	31,007,110	28,634,420	30,100,640	-3%
Residential propane (gallons)	1,525,330	1,106,900	1,043,270	1,021,340	-33%
Residential kerosene (gallons)	13,160	10,960	8,030	16,320	24%
Residential wood (MMBTU)	117,000	165,830	100,960	101,710	-13%
<b>Emissions (MTCO<sub>2</sub>e)</b>					
Residential PG&E electricity	110,120	93,380	44,510	5,000	-95%
Residential MCE electricity	0	0	20	11,060	55,200%*
Residential natural gas	164,570	165,040	152,060	159,850	-3%
Residential propane	8,910	6,470	6,100	5,970	-33%
Residential kerosene	140	120	80	170	21%
Residential wood	11,190	15,860	9,650	9,730	-13%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>294,930</b>	<b>280,870</b>	<b>212,420</b>	<b>191,780</b>	<b>-10%</b>

\* MCE did not operate in the unincorporated County until 2017, and 2017 operations were very limited. MCE percentage changes are for changes from 2017 to 2019.

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.



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**Solid Waste**

Contra Costa County’s community-wide GHG emissions associated with solid waste includes four subsectors.

- Municipal solid waste (MSW) is the material that is discarded by community members and reflects the actual waste generated by the community.
- Alternative daily cover (ADC) is organic material applied at landfills by the landfill operator as a means of controlling debris and pests.
- Waste in place is the solid waste and associated GHG emissions deposited in the County’s landfills in previous years.
- The flaring subsector accounts for GHG emissions from the combustion of gases generated by the decomposing waste.

Between 2005 and 2019, emissions decreased by 10 percent due to decreases in solid waste generated and ADC applied, likely as a result of increased community awareness about recycling and composting and the availability of curbside recycling programs. Although annual waste generation decreased, waste in place at the landfills increased as waste is added to the landfills each year. **Table 6** presents solid waste emissions data for each year for the unincorporated area.

**Table 6: Solid Waste Activity Data and GHG Emissions by Subsector, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 – 2019
<b>Activity Data (Tons)</b>					
Solid waste	154,820	78,790	79,520	79,340	-49%
ADC	15,950	13,990	11,470	7,580	-52%
Waste in place	34,455,010	41,785,650	45,776,140	47,618,290	38%
Landfill flaring	5,270	5,260	5,250	5,270	Less than 1%
<b>Emissions (MTCO<sub>2</sub>e)</b>					
Solid waste	45,390	23,100	22,750	20,760	-54%
ADC	3,060	3,440	2,820	1,860	-39%
Waste in place	193,950	196,500	196,000	196,610	1%
Landfill flaring	1,540	1,530	13,550	13,590	-1%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>243,940</b>	<b>224,570</b>	<b>235,120</b>	<b>232,820</b>	<b>-10%</b>

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

**Nonresidential Energy**

Contra Costa County’s GHG emissions from nonresidential energy totaled approximately 109,370 MTCO<sub>2</sub>e in 2019, compared to 118,740 MTCO<sub>2</sub>e in 2005, a decline of 8 percent. Electricity emissions from retail electricity suppliers (PG&E and MCE) have fallen significantly, driven by a small decrease in electricity use

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and a large increase in the amount of electricity for renewable and carbon-free sources (see **Table 1**). Between 2005 and 2019, nonresidential electricity obtained from PG&E decreased by 90 percent and nonresidential electricity obtained from MCE increased from virtually nothing in 2017 to approximately 200 million kWh in 2019. Natural gas use and associated emissions have also reportedly declined, although this is less likely to be due to an actual decline and more likely the result of data being omitted by PG&E as a way of complying with state privacy regulations. Similarly, direct access electricity (electricity purchased from third parties instead of PG&E or MCE, usually by large customers such as major industrial facilities) was only reported for 2019, although this electricity use likely occurred in previous years but was not reported due to privacy regulations. **Table 7** provides a breakdown of the activity data and GHG emissions for nonresidential energy for the unincorporated area.

**Table 7: Nonresidential Energy Activity Data and GHG Emissions by Subsector, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 – 2019
<b>Activity Data</b>					
Nonresidential PG&E Electricity (kWh) <sup>1</sup>	284,558,070	266,216,660	266,216,660	29,062,250	-90%
Nonresidential MCE electricity (kWh) <sup>2</sup>	0	0	28,730	200,181,720	696,669%
Nonresidential Direct Access electricity (kWh) <sup>3</sup>	0	0	0	396,805,940	N/A
Nonresidential natural gas (therms) <sup>4</sup>	10,251,360	13,784,410	4,340,910	4,340,910	-58%
<b>Emissions (MTCO<sub>2</sub>e)</b>					
Nonresidential PG&E electricity <sup>1</sup>	64,180	51,980	25,650	3,150	-95%
Nonresidential MCE electricity <sup>2</sup>	0	0	Less than 10	9,040	451,900%
Nonresidential Direct Access electricity <sup>3</sup>	0	0	0	74,130	N/A
Nonresidential natural gas <sup>4</sup>	54,560	73,370	23,050	23,050	-58%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>118,740</b>	<b>125,350</b>	<b>48,710</b>	<b>109,370</b>	<b>-8%</b>

1: Due to omissions in data reported by PG&E for the calendar year 2017, the project team assumed that electricity use remained constant from 2013 levels.

2: MCE did not operate in the unincorporated County until 2017, and 2017 operations were very limited. MCE percentage changes are for changes from 2017 to 2019.

3: Direct access electricity was only reported for 2019. As PG&E also reports MCE-supplied electricity as Direct Access, the numbers given in this table are the electricity use after MCE data are removed.

4: Due to omissions in data reported by PG&E for the calendar year 2019, the project team assumed that natural gas use remained constant from 2017 levels.

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

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**Agriculture**

GHG emissions associated with the agriculture sector for the unincorporated area increased by approximately 8 percent between 2005 and 2019 (see **Table 8**). This increase is due primarily to a minor increase (5 percent) in the amount of cattle in the county. Although crop acreages declined from 2005 to 2019, more fertilizer was applied in 2019 than in 2005 due to a shift in the types of crops being grown that required slightly more fertilizer.

**Table 8: Agriculture Activity Data and GHG Emissions by Subsector, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Activity Data</b>					
Crops (acreage)	200,980	204,031	197,360	183,730	-9%
Nitrogen applied (pounds)	3,261,620	3,560,480	3,698,500	3,608,340	11%
Livestock (effective annual population)	16,500	19,110	22,060	17,340	5%
<b>Emissions (MTCO<sub>2</sub>e)</b>					
Crops	3,920	4,280	4,450	4,340	11%
Enteric fermentation	28,510	33,920	39,160	30,790	-8%
Manure management	920	1,100	1,270	1,000	9%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>33,350</b>	<b>39,300</b>	<b>44,880</b>	<b>36,130</b>	<b>8%</b>

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

**Off-Road Equipment**

According to data shown in **Table 9**, emissions from off-road equipment in unincorporated Contra Costa County increased approximately 73 percent between 2005 and 2019, although the sector overall remains a small proportion of the total community-wide emissions. This increase is primarily the result of a significant rise in diesel tractor and other agricultural equipment use over this period, along with increases in commercial and industrial/warehouse equipment use. Since this is modeling directly reported by State agencies, it is possible that changes in modeling methods may be affecting the results. Note that the State provides these GHG emission levels directly, so there is no activity data to display.

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**Table 9: Off-Road Equipment GHG Emissions by Subsector, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Total Annual MTCO<sub>2</sub>e</b>					
Agricultural equipment	1,200	1,190	1,180	10,170	748%
Cargo handling equipment	900	380	330	310	-66%
Commercial harbor equipment *	0	0	0	2,600	N/A
Construction and mining equipment	6,780	7,170	8,880	7,200	6%
Industrial equipment	8,320	8,840	9,470	9,780	18%
Lawn and garden equipment	3,580	3,280	3,760	3,880	8%
Light commercial equipment	2,230	2,780	3,060	3,270	47%
Locomotives	3,170	3,260	3,540	3,620	14%
Oil drilling equipment	20	20	20	20	0%
Pleasure craft	1,890	1,810	1,800	1,830	-3%
Portable equipment	4,830	6,240	6,700	6,970	44%
Recreational equipment	650	670	610	630	-3%
Transport Refrigeration Units	590	650	3,490	3,730	532%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>34,160</b>	<b>36,290</b>	<b>42,840</b>	<b>54,010</b>	<b>58%</b>

\* State modeling only provided emissions for commercial harbor equipment for 2019.

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

According to records maintained by the California Department of Conservation’s Geologic Energy Management Division, there are no active oil or gas extraction wells in the unincorporated area. There are 16 natural gas storage wells in the hills between Clyde and Bay Point, along with an observation well. As these sites are not being used for active extraction, there are no further emissions associated with fossil fuel production at well sites in this inventory.

### **Water and Wastewater**

Emissions associated with the water and wastewater sector are counted as indirect or direct emissions. Indirect water emissions refer to emissions created by the electricity required to treat and move water to where it is used. Indirect wastewater emissions refer to electricity needed to move wastewater to water treatment facilities, and to process and discharge it. Direct wastewater emissions refer to emissions produced directly by decomposing materials in wastewater.

GHG emissions from Contra Costa County’s water and wastewater consumption decreased 40 percent between 2005 and 2019. Indirect water GHG emissions declined by 62 percent between 2005 and 2019 while indirect wastewater GHG emissions decreased by 66 percent. Community members used substantially less water (31 percent less) and generated less wastewater (30 percent less) in 2019 than in

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2005 despite population growth. This is likely a result of increased water efficiency by community residents and businesses. Additionally, the electricity used in water and wastewater pumping and treatment has been increasingly supplied by renewable and carbon-free sources, decreasing GHG emissions. Direct wastewater emissions did rise by approximately 199 percent from 2005 to 2019, but given that the amount of wastewater generated declined by this period, this is likely due to changes in modeling approaches and available data. The emissions data for the unincorporated area in **Table 10** shows that overall emissions increased slightly within the water and wastewater sector.

**Table 10: Water and Wastewater Activity Data and GHG Emissions by Subsector, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Activity Data</b>					
Water use (million gallons)	11,530	11,650	7,380	8,010	-31%
Water electricity use (kWh)	26,443,770	28,004,290	19,137,620	20,783,930	-21%
Wastewater generation (million gallons)	4,560	4,610	3,150	3,170	-30%
Wastewater electricity use (kWh)	6,199,120	6,198,590	4,268,050	4,295,780	-31%
<b>Emissions (MTCO<sub>2</sub>e)</b>					
Indirect water	5,960	5,470	1,840	2,250	-62%
Indirect wastewater	1,400	1,210	410	470	-66%
Direct wastewater	720	720	2,150	2,150	199%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>8,080</b>	<b>7,400</b>	<b>4,400</b>	<b>4,870</b>	<b>-40%</b>

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

**BART**

Emissions associated with BART ridership decreased 82 percent between 2005 and 2019. This decline is attributable to changes in BART’s electricity portfolio, which in recent years have shifted to favor more renewable and carbon-free sources of energy. BART ridership from community members in unincorporated Contra Costa County increased 29 percent between 2005 and 2019, as shown in **Table 11**. Ridership at all stations serving the unincorporated area increased by 10 to 35 percent over this period except for Pittsburg/Bay Point, which saw some of its ridership shift to Pittsburg Center and Antioch with the opening of the BART to Antioch extension in 2018.

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**Table 11: BART Activity Data and GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 – 2019
<b>Activity Data</b>					
BART Ridership (passenger miles)	11,231,870	14,228,420	15,528,840	14,444,740	29%
<b>Emissions (MTCO<sub>2e</sub>)</b>					
<b>Total Annual MTCO<sub>2e</sub></b>	<b>1,040</b>	<b>1,320</b>	<b>1,440</b>	<b>190</b>	<b>-82%</b>

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

### Land Use and Sequestration

GHG emissions from land use and sequestration can be either positive (a source of emissions) or negative (removing emissions from the atmosphere, creating what is known as an emissions “sink”). Natural lands and street trees absorb carbon, storing it in wood, plants, and soil. As a result, when natural land is preserved or when more street trees are planted, emissions from this sector are negative because GHGs are being removed from the atmosphere. However, developing natural lands or converting them to a different form (for example, replacing forests with crop land) or removing street trees causes carbon to be released, creating GHG emissions.

This sector includes emission sources and sinks from three types of activities: sequestration of GHG emissions in locally controlled forested lands, sequestration of GHG emissions in street trees in urbanized unincorporated areas, and emissions caused by permanently removing vegetation from natural lands or farmlands as a part of development.

Emissions and sequestered amounts remained constant in both years for all three activities. Locally-controlled forests and street trees have not had their sequestration capabilities changed by human activities during the inventory period. While there was some development activity that caused a loss of sequestered GHG emissions, records of when the development specifically occurred are not available, and so the GHG emissions have been assigned equally to both inventory years, hence the lack of changes. Forests sequestered 58,110 MTCO<sub>2e</sub> annually, while street trees sequestered 12,750 MTCO<sub>2e</sub>, for a total carbon sink of 70,860 MTCO<sub>2e</sub> for the unincorporated area, as shown in **Table 12**.

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**Table 12: Land Use and Sequestration Activity Data and GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Activity Data</b>					
Acres of forested land	60,050	60,050	60,050	60,050	0%
Acres of urban trees	32,780	32,780	32,780	32,780	0%
Acres of land use changes	0	0	0	0	0%
<b>Emissions (MTCO<sub>2e</sub>)</b>					
Forest sequestration	-58,110	-58,110	-58,110	-58,110	0%
Street tree sequestration	-12,750	-12,750	-12,750	-12,750	0%
Land use changes	0	0	0	0	0%
<b>Total Annual MTCO<sub>2e</sub></b>	<b>-70,860</b>	<b>-70,860</b>	<b>-70,860</b>	<b>-70,860</b>	<b>0%</b>

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

**Wildfire**

Wildfires create GHG emissions by burning organic materials such as trees and plants, releasing the carbon sequestered in these materials. Larger fires and those that burn through forested areas, as opposed to less densely vegetated ecosystems, release more GHG emissions. The County reported wildfires in 2005, 2013, and 2019, but not in 2017. The acreages and emissions of these fires for the unincorporated area are reported in **Table 13**. Although wildfire emissions and acreages were lower in 2019 than in 2005, wildfire activity varies widely from year to year, and is generally expected to increase in future years due to climate change. Wildfire emissions are not calculated in the totals presented in this memorandum and are for informational purposes only.

**Table 13: Wildfire Activity Data and GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Activity Data</b>					
Acres burned	2,070	6,320	0	1,830	-31%
<b>Emissions (MTCO<sub>2e</sub>)</b>					
<b>Total Annual MTCO<sub>2e</sub></b>	<b>14,270</b>	<b>66,080</b>	<b>0</b>	<b>10,100</b>	<b>-29%</b>

2005 wildfires: Bragdon Fire, BNSF Fire, Byron Fire, Vasco Airport Fire, and an unnamed fire south of Antioch.  
2013 wildfires: Kirker Fire and Morgan Fire.  
2019 wildfires: Marsh 3 Fire, Marsh 5 Fire, Marsh 6 Fire.  
All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

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**Stationary Sources**

Stationary source emissions result from fuel use, such as natural gas or propane, at large industrial facilities. These facilities include refineries, power plants, factors, and similar installations. Natural gas use at these facilities may be included as part of the nonresidential natural gas use reported by PG&E. **Table 14** shows the emissions from stationary sources for the unincorporated area. This information is directly reported by the California Air Resources Board as total emissions. The Board does not report activity data for stationary sources, which would include amounts of fuel burned at these facilities. These emissions are not included in the totals presented in this memorandum and are for informational purposes only.

**Table 14: Stationary Source GHG Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Emissions (MTCO<sub>2</sub>e)</b>					
<b>Total Annual MTCO<sub>2</sub>e</b>	13,983,030	11,956,000	11,232,290	10,867,670	-22%

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

**PER-CAPITA EMISSIONS**

Along with the “absolute” GHG emission levels discussed previously, the project team also assessed the per-capita, or per-person, GHG emissions from the unincorporated area of Contra Costa County. The team calculates the per-capita GHG emissions by taking the absolute GHG emissions presented in **Table 2** and dividing these GHG emissions by the number of residents in the unincorporated county for that inventory year. **Table 15** and **Figure 2** show the per-capita emissions for the inventory years for the unincorporated area.

Overall, per-capita emissions declined 31 percent from 2005 to 2019. Because the population of unincorporated Contra Costa County grew during this time, most sectors saw their per-capita emissions decline. Even for sectors that saw increases in their absolute emissions, such as agriculture, the population growth resulted in a decline in per-capita emissions. The one sector that saw an increase in per-capita emissions was off-road equipment, although the per-capita emissions grew by 53 percent from 2005 to 2019 compared to a 73-percent increase when measured at the absolute level.



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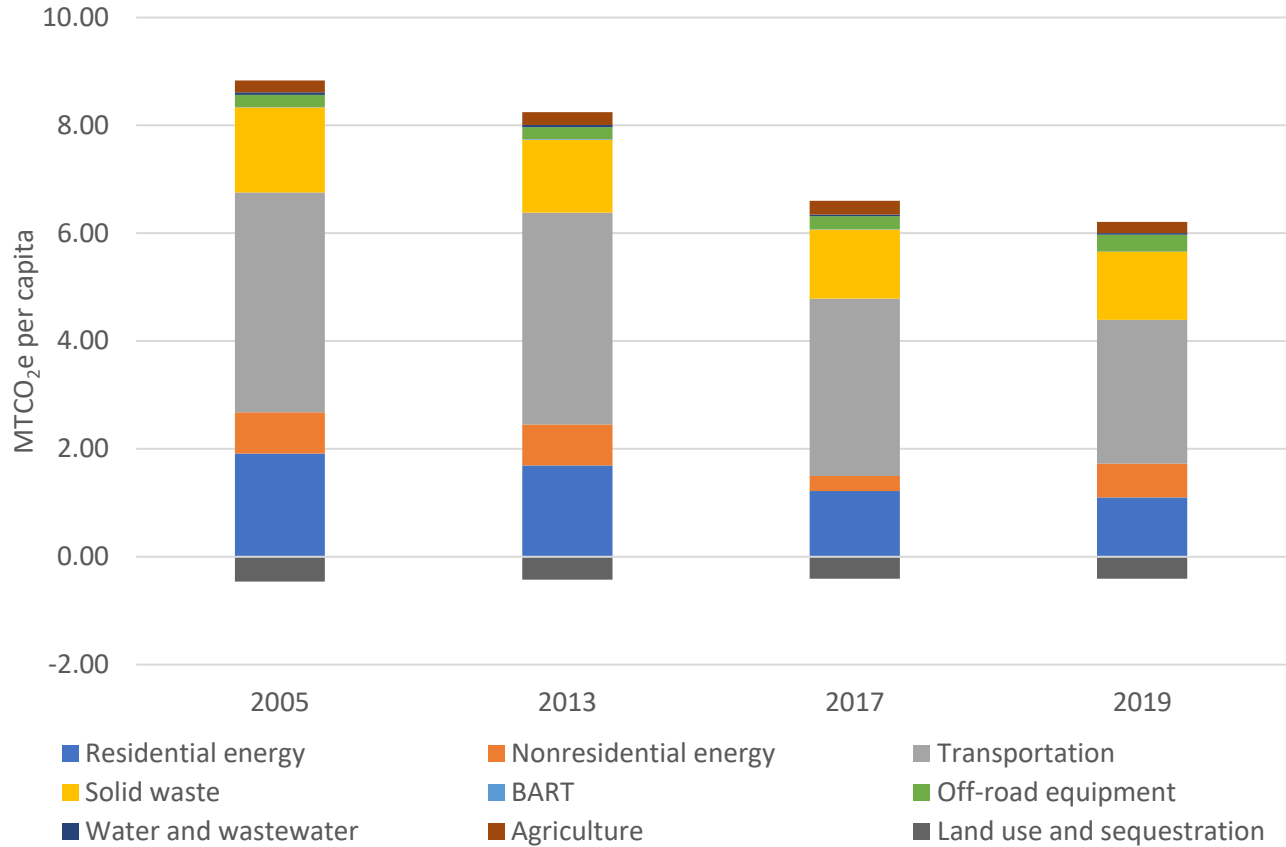
**Table 15: Per-Capita Emissions, 2005 to 2019**

SECTOR	2005	2013	2017	2019	PERCENTAGE CHANGE, 2005 - 2019
<b>Population</b>					
Residents	154,270	165,700	174,110	174,150	13%
<b>Emissions (MTCO<sub>2</sub>e per-capita)</b>					
Transportation	4.07	3.93	3.28	2.66	-35%
Residential energy	1.91	1.70	1.22	1.10	-42%
Solid waste	1.58	1.36	1.28	1.27	-20%
Nonresidential energy	0.77	0.76	0.28	0.63	-18%
Agriculture	0.22	0.24	0.26	0.21	-4%
Off-road equipment	0.22	0.22	0.25	0.31	53%
Water and wastewater	0.05	0.04	0.03	0.03	-47%
BART	0.01	0.01	0.01	Less than 0.01	-84%
Land use and sequestration	-0.46	-0.43	-0.41	-0.41	-11%
<b>Total Annual Per-Capita MTCO<sub>2</sub>e</b>	<b>8.37</b>	<b>7.82</b>	<b>6.19</b>	<b>5.80</b>	<b>-31%</b>
<b>Informational Items</b>					
Stationary sources	90.64	72.15	64.51	62.40	-31%
Wildfire	0.09	0.40	0.00	0.06	-37%

All numbers are rounded to the nearest 10. Totals may not equal the sum of individual rows.

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**Figure 2: Per-Capita Annual GHG Emissions by Sector, 2005 to 2019**



### Next Steps

PlaceWorks will prepare 2030, 2040, and 2050 forecasts of community-wide and County operations GHG emissions and will assess the GHG reduction benefits from existing and planned state, regional, and local activities GHG emissions. The results of the GHG inventory, forecast, and benefits of existing and planned activities will help inform new policies to reduce both community-wide and County operations GHG emissions.



# MEMORANDUM

DATE March 11, 2022

TO Jody London, Sustainability Coordinator, Contra Costa County Department of Conservation and Development  
Demian Hardman, Senior Planner, Contra Costa County Department of Conservation and Development

FROM Tammy L. Seale, PlaceWorks, Climate Action and Resilience Principal  
Eli Krispi, PlaceWorks, Climate Action and Resilience Senior Associate  
Jessica Robbins, PlaceWorks, Climate Action and Resilience Planner

SUBJECT Attachment 2: Climate Action Plan Update – Draft Greenhouse Gas Forecast, Existing Reductions, and Target Setting

Introduction ..... 1

Community-Wide GHG Emissions Forecast..... 2

State and Regional GHG Emission Reductions..... 6

Emission Reduction Targets ..... 11

GHG Reduction Potential of 2022 CAP Strategies ..... 16

Next Steps ..... 20

## Introduction

PlaceWorks is working with Contra Costa County (the County) to prepare the County’s 2022 Climate Action Plan (2022 CAP) for the unincorporated county. The 2022 CAP is a plan to reduce greenhouse gas (GHG) emissions and improve community resilience to hazardous conditions associated with climate change. The 2022 CAP is an update to the County 2015 CAP, and it is part of the overarching Envision Contra Costa 2040 project, which is the County’s General Plan update. Envision Contra Costa 2040 is the County’s document to guide future growth and development in the unincorporated area, as well as County operations and decisions through 2040. As part of this work, PlaceWorks has been preparing an updated forecast of future GHG emissions, an assessment of existing and planned GHG reduction programs, and an analysis of potential GHG reduction targets for the unincorporated area. The GHG reduction strategies in the CAP will build on this projection of future emissions and reductions achieved by existing and planned programs, demonstrating a viable path for the County to achieve its GHG emission reduction targets. The proposed GHG emission reduction targets in this memo are recommendations, not final determinations. Staff will ask the Sustainability Committee of the Contra Costa County Board of Supervisors to consider and provide guidance on these recommended targets, including direction on opportunities to achieve further GHG emission reductions should the Sustainability Committee suggest targets that exceed State guidance.

## Community-Wide GHG Emissions Forecast

The draft forecast of community-wide GHG emissions for the unincorporated area is based on the results of the 2019 community GHG emissions inventory. The project team combined these emissions with unincorporated Contra Costa County's 2019 demographics and projections of future demographics, developed as part of the Envision Contra Costa 2040 buildout calculations, to identify the expected future GHG emissions for the community. The project team forecasted GHG emissions for the calendar years 2030, 2040, and 2050 looking both at absolute (total) and per-capita (per-person) emissions for these years.

For many sectors, the draft GHG forecast assumes that each person in the unincorporated area will continue to contribute the same amount of GHG emissions as they did in 2019, so that the amount of GHG emissions increases proportionally to demographic growth. There are some sectors that are not projected this way:

- Transportation, which is projected using a regional traffic demand model based partially on demographics and partially on the location of various land uses.
- Agriculture, which is forecast using future land use projections for the amount of agricultural land in the unincorporated area.
- Land use and sequestration, which is forecast using future land use projections for developed land, forested land, and any agricultural and open space land that is developed.
- Within the off-road equipment sector, emissions from construction and mining equipment are projected using the rate of population and job growth, emissions from industrial equipment are projected using future land use projections for industrial land, and emissions from Transportation Refrigeration Units are projected using the proportion of county-wide road miles in the unincorporated area.

The forecast does not project any change in activity or GHG emissions for alternative home heating fuels (propane, kerosene, and wood), direct access electricity, cargo-handling equipment, or oil drilling equipment. Additionally, emissions for the two informational sectors (stationary sources and wildfires) are not forecasted, owing to their informational and substantial uncertainty in projecting future activities for these sectors. These GHG emissions do not have a demographic indicator that staff can use to reasonably project the volume of these emissions in the future, particularly given that they are informational items and not included in the total community-wide emissions. **Table 1** shows the demographic projections and their sources for the unincorporated area.

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GREENHOUSE GAS FORECAST, STATE REDUCTIONS, AND TARGET SETTING

**Table 1: Demographic Projections, 2019 – 2050**

DEMOGRAPHIC	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050	SOURCE
Population	174,150	199,600	242,070	293,570	69%	ABAG/MTC, Envision Contra Costa 2040
Households	60,320	70,040	83,080	98,560	63%	ABAG/MTC, Envision Contra Costa 2040
Jobs	38,760	45,690	50,600	56,040	45%	US Census Bureau, Envision Contra Costa 2040
Service population *	212,910	245,290	292,670	349,610	64%	ABAG/MTC, US Census Bureau, Envision Contra Costa 2040

\* Service population is the sum of population and jobs  
All numbers are rounded to the nearest 10.

**ABSOLUTE GHG EMISSIONS FORECAST**

**Table 2** and **Figure 1** show unincorporated Contra Costa County’s projected future GHG emissions relative to the 2019 inventory. Most sectors show an increase in GHG emissions due to the growing population. Agricultural emissions decrease because the amount of land use for agricultural purposes is projected to decline. Although the land use and sequestration sector is expected to remain a net carbon sink (negative emissions), the amount of emissions sequestered (removed from the atmosphere) by the activities in this sector are projected to decline. This is due to anticipated development of currently undeveloped land, removing the potential for this land to sequester carbon. Sequestration in forested and urbanized areas is projected to increase slightly.

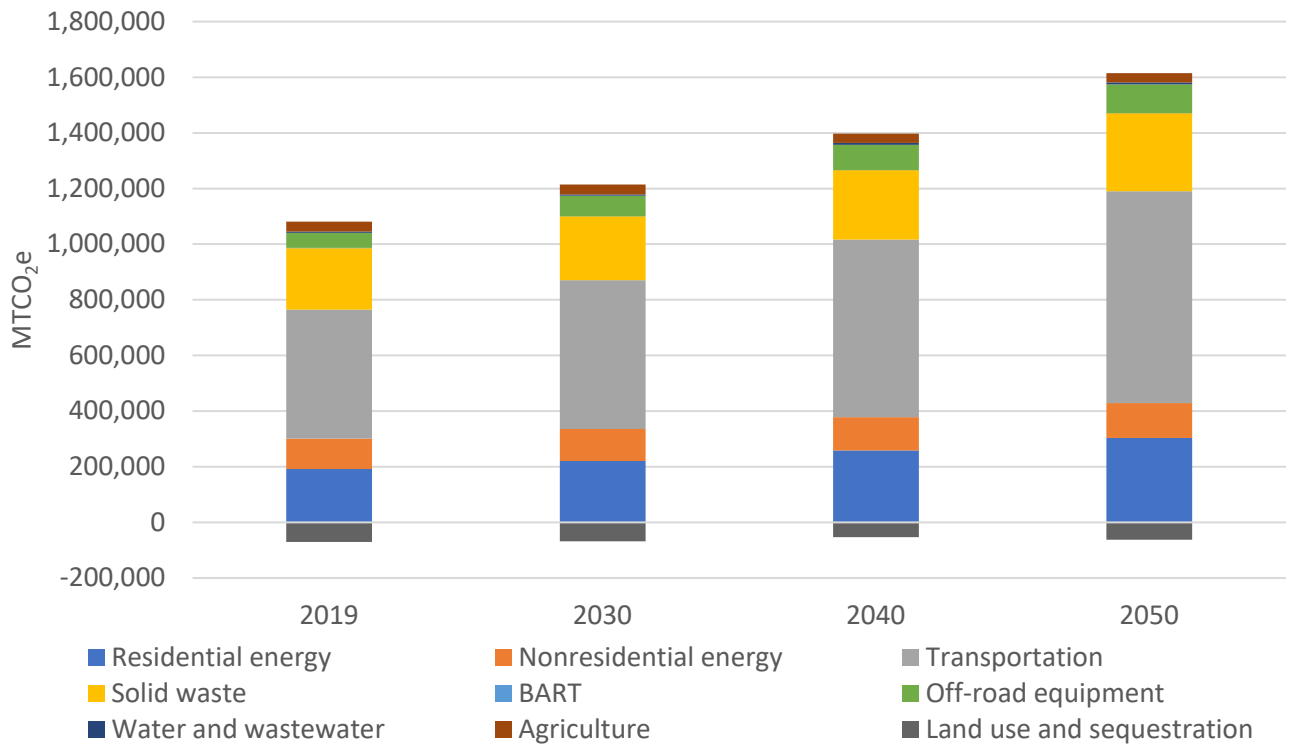
**Table 2: Absolute GHG Emissions Forecast, 2019 – 2050**

SECTOR	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
Transportation	464,040	534,610	637,880	761,980	64%
Residential energy	191,780	220,130	258,150	303,300	58%
Nonresidential energy	109,370	115,670	120,130	125,080	14%
Solid waste	220,760	229,820	249,820	280,640	27%
Agriculture	36,130	34,770	33,410	33,410	-8%
Off-road equipment	54,010	73,260	90,420	102,530	90%
Water and wastewater	4,870	5,610	6,700	7,990	64%
BART	190	220	260	310	63%
Land use and sequestration	-70,860	-67,580	-52,970	-62,330	-12%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>1,010,290</b>	<b>1,146,510</b>	<b>1,343,800</b>	<b>1,552,910</b>	<b>54%</b>

All numbers are rounded to the nearest 10. Due to rounding, totals may not equal the sum of the individual values.

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**Figure 1: Absolute GHG Emissions Forecast, 2019 – 2050**



**PER-CAPITA GHG EMISSIONS FORECAST**

In addition to the absolute emissions discussed in the previous section, the forecast also assessed per-capita (per-person) emissions. These emissions are per-resident population, as projected by Envision Contra Costa 2040, as shown in **Table 1. Table 3** and **Figure 2** show projected per-capita GHG emissions for unincorporated Contra Costa County.

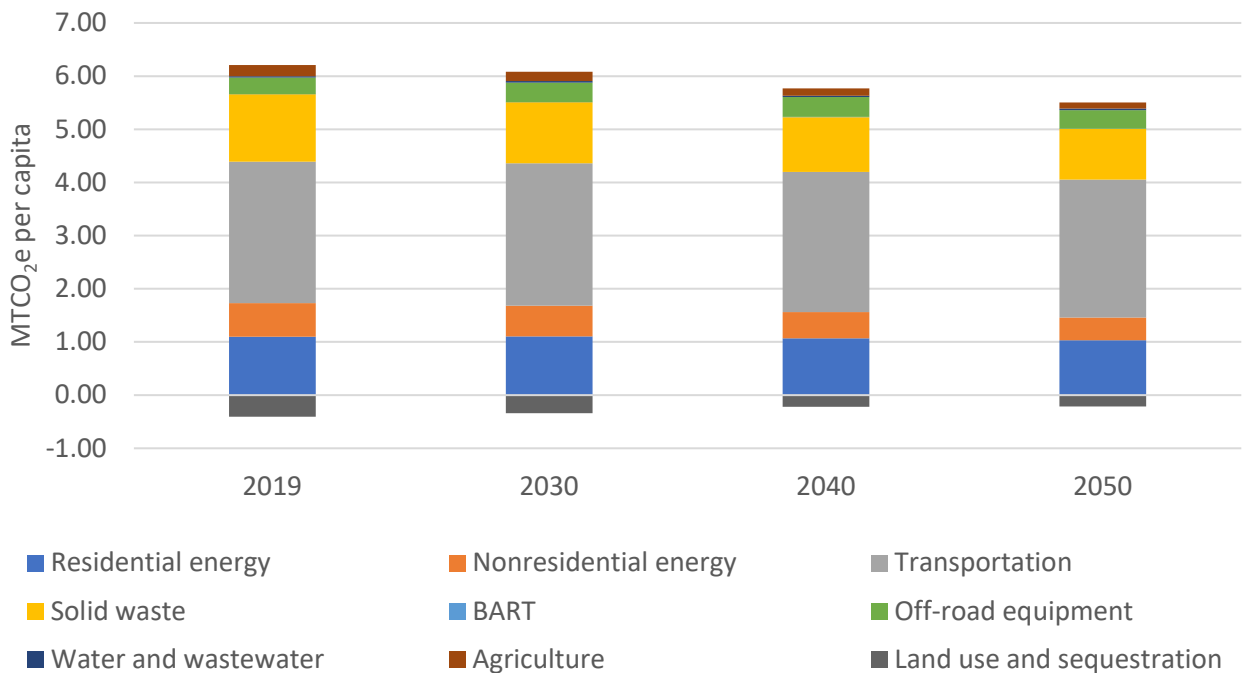
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**Table 3: Per-Capita GHG Emissions Forecast, 2019 – 2050**

SECTOR	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
Transportation	2.66	2.68	2.64	2.60	-3%
Residential energy	1.10	1.10	1.07	1.03	-6%
Nonresidential energy	0.63	0.58	0.50	0.43	-32%
Solid waste	1.27	1.15	1.03	0.96	-25%
Agriculture	0.21	0.17	0.14	0.11	-45%
Off-road equipment	0.31	0.37	0.37	0.35	13%
Water and wastewater	0.03	0.03	0.03	0.03	-3%
BART	Less than 0.01	Less than 0.01	Less than 0.01	Less than 0.01	-3%
Land use and sequestration	-0.41	-0.34	-0.22	-0.21	-48%
<b>Total Annual Per-Capita MTCO<sub>2</sub>e</b>	<b>5.80</b>	<b>5.74</b>	<b>5.55</b>	<b>5.29</b>	<b>-9%</b>

Due to rounding, totals may not equal the sum of the individual values.

**Figure 2: Per-Capita GHG Emissions Forecast, 2019 – 2050**



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Although overall emissions are expected to increase, per-capita emissions are expected to decline slightly from 2019 to 2050. This is because the number of residents is expected to increase faster than other demographic metrics used in the forecast (households, jobs, and service population). Additionally, since some sectors and subsectors assume no change in emissions or only minor changes based on land use patterns, this translates to a decrease in per-capita emissions for those sectors.

## State and Regional GHG Emission Reductions

California has adopted and committed to implementing policies to decrease GHG emission levels statewide, including from several of the major GHG emission sources present in the unincorporated areas of Contra Costa County. Many of these policies are identified in California's [Climate Change Scoping Plan](#) (Scoping Plan), which was originally adopted in 2008 in response to the California Global Warming Solutions Act (Assembly Bill, or AB, 32). The Scoping Plan outlines several regulations and market-based solutions to achieving California's GHG emission reduction goals. Successive updates to the Scoping Plan in 2014 and 2017 revised these state-level actions and identified additional opportunities for GHG emission reductions, as applicable.<sup>1</sup>

While the Scoping Plan and related documents lay out several state-led policies to reduce GHG emissions, the 2022 CAP will include those policies that have a direct and apparent GHG emission reduction benefit to unincorporated Contra Costa County. The project team has assessed community-wide GHG emission reduction benefits from four state-level efforts:

1. The [Renewables Portfolio Standard](#) (RPS) requires increases in renewable and carbon-free electricity supplies.
2. The [Clean Car Standards](#) require increased fuel efficiency of on-road vehicles and decreased carbon intensity of vehicle fuels.
3. The updated [Title 24](#) building energy efficiency standards require new buildings to achieve increased energy-efficiency targets. The latest version of these standards is set to go into effect January 1, 2023.
4. The [Low Carbon Fuel Standard](#) (LCFS) mandates reduced carbon intensity of fuels used in off-road equipment.

In addition to the state actions, the County's default electricity provider, MCE, has also taken action to reduce the GHG emissions from the electricity it supplies to Contra Costa community members, beyond the minimum required by RPS. In 2019, MCE electricity was approximately 60-percent renewable and 90-percent carbon-free. In future years, MCE is working toward sourcing 95 percent of their electricity from carbon-free sources.

**Table 4** shows the GHG reduction potential from the four state-level efforts and MCE's energy procurement plans. **Table 5** and **Figure 3** show future GHG emissions in unincorporated Contra Costa County with these efforts in place.

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<sup>1</sup> At time of writing, the California Air Resources Board is working on a third update to the Scoping Plan, in response to the adoption of Senate Bill 32 in 2016 and the Governor's 2018 goal of achieving statewide carbon neutrality by 2045. The updated Scoping Plan is set to be adopted sometime in late 2022.



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**Table 4: Absolute GHG Emission Reductions from Existing and Planned State and Regional Actions, 2019 – 2050**

	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
<b>Forecasted emissions without state and regional actions</b>	<b>1,010,290</b>	<b>1,146,510</b>	<b>1,343,800</b>	<b>1,552,910</b>	<b>54%</b>
Reductions from RPS	-	-24,730	-55,990	-122,760	-
Reductions from Clean Car standards	-	-108,740	-194,500	-251,160	-
Reductions from Title 24	-	-11,020	-37,170	-70,170	-
Reductions from LCFS (off-road only) *	-	-3,590	680	6,270	-
Reductions from MCE clean energy procurement	-	-1,270	-990	-	-
Reductions from all 5 actions	-	<b>-149,350</b>	<b>-287,970</b>	<b>-437,820</b>	-
<b>Emissions with state and regional actions</b>	<b>1,010,290</b>	<b>997,170</b>	<b>1,055,820</b>	<b>1,115,090</b>	<b>10%</b>

\* Due to the methods used in the forecast and assessment of state GHG reduction potential, future projections for off-road equipment GHG emissions are higher than forecasted above.

All numbers are rounded to the nearest 10. Due to rounding, totals may not equal the sum of the individual values.

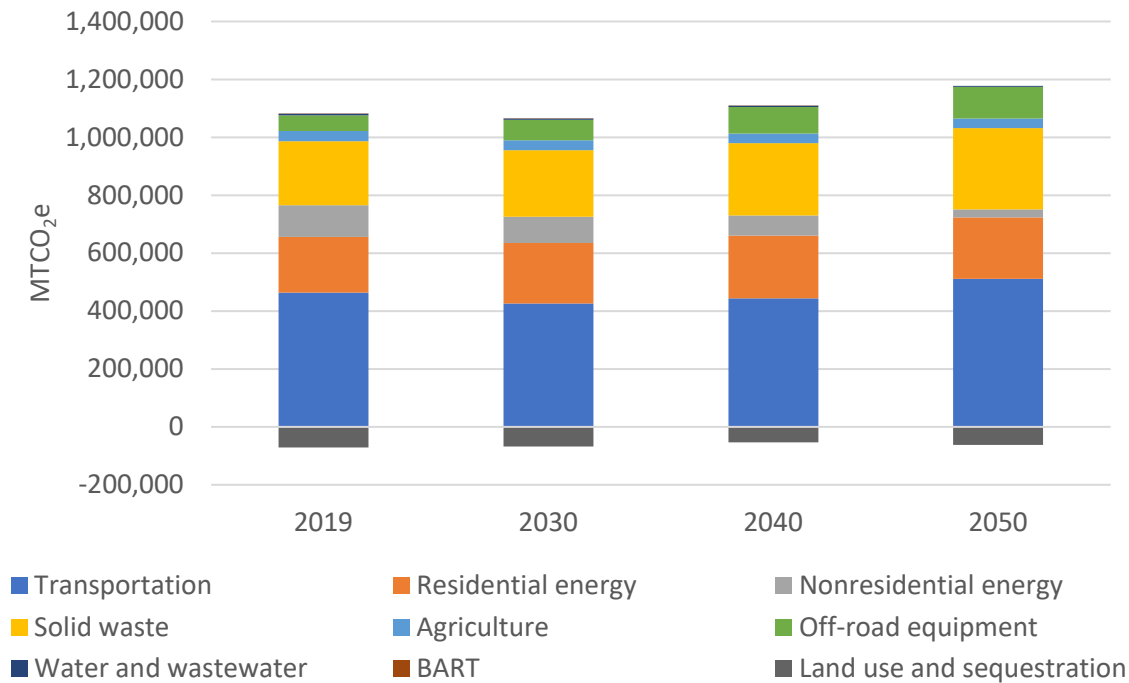
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**Table 5: Absolute GHG Emissions with Existing and Planned State and Regional Actions, 2019 – 2050**

SECTOR	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
Transportation	464,040	425,870	443,380	510,820	10%
Residential energy	191,780	208,720	217,410	212,560	11%
Nonresidential energy	109,370	91,120	69,040	27,660	-75%
Solid waste	220,760	229,820	249,820	280,640	27%
Agriculture	36,130	34,770	33,410	33,410	-8%
Off-road equipment	54,010	69,670	91,100	108,800	101%
Water and wastewater	4,870	4,640	4,550	3,530	-28%
BART	190	140	80	0	-100%
Land use and sequestration	-70,860	-67,580	-52,970	-62,330	-12%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>1,010,290</b>	<b>997,170</b>	<b>1,055,820</b>	<b>1,115,090</b>	<b>10%</b>

All numbers are rounded to the nearest 10. Due to rounding, totals may not equal the sum of the individual values.

**Figure 3: Absolute GHG Emissions with Existing and Planned Actions, 2019 – 2050**



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With state and regional existing and planned actions factored in, most GHG sources are expected to either see a decrease in emissions or a much smaller increase in emissions than the level forecasted in **Table 2**. Emissions from solid waste, agriculture, and land use and sequestration remain unchanged, as no existing or planned state or regional policies are expected to influence these emissions. Emissions from off-road equipment are expected to rise slightly compared to the forecast, but this is an artificial rise caused by the emissions in the forecast being less than those assumed by state modeling efforts.

**Table 6** and **Figure 4** show the per-capita GHG emissions with existing and planned actions for unincorporated Contra Costa County. With existing and planned actions factored in, per-capita GHG emissions decrease in almost all sectors, with overall per-capita GHG emissions falling 35 percent from 2019 to 2050. The one sector with an increase in per-capita emissions is off-road equipment, as the growth in unincorporated Contra Costa County’s population is not large enough to overcome the substantial increase in total off-road equipment GHG emissions.

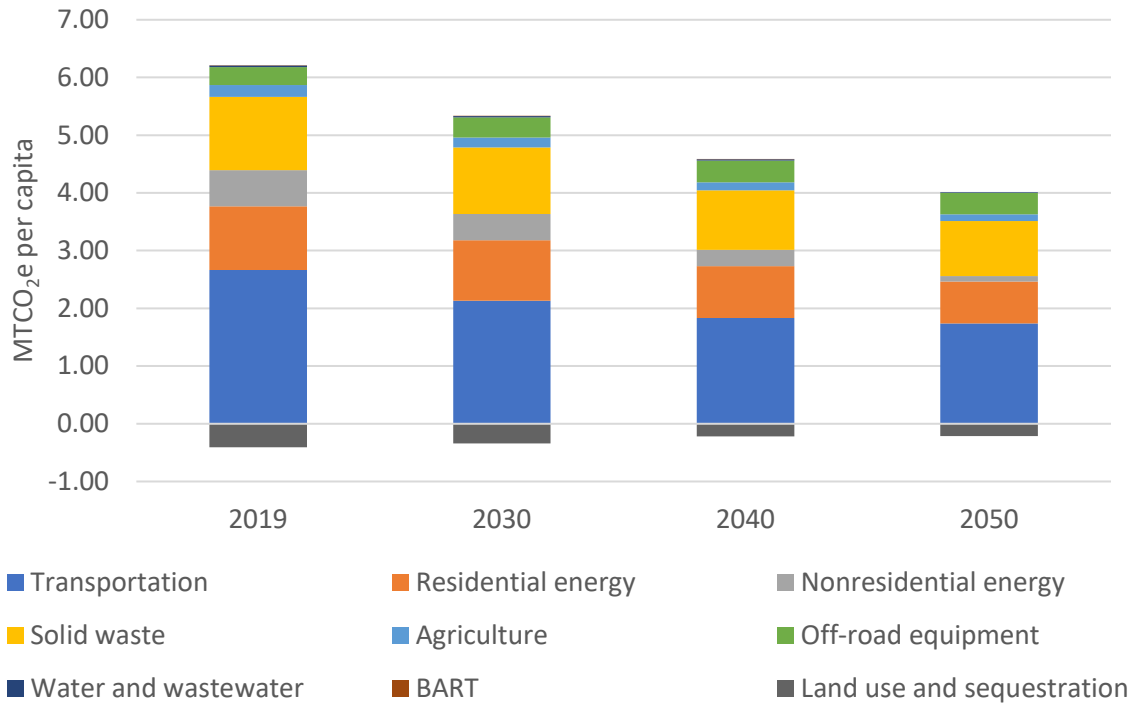
**Table 6: Per-Capita GHG Emissions with Existing and Planned Actions, 2019 – 2050**

SECTOR	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
Transportation	2.66	2.13	1.83	1.74	-35%
Residential energy	1.10	1.05	0.90	0.72	-34%
Nonresidential energy	0.63	0.46	0.29	0.09	-85%
Solid waste	1.27	1.15	1.03	0.96	-25%
Agriculture	0.21	0.17	0.14	0.11	-45%
Off-road equipment	0.31	0.35	0.38	0.37	19%
Water and wastewater	0.03	0.02	0.02	0.01	-57%
BART	Less than 0.01	Less than 0.01	Less than 0.01	0.00	-100%
Land use and sequestration	-0.41	-0.34	-0.22	-0.21	-48%
<b>Total Annual Per-Capita MTCO<sub>2</sub>e</b>	<b>5.80</b>	<b>5.00</b>	<b>4.36</b>	<b>3.80</b>	<b>-35%</b>

Due to rounding, totals may not equal the sum of the individual values.

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**Figure 4: Per-Capita GHG Emissions with Existing and Planned Actions, 2019 – 2050**



## Emission Reduction Targets

A key part of any CAP is one or more targets, which are the levels to which the community agrees to reduce GHG emissions. The 2022 CAP for unincorporated Contra Costa County will include GHG emission reduction targets for 2030, 2040, and 2050. Targets may be “firm” levels of GHG emission reductions supported by State regulations and local commitments (also called regulatory targets), or aspirational targets that go beyond adopted minimums and represent a higher level of GHG emission reductions that the community can strive toward (also called goals).

### TYPES OF TARGETS

There are usually three types of targets: absolute targets, per-capita targets, and carbon-neutral targets. The County may choose to adopt GHG reduction targets of any and all types.

#### Absolute targets

An absolute target is a specific, fixed level of GHG emissions that the community intends to reduce GHG emissions to (or below) by a given milestone year. Such targets may be expressed as a specific amount of GHG emissions (e.g., 750,000 metric tons of carbon dioxide equivalent [MTCO<sub>2</sub>e]), but more often are expressed as reducing GHG emissions to a percent below a particular baseline (e.g., 15 percent below 2005 GHG emission levels by 2020).

#### Per-capita targets

A per-capita target is a level of GHG emissions per person that the community plans to reduce GHG emission to or below by a specified year, such as 4 MTCO<sub>2</sub>e per person by 2030. Per-capita targets are usually per-resident population, consistent with State guidance in the Scoping Plan, but they may also be expressed as per-service population (residents plus jobs). Unlike absolute targets, the total level of GHG emission reductions specified by per-capita targets is dependent on changes to community growth, so a higher-than-expected population growth would allow for higher absolute GHG emissions even if the per-capita GHG emission levels are unchanged.

#### Carbon-neutral targets

A carbon-neutral target is a commitment that the community’s net GHG emissions will be zero. Although in theory a carbon-neutral target could mean that the community eliminates all GHG emissions, in practice this is extremely difficult to do at the local level. More commonly, these targets call for communities to substantially reduce GHG emissions and then balance out the remaining GHG emissions through carbon sequestration, offsets, or similar carbon removal practices, so the community commits to net carbon neutrality. Such targets should be combined with an absolute or per-capita target, specifying that the community must reduce GHG emissions to a set level and then offset the remainder.

### STATE GHG-REDUCTION TARGETS

California has committed to GHG emission reduction targets through legislative actions and executive orders. Legislative actions are binding targets that are codified in State law and may be thought of as “firm” or regulatory targets. Executive orders do not have the force of law, but they provide an indication of the State’s goals and intentions and may be thought of as aspirational targets. **Table 7** shows the State’s GHG emission reduction targets.

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**Table 7: State GHG Emission reduction Targets**

TARGET YEAR	TARGET	TYPE	ESTABLISHING ACT
2020	Reduce emissions to 1990 levels.	Regulatory target	Assembly Bill (AB) 32 (2006)
2030	Reduce emissions 40 percent below 1990 levels.	Regulatory target	Senate Bill (SB) 32 (2016)
2045	Carbon-neutral emissions.	Aspirational target	Executive Order (EO) B-55-18 (2018)
2050	Reduce emissions 80 percent below 1990 levels.	Aspirational target	Executive Order (EO) S-03-05 (2015)

**GUIDANCE FOR LOCAL GOVERNMENTS**

**State Climate Change Scoping Plan**

AB 32 codified into law California’s target of reducing GHG emissions to 1990 levels by 2020. The law directed the California Air Resources Board (CARB) to oversee and plan the state’s GHG reduction efforts. CARB released the first Climate Change Scoping Plan in 2008, laying out a framework for achieving California’s GHG emission reduction targets. CARB has prepared updates to the Scoping Plan in 2014 and 2017.

The most recent version of the Scoping Plan from 2017 provides detailed options for local targets, including those for plan-level efforts, such as the 2022 CAP. The Scoping Plan indicates that per-capita targets of 6.0 MTCO<sub>2</sub>e per person by 2030 and 2.0 MTCO<sub>2</sub>e per person by 2050 are consistent with California’s adopted regulatory target of reducing GHG emissions to 40 percent below 1990 levels by 2030 and the aspirational target of 80 percent below 1990 levels by 2050. At the time that staff prepared the 2015 CAP, State guidance did not propose per-capita targets, which is why the 2015 CAP does not consider or establish them.

**California Environmental Quality Act Guidance**

Under the California Environmental Quality Act (CEQA) Guidelines,<sup>2</sup> CAPs and other GHG-reduction plans can help to streamline the environmental review process for any development effort defined as a project under CEQA. Plans that can be used this way are called Qualified GHG Reduction Strategies and must satisfy six criteria, one of which is that they “establish a level, based on substantial evidence, below which the contribution to greenhouse gas emissions covered by the plan would not be cumulatively considerable.” If the plan meets these criteria, as determined by the community, any project consistent with the plan’s GHG emission reduction strategies can be determined to have a less-than-significant impact on GHG emissions, reducing the need for additional analyses and mitigation measures. Additionally, the plan must identify measures and performance standards that can be clearly shown to achieve this determination. As a result, a plan seeking to be a Qualified GHG Reduction Strategy must have a GHG emission reduction target or targets that not only substantially reduce GHG emissions, but that can also be feasibly achieved.

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<sup>2</sup> The 2022 CEQA Guidelines are available at [https://califaep.org/statute\\_and\\_guidelines.php](https://califaep.org/statute_and_guidelines.php)

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In February 2022, the Bay Area Air Quality Management District (BAAQMD) released a draft document titled “CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans.” This document provides guidance to Bay Area communities, including Contra Costa County, for determining whether a proposed project will have a significant impact on climate change. In the document, BAAQMD recommends that to meet the criteria for a Qualified GHG Reduction Strategy, a local plan must meet one of two targets:

- Reduce emissions to 40 percent below 1990 levels by 2030 and achieve net carbon neutrality by 2045.
- Be consistent with the State guidance calling for targets to be “a level, based on substantial evidence, below which the contribution to greenhouse gas emissions covered by the plan would not be cumulatively considerable.”

Note that this guidance is draft and may change in its final form.

**TARGET OPTIONS FOR CONTRA COSTA COUNTY**

Local governments have the flexibility to select their own GHG emission reduction targets that are different from the ones recommended by guidance documents. For a document that serves as a Qualified GHG Reduction Strategy, these targets should be consistent with or go beyond the recommendations in guidance documents, achieving a comparable or greater level of GHG emission reductions. PlaceWorks recommends that the 2022 CAP for Contra Costa County include GHG emission reduction targets that are, at minimum, consistent with the state’s regulatory targets. Additionally, PlaceWorks recommends that the County adopt a net carbon neutral goal as an aspirational target.

**Regulatory Targets**

The County’s GHG emission regulatory targets may be either absolute or per-capita. **Table 8** shows what these targets would be for unincorporated Contra Costa County as necessary to meet the State’s guidance, although the County may choose to adopt regulatory targets that call for a greater level of reductions.

**Table 8: Minimum Recommended Regulatory Targets**

TARGET YEAR	ABSOLUTE TARGETS		PER-CAPITA TARGETS
	MTCO <sub>2</sub> E	DESCRIPTION	MTCO <sub>2</sub> E PER CAPITA
2030	658,700	40% below 1990 levels	6.0
2040 *	439,140	60% below 1990 levels	4.0
2050	219,570	80% below 1990 levels	2.0

\* State guidance does not establish 2040 targets. These targets are interpolations between the 2030 and 2050 targets. PlaceWorks recommends a 2040 target, in addition to 2030 and 2050 targets, for consistency with the horizon year of Envision Contra Costa 2040. Note: Consistent with State guidance, 1990 GHG emission levels for unincorporated Contra Costa County is equal to 15 percent below 2005 levels. Unincorporated Contra Costa County GHG emissions in 2005 were 1,291,580 MTCO<sub>2</sub>e, translating to a 1990 GHG emissions level of 1,097,840 MTCO<sub>2</sub>e. Absolute targets are rounded to the nearest tens.

**Table 9, Figure 5, and Figure 6** show these potential regulatory GHG emission targets relative to unincorporated Contra Costa County’s GHG emissions after considering the effects of existing and planned efforts.

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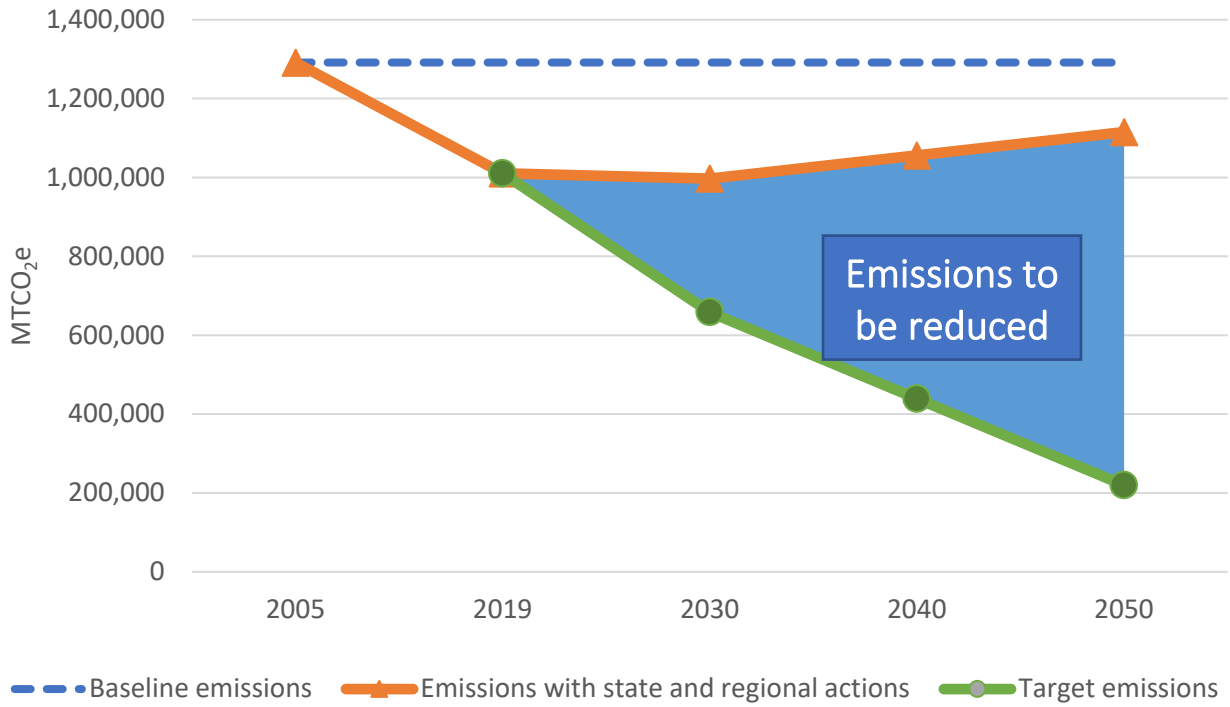
**Table 9: GHG Emission Reduction Levels**

	2030	2040	2050
<b>Absolute emissions</b>			
Emissions with existing and planned state and regional actions (MTCO <sub>2</sub> e)	997,170	1,055,820	1,115,090
Target emissions	658,700	439,140	219,570
Gap to target	338,470	616,680	895,520
<b>Per-capita emissions</b>			
Emissions with existing and planned state and regional actions (MTCO <sub>2</sub> e)	5.00 MTCO <sub>2</sub> e per person	4.36 MTCO <sub>2</sub> e per person	3.80 MTCO <sub>2</sub> e per person
Target emissions *	6.0 MTCO <sub>2</sub> e per person (1,197,600 MTCO <sub>2</sub> e)	4.0 MTCO <sub>2</sub> e per person (968,280 MTCO <sub>2</sub> e)	2.0 MTCO <sub>2</sub> e per person (587,140 MTCO <sub>2</sub> e)
Gap to target *	-1.00 MTCO <sub>2</sub> e per person (-200,430 MTCO <sub>2</sub> e) †	0.36 MTCO <sub>2</sub> e per person (87,540 MTCO <sub>2</sub> e)	1.80 MTCO <sub>2</sub> e per person (527,950 MTCO <sub>2</sub> e)
* Although these proposed targets and gaps are for per-capita emissions, they are also shown as absolute targets for a point of comparison.			
† Negative values mean that actions with existing and planned efforts exceed the proposed target.			
Due to rounding, totals may not equal the sum of the individual values.			

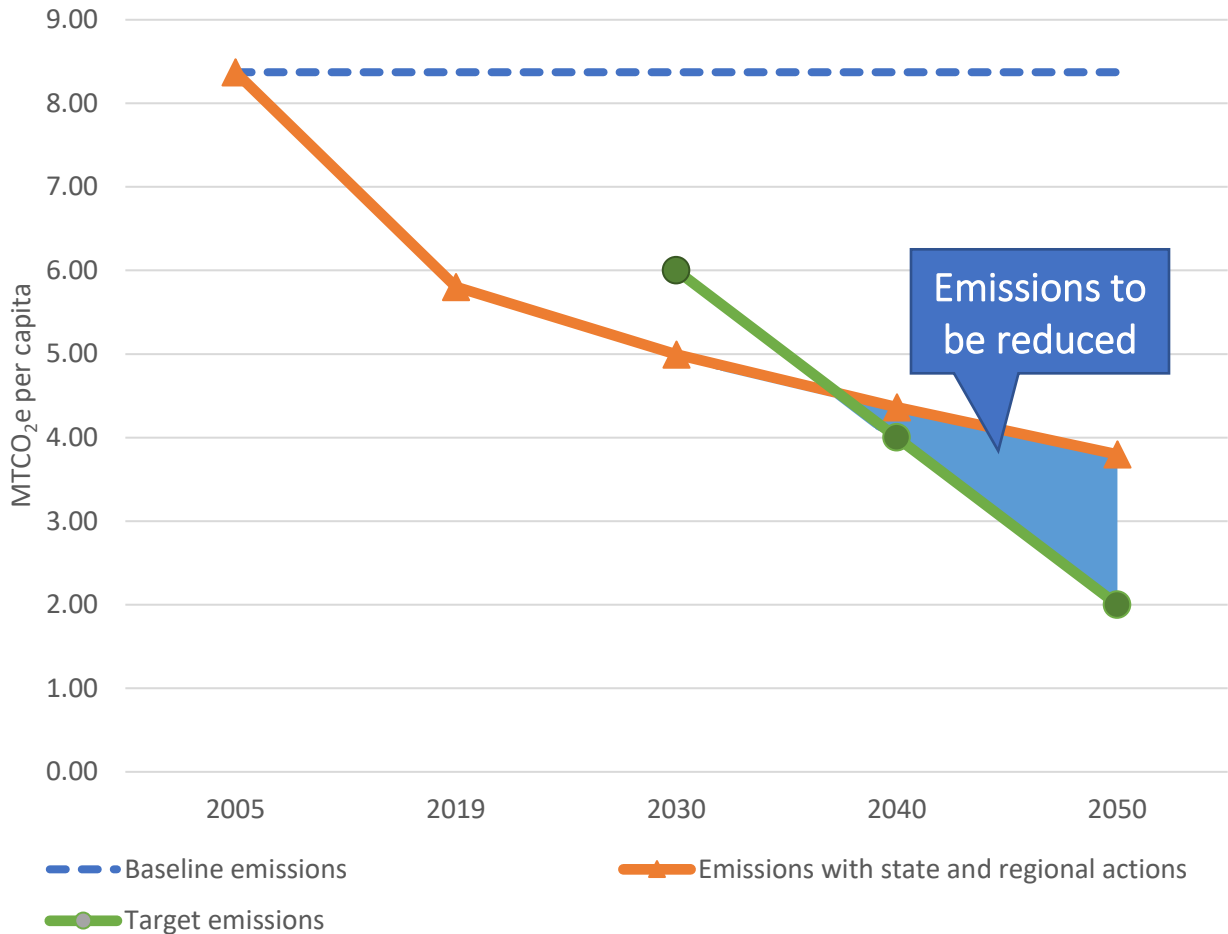


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Figure 5: Absolute GHG Emission Levels and Reduction Targets



**Figure 6: Per-Capita GHG Emission Levels and Reduction Targets**



PlaceWorks recommends that the net carbon neutral target apply for either 2040 to match the horizon year of Envision Contra Costa 2040, or for 2045 to match the goal put forward in EO S-03-05. To be consistent with the recommended regulatory targets, if the County chooses 2045 for the net carbon neutral goal, PlaceWorks recommends an additional regulatory target of at least 70 percent below 1990 levels or 3.0 MTCO<sub>2</sub>e per person by 2045.

### GHG Reduction Potential of 2022 CAP Strategies

PlaceWorks has worked with County staff to develop a set of GHG emission reduction strategies and to assess the GHG emission reduction potential of these strategies, given the project team’s reasonable understanding of available resources and what seemed appropriate for the unincorporated area. Attachment 4 provides detailed information about the GHG emission reduction potential of these strategies.

These GHG emission reduction potentials are intended to be a starting point. They are based on best available information and known resources and capabilities. It is possible to achieve greater reductions if there is increased confidence in higher levels of participation or development of additional programs. Through

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discussions with County staff and members of the Board of Supervisors, PlaceWorks anticipates that these reductions will be revised to better reflect County and community priorities and to achieve the County’s preferred targets. **Table 10** shows the absolute expected GHG emission levels with these strategies enacted, while **Table 11** shows these reductions from a per-capita perspective.

**Table 10: Absolute GHG Emissions with 2022 CAP Reduction Strategies**

SECTOR	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
Transportation	464,040	315,100	246,450	127,280	-73%
Residential energy	191,780	153,210	116,900	58,790	-69%
Nonresidential energy	109,370	79,860	52,490	13,500	-88%
Solid waste	220,760	226,570	243,650	270,670	23%
Agriculture	36,130	34,770	33,410	33,410	-8%
Off-road equipment	54,010	69,670	91,100	108,800	101%
Water and wastewater	4,870	3,670	3,240	2,050	-58%
BART	190	150	90	0	-100%
Land use and sequestration	-70,860	-73,530	-61,970	-74,370	5%
<b>Total Annual MTCO<sub>2</sub>e</b>	<b>1,010,290</b>	<b>809,450</b>	<b>725,340</b>	<b>540,120</b>	<b>-47%</b>

All numbers are rounded to the nearest 10. Due to rounding, totals may not equal the sum of the individual values.

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**Table 11: Per-Capita GHG Emissions with 2022 CAP Reduction Strategies**

SECTOR	2019	2030	2040	2050	PERCENTAGE CHANGE, 2019-2050
Transportation	2.66	1.58	1.02	0.43	-84%
Residential energy	1.10	0.77	0.48	0.20	-82%
Nonresidential energy	0.63	0.40	0.22	0.05	-93%
Solid waste	1.27	1.14	1.01	0.92	-27%
Agriculture	0.21	0.17	0.14	0.11	-45%
Off-road equipment	0.31	0.35	0.38	0.37	19%
Water and wastewater	0.03	0.02	0.01	0.01	-75%
BART	Less than 0.01	Less than 0.01	Less than 0.010	0.00	-100%
Land use and sequestration	-0.41	-0.37	-0.26	-0.25	-38%
<b>Total Annual Per-Capita MTCO<sub>2</sub>e</b>	<b>5.80</b>	<b>4.06</b>	<b>3.00</b>	<b>1.84</b>	<b>-68%</b>

Due to rounding, totals may not equal the sum of the individual values.

With the reductions currently projected from the 2022 CAP strategies, GHG emissions for the unincorporated Contra Costa County are expected to fall 47 percent relative to 2019 levels by 2050, or for per-capita emissions to decrease by 68 percent. These reductions occur in most GHG emission sectors. As noted previously, there is the potential for these strategies to yield additional GHG emission-reduction potentials through discussions with County staff and decision makers.

With these reductions as currently assessed, unincorporated Contra Costa County achieves the proposed per-capita targets for all years, and in 2030 and 2040 substantially exceeds, although it does not achieve the proposed absolute targets. **Table 12, Figure 7, and Figure 8** show these reductions relative potential regulatory GHG emission-reduction targets.

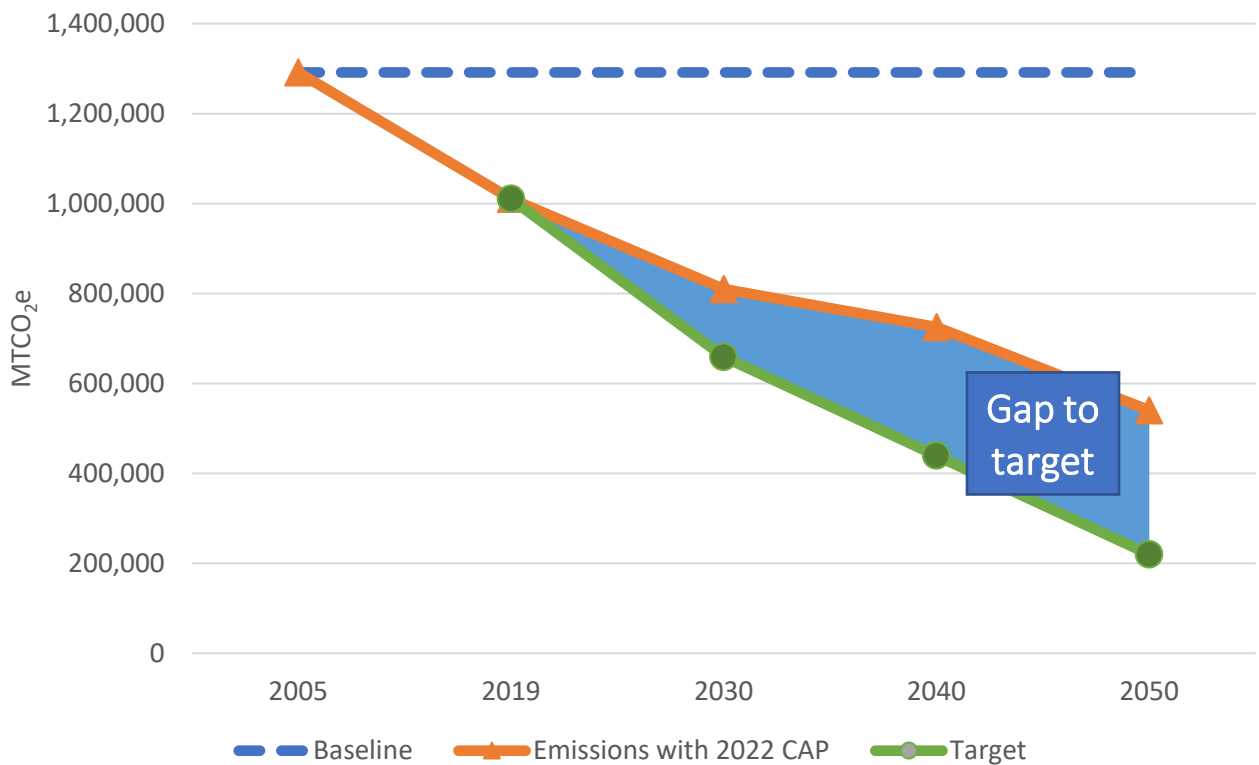
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**Table 12: 2022 CAP GHG Emission Reductions and Proposed Regulatory Targets**

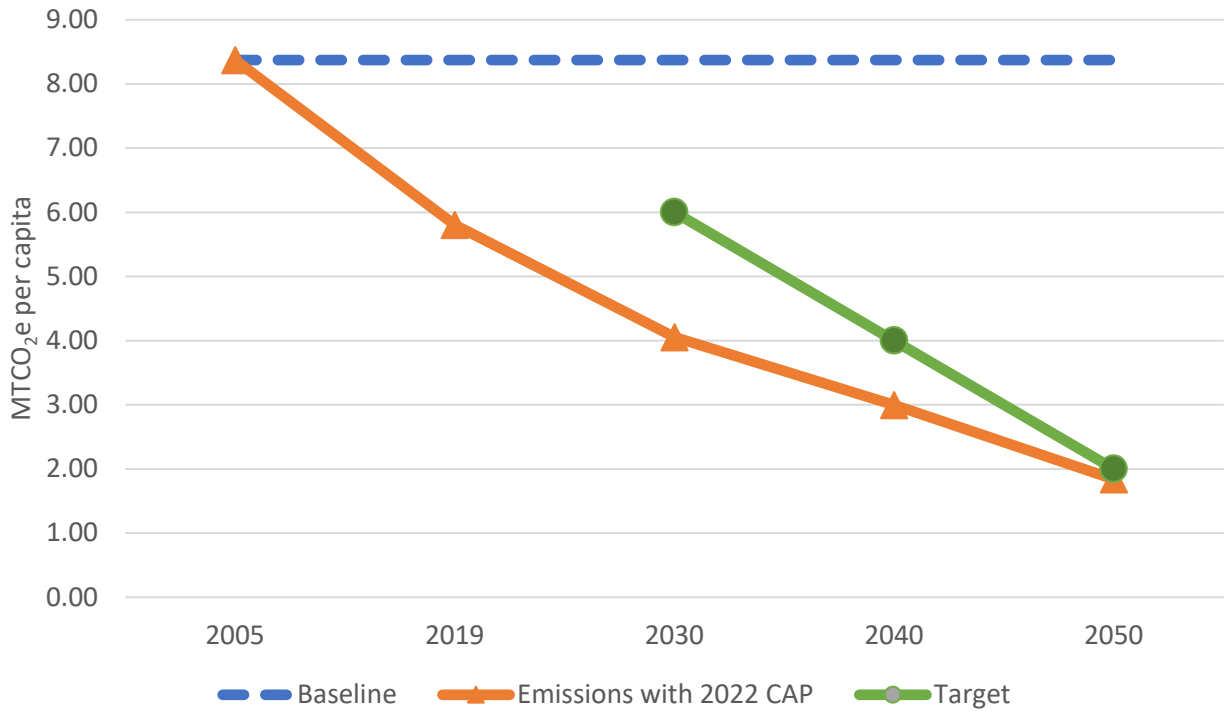
	2030	2040	2050
<b>Absolute emissions</b>			
Regulatory target	658,700	439,140	219,570
Emissions with strategies	809,450	725,340	540,120
Gap to target *	150,750	286,200	320,550
<b>Per-capita emissions</b>			
Regulatory target	6.00	4.00	2.00
Emissions with strategies	4.06	3.00	1.84
Gap to target *	-1.94	-1.00	-0.16

\* Negative values mean that the GHG emission levels with the strategies as currently assessed exceed the proposed target.  
 Due to rounding, totals may not equal the sum of the individual values.

**Figure 7: Absolute GHG Emission Levels and Reduction Targets with 2022 CAP**



**Figure 8: Per-Capita Emission Levels and Reduction Targets with 2022 CAP**



## Next Steps

If the County has any revisions to the forecast and existing and planned actions discussions of this memo, PlaceWorks will work with County staff to make these changes. PlaceWorks will discuss these potential GHG-reduction targets and the reductions achieved by the GHG-reduction strategies with County staff and decision makers. We will then work to revise the assumptions underlying these GHG emission reductions to adjust the level of reduction potential so it is consistent with County expectations and community values.

# We Can Model Regional Emissions, But Are the Results Meaningful for CEQA?

Authors: AEP Climate Change Committee (Michael Hendrix, Dave Mitchell, Haseeb Qureshi, Jennifer Reed, Brian Schuster, Nicole Vermillion, and Rich Walters)

On December 24, 2018, the California Supreme Court, *Sierra Club v. County of Fresno (Friant Ranch, L.P.) (2018) 6 Cal.5th 502, Case No. S219783 (Friant Ranch)*, held that simply identifying that a project exceeds an emissions threshold is not sufficient to identify a project's significant effect on the environment relative to the health effects of project emissions. The Court found that an EIR should make a reasonable effort to substantively connect a project's criteria pollutant emissions to likely health consequences, or explain why it is not currently feasible to provide such an analysis. In 2019, there were several CEQA documents that included health effects modeling to provide additional analysis for projects with criteria air pollutant emissions that exceed a significance threshold. While it is technically possible to conduct this modeling, we argue that this additional layer of quantitative analysis may not always provide decision-makers and the public with additional meaningful information. It is the air districts that are best suited to provide frameworks for how to identify health effects of regional criteria pollutant emissions under CEQA.

## Introduction

Significance thresholds for regional criteria pollutants used by California air districts and lead agencies represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable national or state ambient air quality standard (AAQS). By analyzing the project's emissions against these thresholds, the CEQA document assesses whether these emissions directly contribute to any regional or local exceedances of the applicable AAQS and exposure levels. The basis of the ruling in *Friant Ranch* was that the EIR did not provide a meaningful analysis of the adverse health effects that would be associated with the project's criteria pollutant emissions, which were identified as being far above the relevant thresholds. The discussion of the adverse health effects in the EIR was general in nature and did not connect the levels of the pollutants that would be emitted by the project to adverse health effects.

The process of correlating project-related criteria pollutant emissions to health-based consequences is called a health impact assessment (HIA). An HIA involves two steps: 1) running a regional photochemical grid model (PGM) to estimate the small increases in concentrations of ozone and particulate matter (PM) in the region as a result of a project's emissions of criteria and precursor pollutants; and 2) running the U.S. EPA Benefits Mapping and Analysis Program (BenMAP) to estimate the resulting health impacts from these increases in concentrations of ozone and PM.

## Limitations of Regional-Scale Dispersion Models

It is technically feasible to conduct regional-scale criteria pollutant modeling for a development project. Particulate matter (PM) can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur oxides (SO<sub>x</sub>) and NO<sub>x</sub>. Ozone (O<sub>3</sub>) is a secondary pollutant formed from the oxidation of reactive organic gases (ROGs) and nitrogen oxides (NO<sub>x</sub>) in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Secondary formation of PM and ozone can occur far from the original emissions source from regional transport due to wind and topography (e.g. low-level jet stream). As such, modeling concentrations of secondary PM and ozone require photochemical grid models (PGMs), such as CMAQ and CAMx. These models have a much larger "grid" system and much lower resolution than localized dispersion modeling (e.g., AERMOD). For example, common grid cells in PGMs are 4x4 kilometers, while AERMOD can identify concentrations at the meter-level.

Photochemical modeling also depends on all emission sources in the entire domain. Low resolution and spatial averaging produces “noise” and model uncertainty that can exceed a project’s specific emissions. Additionally, regional-scale models are highly contingent upon background concentrations. Factors such as meteorology and topography greatly affect the certainty levels of predicted concentrations at receptor points. As a result, there are statistical ranges of uncertainty through all the modeling steps. Due to these factors, it is difficult to predict ground-level secondary PM and ozone concentrations associated with relatively small emission sources with a high degree of certainty. While it is possible to use a regional-scale model to predict these regional concentrations, when a project’s emissions are less than the regional model’s resolution, the resultant ambient air quality concentrations will be within the margin of uncertainty. In CEQA terms, this would fit the definition of “speculative”. Only when the scale of emissions would result in changes in ambient air quality beyond the model margin of uncertainty would the results not be “speculative” as defined by CEQA.

## Identifying Health Effects due to Ambient Air Quality Changes

BenMap is a model developed by the USEPA to understand the health effects from changes in ozone and PM concentrations. If there is an acceptable level of confidence that the results provided by the regional dispersion modeling are valid, then these concentrations can be translated into health outcomes using BenMap. The health outcomes in BenMap are based on changes in ambient air concentrations and the population exposed to these changes. Data provided by this analysis may indicate increased number of workdays lost to illness, hospital admissions (respiratory), emergency room visits (asthma), or mortality, among other health effects. These are called “health incidences.”

Translating the incremental increase in PM and ozone concentrations to specific health effects is also subject to uncertainty. For example, regional models assign the same toxicity to PM regardless of the source of PM (such as road dust as exhaust), and thus potentially overpredict adverse health effects of PM. BenMap also assumes that health effects can occur at any concentration, including small incremental concentrations, and assumes that impacts seen at large concentration differences can be linearly scaled down to small increases in concentration, with no consideration of potential thresholds below which health impacts may not occur. Additionally, BenMap is used for assessing impacts over large areas and populations and was not intended to be used for individual projects. For health incidences, the number of hospitalizations or increase in morbidity predicted by BenMap is greatly affected by the population characteristics.<sup>1</sup> Small increases in emissions in an area with a high population have a much greater affect than large increases in emissions over an area with a small population. As a result, the same amount of emissions generated in an urban area could result in greater health consequences than if the same emissions occurred on the urban periphery, where fewer people may be affected. This will also depend on other factors including meteorology and photochemistry, as discussed above. Emissions in areas with conditions that favor high air dispersion or unfavorable ozone formation will likely have relatively lower effects on ambient air quality and health outcomes.

While BenMap provides additional statistical information about health consequences requested by the Court in the Friant Ranch decision, this information is only meaningful when presented with the full health context of the region or locality at hand. For example, if the BenMap analysis says that the project would result in two additional hospital admissions, this result alone is not useful unless one identifies how many hospital admissions are caused by poor air quality now (without the project) and how many hospital admissions occur

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<sup>1</sup> BenMap assigns prevalence rate for asthma and other health effects based on indicators such as gender, race, age, ethnicity, etc. The BenMap user manual specifically states that there are a wide range of variables that can be included in the health effect function. The health effect function was developed based on epidemiological studies, and specifically states that “there are a number of issues that arise when deriving and choosing between health effect functions that go well beyond this user manual. Hence, it is important to have a trained health researcher assist in developing the impact function data file.”



overall (due to air quality and other causes). Because health is not solely influenced by ambient air quality, and has many factors that are highly variable across geographies and populations, there is an added level of uncertainty in using a generalized identification of health effects due to air quality conditions overlaid onto a specific diverse set of health conditions and other factors. Regardless of the uncertainty levels, if regional health effects are identified for a project, then the CEQA analysis needs to provide a full health baseline for decision-makers and the public to be able to understand the marginal change due to project criteria pollutant emissions. Given the margin of uncertainty at each step in the process (regional scale modeling, existing ambient air quality effects on health, population health conditions vulnerability, and marginal health effects of air pollution), the identification of marginal health effects due to individual projects using regional air quality modelling and tools such as BenMap are likely to be within the level of uncertainty and thus defined as “speculative” per CEQA.

## The Role of Air Districts

Regional, community, multiscale air quality modeling conducted by the air districts for each individual air basin or locality within the air basin would be the most appropriate indicator of health effects for projects. The AQMPs provide a forecast of regional emissions based on regional dispersion modeling for all sources within the air basin. Regional-scale models attempt to account for all emissions sources within an air basin.

The regional scale model requires inputs such as existing and future regional sources of pollutants and global meteorological data, which are generally not accessible by CEQA practitioners. Modeling of future years should consider future concentrations of air pollutants based on regional growth projections and existing programs, rules, and regulations adopted by Federal, State, and local air districts. In general, air pollution in California is decreasing as a result of Federal and State laws. Based on the air quality management plans (AQMPs) required for air districts in a nonattainment area, air quality in the air basins are anticipated to improve despite an increase in population and employment growth. Air districts are charged with assessing programs, rules, and regulations so that the increase in population and employment does not conflict with the mandate to achieve the AAQS. Because emissions forecasting and health outcomes based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should also fall on the air districts to identify the potential health outcomes associated with individual project’s criteria pollutant emissions.

The South Coast Air Quality Management District (South Coast AQMD) and the Sacramento Metropolitan Air Quality Management District (Sacramento Metropolitan AQMD) are exploring concepts for project-level analysis in light of Friant Ranch to assist local lead agencies.

- » South Coast AQMD is looking at the largest land use development project they have had in the air basin and doing a sensitivity analysis (using CAMx for photochemical grid modeling and BenMap for health outcomes) to see how locating a very large project in different parts of the air basin (Los Angeles, Inland Empire, v. Orange County) would affect the health incidence.
- » Sacramento Metropolitan AQMD is also looking at a screening process. Rather than looking at the upper end (i.e., largest project in the air basin), Sacramento Metropolitan AQMD is starting at the smallest project that exceeds the regional significance threshold and running CAMx and BenMap at different locations in the air basin to see how it affects regional health incidences.

Guidance from Air Districts would be the most effective way to incorporate meaningful information concerning regional health effects of project criteria pollutants in CEQA analyses, including guidance as to when modelling is and is not useful and meaningful, how modelling should be conducted, and how to best present additional information to inform decision-makers and the public about a project’s impacts.

## So...until air districts do their part, what should we do?

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS BELOW AIR DISTRICT THRESHOLDS**

The Friant Ranch ruling was about providing disclosure of health effects of project emissions that were well over the significance thresholds. Since the air district thresholds are tied to a level the air districts find to not have a significant effect on ambient air quality, there should be no need to discuss the health effects of criteria pollutant emissions that are less than the significance thresholds.

### **PROJECTS WITH CRITERIA POLLUTANT EMISSIONS ABOVE AIR DISTRICT THRESHOLDS**

Pursuant to Section 15125 of the CEQA Guidelines, the environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. For CEQA, the health effects associated with buildout of a project would occur at the project's horizon year. Because CEQA requires an analysis of the change from existing conditions, the change in effects would be associated with changes in ambient air quality and associated health outcomes between existing conditions and the project's horizon year. Therefore, in order to show how a project affects health outcomes in an air basin, the CEQA documents will need to qualitatively or quantitatively address: (1) existing ambient criteria pollutant concentrations, health incidences due to existing air quality, and health incidences overall; 2) future (without project) ambient criteria pollutant concentrations and health incidences, and 3) future (with project) ambient criteria pollutant concentrations and health incidences.

Projects with significant criteria pollutant emissions could use regional modelling and BenMap to identify health effects of project emissions, but it is likely that many (or most) projects that are not regionally substantial in scale will be shown to have minimal regional changes in PM and ozone concentrations and therefore minimal changes in associated health effects. In addition, many projects may have emissions that are less than the uncertainty level of regional air quality models and BenMap health effects modeling; in these cases, quantitative results will not be meaningful. Thus, absent better direction from air districts, CEQA lead agencies will have to determine on a case by case basis whether a qualitative discussion of health effects will suffice, or whether regional modeling, despite its limitations, should be conducted for the project.

Where a project has substantial criteria pollutant emissions when considered on a regional scale, and there is reason to believe that the modeling of ambient air quality and regional health effects would produce non-speculative results when considering modeling uncertainties, then CEQA lead agencies should use regional modelling.

## **Conclusion**

The purpose of CEQA is to inform the public as to the potential for a project to result in one or more significant adverse effects on the environment (including health effects). A CEQA document must provide an understandable and clear environmental analysis and provide an adequate basis for decision making and public disclosure. Regional dispersion modeling of criteria pollutants and secondary pollutants like PM and ozone can provide additional information, but that information may be within the margin of modelling uncertainty and/or may not be meaningful for the public and decision-makers unless a full health context is presented in the CEQA document. Simply providing health outcomes based on use of a regional-scale model and BenMap may not satisfy the goal to provide decision-makers and the public with information that would assist in weighting the environmental consequences of a project. A CEQA document must provide an analysis that is understandable for decision making and public disclosure. Regional scale modeling may provide a technical method for this type of analysis, but it does not necessarily provide a meaningful way to connect the magnitude of a project's criteria pollutant emissions to health effects without speculation.

In order to accurately connect the dots, we urge California air districts to provide more guidance on how to identify and describe the health effects of exceeding regional criteria pollutant thresholds. The air districts are the primary agency responsible for ensuring that the air basins attain the AAQS and ensure the health and welfare of its residents relative to air quality. Because emissions forecasting and health outcomes are based on the regional growth projections to achieve the AAQS is under the purview of the air districts, it should fall on the air districts to identify the potential health outcomes associated with exceeding the CEQA thresholds for projects. The air districts should provide lead agencies with a consistent, reliable, and meaningful analytical approach to correlate specific health effects that may result from a project's criteria pollutant emissions.

## **Glossary**

AAQS – Ambient Air Quality Standards

BenMap – Benefits Mapping and Analysis Program

CAMx – Comprehensive Air Quality Model with extensions

CMAQ – Community Multiscale Air Quality

NOx – Nitrogen Oxides

PM – Particulate Matter

SOx – Sulfur Oxides

State – California

USEPA – United States Environmental Protection Agency

**S219783**

**IN THE SUPREME COURT OF CALIFORNIA**

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT  
FILED

APR 13 2015

Frank A. McGuire Clerk  
Deputy

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After a Published Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726  
Honorable Rosendo A. Pena, Jr.

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**APPLICATION OF THE SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT FOR LEAVE TO FILE  
BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY  
AND [*PROPOSED*] BRIEF OF *AMICUS CURIAE***

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**TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE  
SUPREME COURT:**

**APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF**

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this *amicus* brief in support of neither party.

**HOW THIS BRIEF WILL ASSIST THE COURT**

SCAQMD's proposed *amicus* brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

- 1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
- 2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review *de novo*.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

### **STATEMENT OF INTEREST OF *AMICUS CURIAE***

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

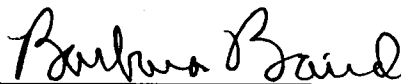
**CERTIFICATION REGARDING AUTHORSHIP AND FUNDING**

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT  
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*SOUTH COAST AIR QUALITY*  
*MANAGEMENT DISTRICT*

## BRIEF OF AMICUS CURIAE

### SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, “[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.” (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 [*“Laurel Heights I”*]) Accordingly, “an agency must use its best efforts to find out and disclose all that it reasonably can.” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)<sup>1</sup>). However, “[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible.” (*Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project’s pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

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<sup>1</sup> The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq.*

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

## **ARGUMENT**

### **I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.**

#### **A. Air Quality Regulatory Background**

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality

management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “chapter 7” hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Executive Summary” hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called “criteria” document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called “criteria pollutants.” EPA must then establish “national ambient air quality standards” at levels “requisite to protect public health”,



allowing “an adequate margin of safety.” (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), <http://www.epa.gov/air/criteria.html> (last updated Oct. 21, 2014).)<sup>2</sup>

Under the Clean Air Act, EPA sets emission standards for motor vehicles and “nonroad engines” (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as “stationary sources.” The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified “major” stationary sources use technology to achieve the “lowest achievable emission rate,” and to control minor stationary sources as

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<sup>2</sup> Particulate matter (PM) is further divided into two categories: fine particulate or PM<sub>2.5</sub> (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM<sub>10</sub>) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), <http://www.epa.gov/airquality/particulatepollution/> (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called “hazardous air pollutants” calling for EPA to establish “maximum achievable control technology” (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as “toxic air contaminants” (TACs) which are subject to two state-required programs. The first program requires “air toxics control measures” for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare “health risk assessments” for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as “significant,” the facility must implement a “risk reduction plan” to bring its risk levels below “significant” levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv>; then follow “Rule 1401” hyperlink (last visited Apr. 1, 2015).)

## **B. The SCAQMD's Role Under CEQA**

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the “lead agency” that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called “responsible” agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to “trustee agencies” and agencies “with jurisdiction by law” including “authority over resources which may be affected by the project.” (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.<sup>3</sup>

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<sup>3</sup> The SCAQMD's CEQA program for its rules is a “Certified Regulatory Program” under which it prepares a “functionally equivalent” document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.<sup>4</sup> SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a “responsible agency” for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, <http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii>; then follow “Rule 1303” hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with “jurisdiction by law” over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

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<sup>4</sup> The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015>; then follow “16. Lead Agency Projects and Environmental Documents Received by SCAQMD” hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, <http://www.arb.ca.gov/regact/diesltac/diesltac.htm>; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, *supra*, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

**II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT’S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.**

Numerous cases hold that courts do not review the correctness of an EIR’s conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

*Bd. of Supervisors* (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must “draw[] a line that divides *sufficient* discussions from those that are *insufficient*.” (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4<sup>th</sup> 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that “[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis.” (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that “the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.” Case law reflects this: “Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible.” (*Association of Irrigated Residents v. County of Madera, supra*, 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be “feasible”; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a “health risk assessment” before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the “maximally exposed individual” (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it

is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588)*, pp. 11-16; (last visited Apr. 1, 2015) <http://www.aqmd.gov/home/library/documents-support-material>; "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, <http://www.aqmd.gov/home/forms>; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from

the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants<sup>5</sup>, such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, <http://www.epa.gov/airquality/ozonepollution/> (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, <http://www.epa.gov/ttnamti1/archive/cpreldoc.html> (last visited Apr. 1, 2015).) NO<sub>x</sub> and VOC are known as “precursors” of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population*, Figure 9, <http://www.epa.gov/apti/ozonehealth/population.html#levels> (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO<sub>x</sub> by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan>; then follow “Appendix V: Modeling & Attainment Demonstrations” hyperlink,

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<sup>5</sup> See discussion of types of pollutants, *supra*, Part I.A.



pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO<sub>x</sub> or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO<sub>x</sub> and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts “internal bank” of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.<sup>6</sup> The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO<sub>x</sub> (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).<sup>7</sup> (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6) at p. 4.1-35, Table 4.1-29.)

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<sup>6</sup> (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, <http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011>; the follow “26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System” (last visited April 1, 2015).)

<sup>7</sup> The SCAQMD was able to establish the location of future NO<sub>x</sub> and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO<sub>x</sub> or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO<sub>x</sub> with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; <https://www.epa.gov/ttnamti1/archive/cpreldoc.html>; then search “Guideline on Ozone Monitoring Site Selection” click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA “significance” threshold for NO<sub>x</sub> and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>; then follow “SCAQMD Air Quality Significance Thresholds” hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a “major” stationary source for “extreme” ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA “significance” finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO<sub>x</sub> or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD’s thresholds of significance may determine

that many projects have “significant” air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter (PM<sub>2.5</sub>)<sup>8</sup>, another “criteria” pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM<sub>2.5</sub>. (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, [http://www.arb.ca.gov/research/health/pm-mort/pm-mort\\_arch.htm](http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm) (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional PM<sub>2.5</sub> in the District, up to 2.82 tons/day (5,650 lbs/day of PM<sub>2.5</sub>, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this PM<sub>2.5</sub> health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.<sup>9</sup> (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

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<sup>8</sup> SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for “PM<sub>2.5</sub>” or particulate matter less than 2.5 microns in diameter.

<sup>9</sup> Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

*E&P, Inc. WTU Central Facility, New Equipment Project* (certified July 19, 2011), <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011>; then follow “Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project” hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM<sub>2.5</sub> increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM<sub>2.5</sub> emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the “normal” “existing conditions” CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.<sup>10</sup>

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<sup>10</sup> Whether a particular study would result in “informational value” is a part of deciding whether it is “feasible.” CEQA defines “feasible” as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.<sup>11</sup> Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, <http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm> (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

### **III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.**

#### **A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document**

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

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technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

<sup>11</sup> In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, “a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts.” (*Vineyard Area Citizens v. City of Rancho Cordova*, *supra*, 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency’s action de novo under the “independent judgment” test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby “accord[ing] greater deference to the agency’s substantive factual conclusions.” (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project’s impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR’s analysis is sufficient to meet CEQA’s informational purposes,<sup>12</sup> while Friant Ranch contends that the substantial evidence standard applies to this question.

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<sup>12</sup> Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,<sup>13</sup> containing two levels of inquiry that should be judged by different standards.<sup>14</sup>

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

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<sup>13</sup> Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

<sup>14</sup> Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document.*" (*Laurel Heights I, supra*, 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra*, 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.



(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses “in sufficient detail to enable meaningful participation and criticism by the public. ‘[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.’” (*Laurel Heights I, supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority, supra*, 57 Cal.4th 439, 448, 457:

whether “existing conditions” baseline would be misleading or uninformative judged by substantial evidence standard.<sup>15</sup>)

If the lead agency’s determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA’s information disclosure provisions, since it would be infeasible to provide additional information. This Court’s decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency’s finding that “the precise parameters of future herbicide use could not be predicted.” *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4<sup>th</sup> 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact “substantial”. (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

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<sup>15</sup> The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra*, 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra*, 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.<sup>16</sup>

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<sup>16</sup> We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project." *Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra*, 124 Cal.App.4<sup>th</sup> at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

**B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.**

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra*, at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR . . . ." (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra*, at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "... leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, “Environmental Checklist Form.”<sup>17</sup>) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency’s noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts’ proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA’s prohibition on courts interpreting its provisions “in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines.” (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra*, at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project’s significant impacts on human health. However, except in certain particular circumstances,<sup>18</sup> neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law’s requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe “health and safety problems caused by {a project’s} physical changes”].) Accordingly, courts must interpret CEQA as a whole to

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<sup>17</sup> Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

<sup>18</sup> E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.<sup>19</sup> Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

#### **IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS**

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4<sup>th</sup> 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck*, 198 Cal.App.4th at p. 959 (citations omitted).<sup>20</sup>

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<sup>19</sup> We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131), or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

<sup>20</sup> Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta*, (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)<sup>21</sup>

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districts should be considered “state agencies” for purposes of the requirement to consult with “trustee agencies” as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere “local agencies” whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id.* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

<sup>21</sup> In *Schenck*, the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck*, 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district’s published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district’s published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those



Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay, supra*, 91 Cal.App.4th 1344, 1369-1371.)

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guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra*, 70 Cal.App.4th 482, 492.

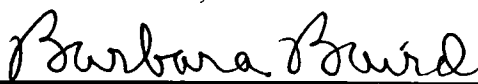
## CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is “sufficient as an informational document” is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY  
MANAGEMENT DISTRICT  
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By:   
Barbara Baird

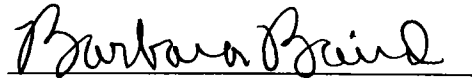
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*SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT*

## CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015

Respectfully submitted,

  
Barbara Baird

**PROOF OF SERVICE**

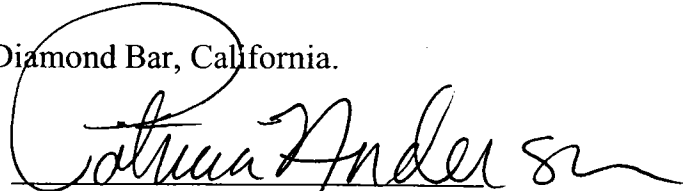
I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

**BY MAIL:** I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.

  
Patricia Anderson

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SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,  
*Plaintiffs and Appellants*

v.

COUNTY OF FRESNO,  
*Defendant and Respondent*

FRIANT RANCH, L.P.,  
*Real Party in Interest and Respondent*

SUPREME COURT  
FILED

APR 13 2015

Frank A. McGuire, Clerk  
Deputy

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After a Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726

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**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND  
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
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REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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## APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

### **1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District**

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality



conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a “serious nonattainment” area to come into attainment of health-based National Ambient Air Quality Standard (“NAAQS”) for coarse particulate matter (PM10), an achievement made even more notable given the Valley’s extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of “extreme” nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates “smog” and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to “offset” vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)<sup>1</sup>, ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

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<sup>1</sup> San Joaquin’s incentive program has been so successful that through 2012, it has awarded over \$ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. See SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) available at <http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206%20Incentives.pdf>.

Valley counties and cities that implement the California Environment Quality Act (CEQA).<sup>2</sup> In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.<sup>3</sup> Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.<sup>4</sup> For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.<sup>5</sup>

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

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<sup>2</sup> See, e.g., SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), available at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf) ("CEQA Guidance").

<sup>3</sup> Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

<sup>4</sup> See, e.g., CEQA Guidance at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), pp. 64-66, 80.

<sup>5</sup> See, e.g., CEQA Guidance at [http://www.valleyair.org/transportation/GAMAQI\\_3-19-15.pdf](http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf), pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).<sup>6</sup> The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

## **2. How the Proposed Amicus Curiae Brief Will Assist the Court**

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

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<sup>6</sup> CEQA does not require speculation. *See, e.g., Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

**Rule 8.520 Disclosure**

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

**CONCLUSION**

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015



Annette A. Ballatore-Williamson  
District Counsel  
Attorney for Proposed Amicus Curiae

SAN JOAQUIN VALLEY UNIFIED  
AIR POLLUTION CONTROL  
DISTRICT

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

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SIERRA CLUB, REVIVE THE SAN JOAQUIN, and  
LEAGUE OF WOMEN VOTERS OF FRESNO,  
*Plaintiffs and Appellants*

v.

COUNTY OF FRESNO,  
*Defendant and Respondent*

FRIANT RANCH, L.P.,  
*Real Party in Interest and Respondent*

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After a Decision by the Court of Appeal, filed May 27, 2014  
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno  
Case No. 11CECG00726

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**AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND  
REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.**

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## I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District (“Air District”) respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report (“EIR”) for the Friant Ranch development project was inadequate under the California Environmental Quality Act (“CEQA”) because it did not include an analysis of the correlation between the project’s criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court’s holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as “TACs”) regulated by the United States Environmental Protection Agency (“EPA”) and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health,

they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully

appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

**II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.**

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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**A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.**

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.<sup>1</sup> Once formed, ozone can be transported long distances by wind.<sup>2</sup> Because of the complexity of ozone formation, a specific tonnage amount of NO<sub>x</sub> or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NO<sub>x</sub> or VOCs can have high levels of ozone concentration simply due to wind transport.<sup>3</sup> Conversely, the San Francisco Bay Area has six times more NO<sub>x</sub> and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

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<sup>1</sup> See United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: <http://www.epa.gov/airquality/ozonepollution/basic.html> (visited March 10, 2015).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.<sup>4</sup>

Particulate matter (“PM”) can be divided into two categories: directly emitted PM and secondary PM.<sup>5</sup> While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.<sup>6</sup> Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SO<sub>x</sub>) and NO<sub>x</sub>.<sup>7</sup> Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NO<sub>x</sub>, SO<sub>x</sub> and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards (“NAAQS”), which are statutorily required to be set by the United States Environmental Protection

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<sup>4</sup> *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Ozone\\_2007\\_Adopted/03%20Executive%20Summary.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf) (visited March 10, 2015).

<sup>5</sup> United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: <http://www.epa.gov/airquality/particlepollution/basic.html> (visited March 10, 2015).

<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

Agency (“EPA”) at levels that are “requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.<sup>8</sup>

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.<sup>9</sup> Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District’s tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO<sub>x</sub>, SO<sub>x</sub> and VOCs) and the atmospheric chemistry and meteorology of the Valley.<sup>10</sup> At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

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<sup>8</sup> See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: <http://www.epa.gov/air/criteria.html#3> (visited March 10, 2015).

<sup>9</sup> *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf](http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf) (visited March 10, 2015).

<sup>10</sup> *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM<sub>2.5</sub> Plan*, Appendix F, pp. F-2 – F-5, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AQ\\_Final\\_Adopted\\_PM2.5/20%20Appendix%20F.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf) (visited March 19, 2015).



emissions Valley wide.<sup>11</sup> Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.<sup>12</sup>

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.<sup>13</sup> The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.<sup>14</sup> This "offset"

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<sup>11</sup> *Id.*

<sup>12</sup> Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. See San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: <http://www.valleyair.org/rules/currntrules/Rule22010411.pdf> (visited March 19, 2015).

<sup>13</sup> *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: <http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf> (visited March 30, 2015).

<sup>14</sup> *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.<sup>15</sup> In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club, supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, “cumulative impacts.”

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

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<sup>15</sup> <sup>15</sup> *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: [http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000\\_.pdf](http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20August%202000_.pdf) (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NO<sub>x</sub> inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.<sup>16</sup> Running the photochemical grid model used for predicting ozone attainment with the

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<sup>16</sup> *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9, available at: [http://www.valleyair.org/Air\\_Quality\\_Plans/docs/AO\\_Ozone\\_2007\\_Adopted/19%20Appendix%20B%20April%202007.pdf](http://www.valleyair.org/Air_Quality_Plans/docs/AO_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf) (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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**B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.**

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated

with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

[t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)<sup>17</sup> The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)<sup>18</sup> The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

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<sup>17</sup> Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

<sup>18</sup> Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "[T]he objections must be sufficiently specific so that the agency has the



opportunity to evaluate and respond to them.’ [Citation.]” *Sierra Club v. City of Orange*, 163 Cal.App.4<sup>th</sup> at 536.<sup>19</sup>

As discussed above, the City’s comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since “[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action.” *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4<sup>th</sup> 1184, 1199, 22 Cal.Rptr.3d 203.

### III. CONCLUSION

For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal’s decision requiring an analysis correlating the localized human health impacts associated with an individual project’s criteria air pollutant emissions be reversed.

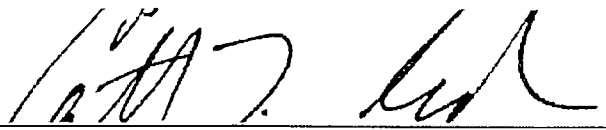
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<sup>19</sup> *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or “piecemealed” the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as “*the use of a single document for both a project-level and a program-level EIR [is] ‘confusing’*,” and “[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,” were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4<sup>th</sup> at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015



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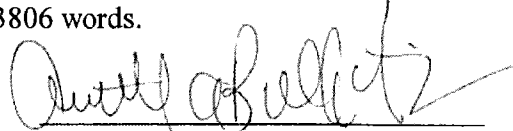
Catherine T. Redmond  
Attorney for Proposed Amicus  
Curiae

SAN JOAQUIN VALLEY  
UNIFIED  
AIR POLLUTION CONTROL  
DISTRICT

## CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015



Annette A. Ballatore-Williamson  
District Counsel (SBN 192176)

*Sierra Club et al, v. County of Fresno, et al*  
**Supreme Court of California Case No.: S219783**  
Fifth District Court of Appeal Case No.: F066798  
Fresno County Superior Court Case No.: 11CECG00726

**PROOF OF SERVICE**

I am over the age of 18 years and not a party to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

**APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF  
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN  
SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO**

On all parties to this action at the following addresses and in the following manner:

**PLEASE SEE ATTACHED SERVICE LIST**

- (XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.
- ( ) **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.
- ( ) **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.

  
\_\_\_\_\_  
Esthela Soto

**SERVICE LIST**

***Sierra Club et al, v. County of Fresno, et al***

**Supreme Court of California Case No.: S219783**

**Fifth District Court of Appeal Case No.: F066798**

**Fresno County Superior Court Case No.: 11CECG00726**

Sara Hedgpeth-Harris, Esq. LAW OFFICE OF SARA HEDGPETH-HARRIS 2125 Kern Street, Suite 301 Fresno, California 93721 Telephone: (559) 233-0907 Facsimile: (559) 272-6046 Email: <a href="mailto:sara.hedgpethharris@shh-law.com">sara.hedgpethharris@shh-law.com</a>	Attorney for Plaintiffs and Appellants, Sierra Club, et al
Daniel C. Cederborg, Esq. Bruce B. Johnson, Jr., Esq. OFFICE OF THE FRESNO COUNTY COUNSEL 2220 Tulare Street, Suite 500 Fresno, California 93721 Telephone: (559) 600-3479 Facsimile: (559) 600-3480 Email: <a href="mailto:bjohnson@co.fresno.ca.us">bjohnson@co.fresno.ca.us</a>	Attorneys for Defendant and Respondent, County of Fresno
Bryan N. Wagner, Esq. WAGNER & WAGNER 7110 N. Fresno Street, Suite 340 Fresno, California 93720 Telephone: (559) 224-0871 Facsimile: (559) 224-0885 Email: <a href="mailto:bryan@wagnerandwagner.com">bryan@wagnerandwagner.com</a>	Attorneys for Real Party in Interest/Respondent Friant Ranch, L.P.
Clerk of the Court Superior Court of California County of Fresno 1130 'O' Street Fresno, California 93721 Telephone: (559) 457-1900	
Clerk of the Court Fifth District Court of Appeal 2424 Ventura Street Fresno, California 93721 Telephone: (559) 445-5491	

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<p>Marcia L. Scully, Esq.  General Counsel  <b>METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA</b>  Post Office Box 54153  Los Angeles, California 90054  Telephone: (213) 217-6115</p>	<p>Attorney for Amicus Curiae, The Metropolitan Water District of Southern CA</p>
<p>Amy Minter, Esq.  <b>CHATEN-BROWN &amp; CARSTENS LLP</b>  2200 Pacific Coast Highway, Suite 318  Hermosa Beach, California 90254  Telephone: (310) 798-2400  Facsimile: (310) 798-2402  Email: <a href="mailto:ACM@CBCEarthlaw.com">ACM@CBCEarthlaw.com</a></p>	<p>Attorney for Amici Curiae, Association of Irrigated Residents, Medical Advocates for Healthy Air, and Coalition for Clean Air</p>
<p>Shanda M. Beltran, Esq.  General Counsel  <b>BUILDING INDUSTRY LEGAL DEFENSE FOUNDATION</b>  17744 Sky Park Cr., Suite 170  Irvine, California 92614  Telephone: (949) 553-9500  Facsimile: (949) 769-8943  Email: <a href="mailto:sbeltran@biasec.org">sbeltran@biasec.org</a></p>	<p>Attorney for Amicus Curiae, Building Industry Legal Defense Foundation</p>
<p>Gene Talmadge, President  <b>CALIFORNIA ASSOCIATION OF ENVIRONMENTAL PROFESSIONALS</b>  40747 Baranda Court  Palm Desert, California 92260  Telephone: (760) 340-4499  Facsimile: (760) 674-2479</p>	<p>Attorney for Amicus Curiae, California Association of Environmental Professionals</p>
<p>Jennifer L. Hernandez, Esq.  <b>HOLLAND &amp; KNIGHT LLP</b>  50 California Street, Suite 2800  San Francisco, California 94111</p>	<p>On behalf of Amicus Curiae, CEQA Research Council</p>

Telephone: (415) 743-6927 Facsimile: (415) 743-6910 Email: <a href="mailto:Jennifer.hernandez@hklaw.com">Jennifer.hernandez@hklaw.com</a>	
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**Appendix 5.13-1**

**Noise Appendix**





# LOCAL REGULATIONS AND STANDARDS

## 88-3.612 - Noise.

- (a) Except as provided in subsection (b) of this section, a commercial WECS may not generate or emit any noise at any time that exceeds a maximum level of sixty-five decibels (dBA), as measured at each line of the exterior project boundary.
- (b) A land use permit issued for a commercial WECS may authorize a maximum noise level that exceeds the level specified in subsection (a) if the commercial WECS is adjacent to an already-existing or approved commercial WECS and upon a finding that existing legal offsite residences and general plan-designated residential areas will not be adversely affected.
- (c) A residential WECS may not generate or emit any noise at any time that exceeds a maximum level of sixty decibels (dBA), as measured at each line of the parcel upon which the residential WECS is installed.
- (d) The measurement of commercial or residential WECS noise levels may not be adjusted for, or averaged with, periods of non-operation of the WECS. A site-specific noise study may be required to confirm compliance with the applicable noise standard. If noise generated or emitted by a commercial or residential WECS exceeds the applicable standard, the WECS operator must take measures necessary to comply with the standard, which may include discontinued operation of one or more WECS.

(Ord. No. 2011-04, § VI, 4-5-11; Ord. 85-39 § 4).

## 82-44.410 - Conditions.

- (a) The zoning administrator may condition the issuance of a temporary events permit by imposing any of the following requirements concerning the time, place, and manner of the event. The zoning administrator may consult with public works, fire, and law enforcement officials and may impose time, place, and manner conditions that are requested by those officials, provided the requested conditions are among the conditions specified below. No conditions other than those specified below may be placed on a permit. Conditions may not restrict expressive activity or the content of speech.
- (1) Alteration of the date, time, route or location of the event proposed on the application.
  - (2) Conditions concerning accommodation of pedestrian or vehicular traffic.
  - (3) Conditions concerning parking, including but not limited to requirements for the use of shuttles from parking areas to the venue.
  - (4) Conditions concerning traffic control, including but not limited to requirements for the use of traffic cones or barricades.
  - (5) Requirements for provision of on-site restrooms.
  - (6) Requirements for use of security responsible for crowd control, fire watch, general security, and evacuation of occupants.
  - (7) Conditions concerning maximum occupancy, based on the size of the venue and for purposes of minimizing impacts on traffic and parking. In imposing conditions concerning maximum occupancy, the zoning administrator may consider the lot size of the event venue, proximity of surrounding residences, density of the underlying zoning district, and the location and size of any buildings between the venue and surrounding properties.
  - (8) Restrictions on the number and type of structures at the event, and inspection and approval of structures.
  - (9) Compliance with animal protection ordinances and laws.
  - (10) Requirements for use of garbage containers and cleanup.
  - (11) Conditions limiting the duration of time and hours of the event (including the time to prepare and clean up the venue) in order to minimize impacts on traffic and parking.
  - (12) Time, place, and manner restrictions on the use of amplified sound. The use of amplified sound is prohibited in a residential district unless allowed as a condition of a temporary event permit.
- (b) When a temporary event permit is granted for any event in a residential zoning district or at a residence in any other zoning district, it is granted subject to the following conditions:
- (1) The event shall not generate or emit any noise or sound that exceeds any of the levels specified in the table below measured at the exterior of any dwelling unit located on another

residential property. The noise generated or emitted shall not exceed the levels specified in the table for the duration of time specified in the table. Exterior noise levels shall be measured with a sound level meter. The permit shall incorporate the applicable "allowable exterior noise levels" specified in the table into the permit conditions only for the duration of time allowed for the event by the permit. For example, if the permit provides that an event shall end by seven p.m., the "allowable exterior noise levels" allowed between nine a.m. and eight p.m. shall be incorporated into the conditions, but the event must end by seven p.m.

#### Allowable Exterior Noise Levels

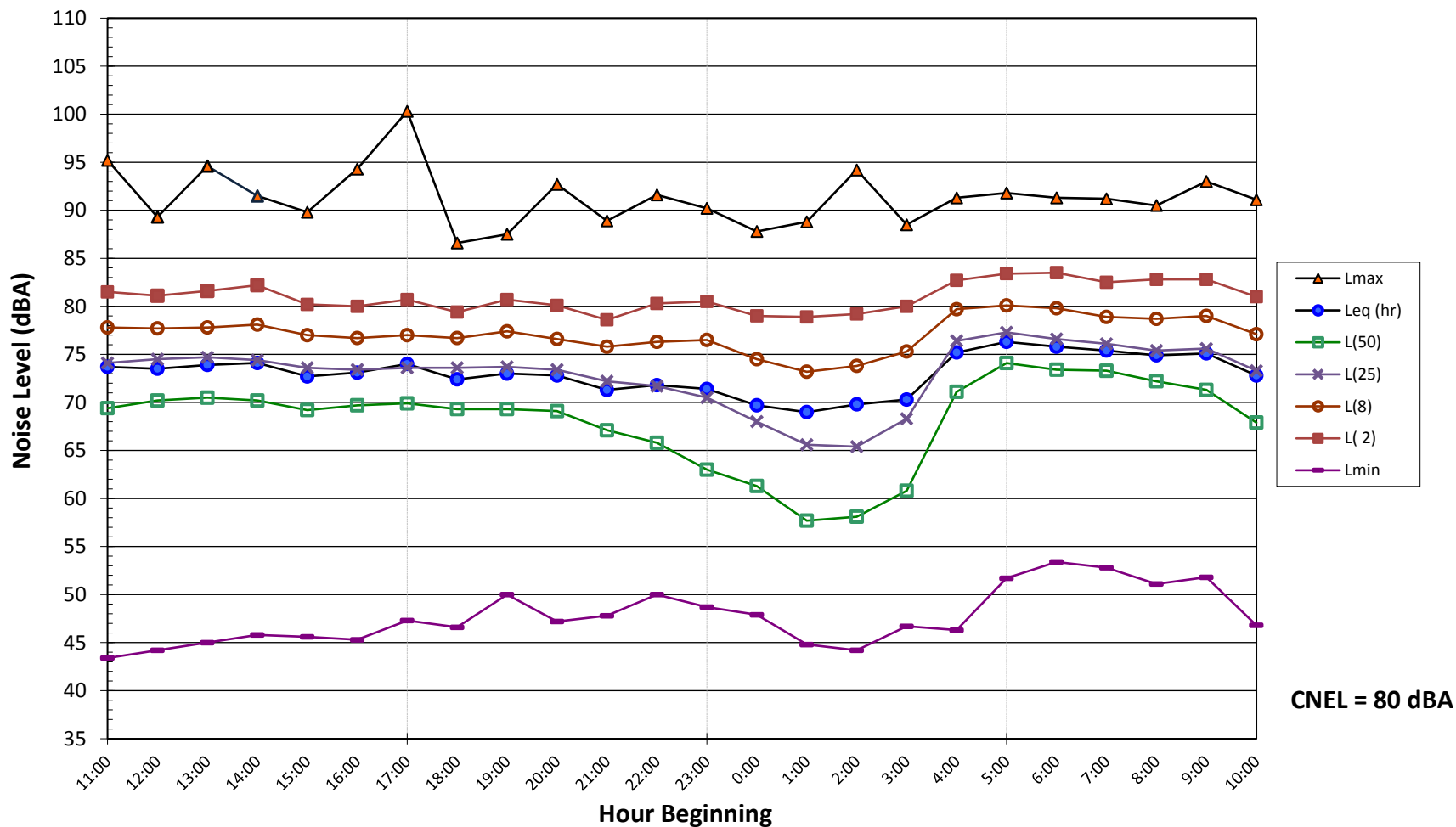
Cumulative Duration of Noise	9 a.m. - 8 p.m.	8 p.m. - 10 p.m.
30 minutes per hour	60 dBA	<u>55</u> dBA
15 minutes per hour	65 dBA	60 dBA
5 minutes per hour	70 dBA	65 dBA
1 minute per hour	75 dBA	70 dBA
Level not to be exceeded at any time	80 dBA	75 dBA

- (2) Amplified sound is prohibited after eight p.m. Sundays through Thursdays and after ten p.m. Fridays, Saturdays, and holidays. A temporary event permit shall not allow the use of amplified sound after these hours.

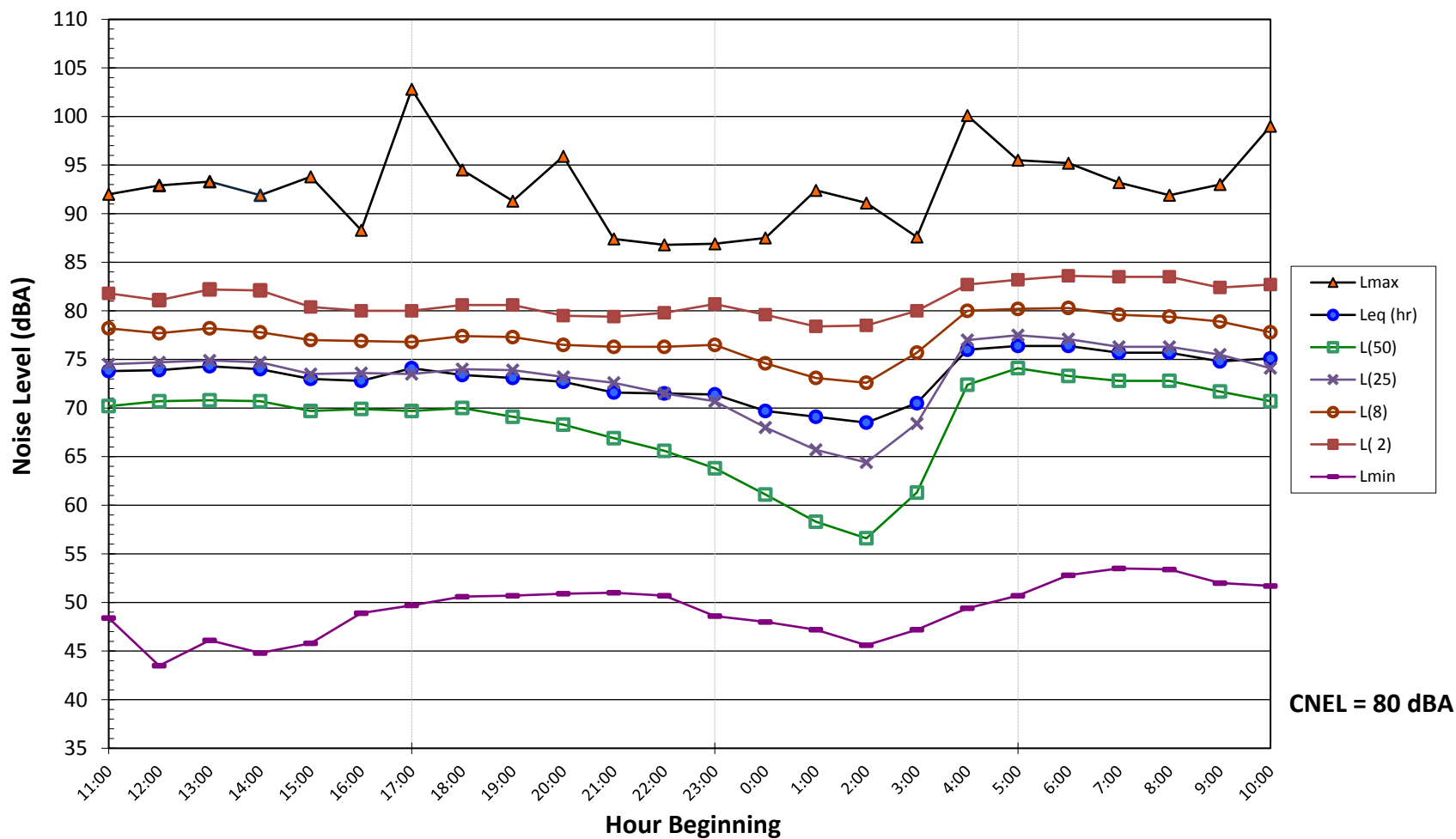
(Ord. No. 2010-11, § V, 7-13-10; Ord. 2005-25 § 2).

# NOISE MONITORING LONG-TERM GRAPHS

**Noise Levels at Noise Measurement Site LT-1  
 Contra Costa County, CA - General Plan Update  
 Tuesday, April 23, 2019**

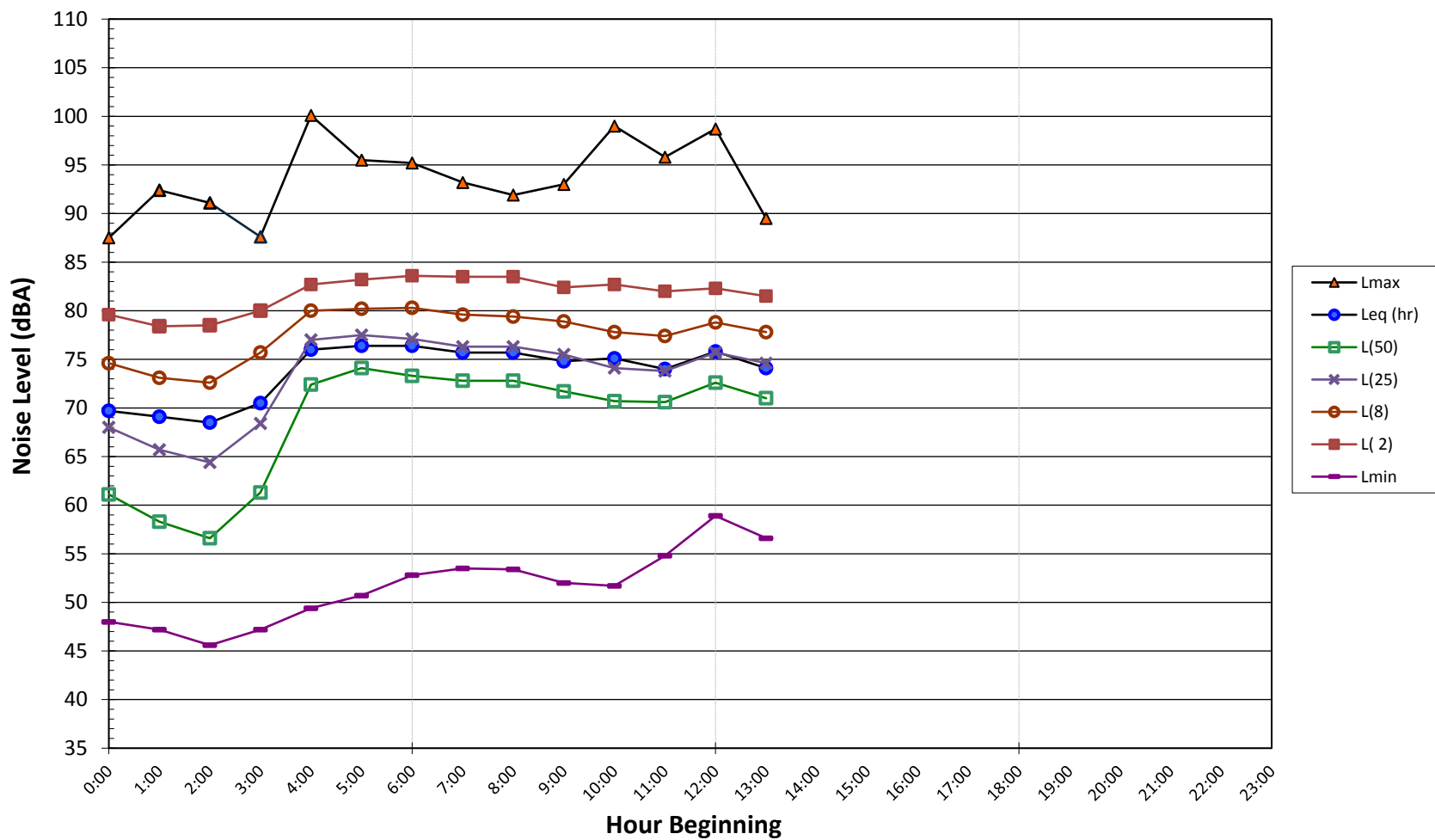


**Noise Levels at Noise Measurement Site LT-1  
 Contra Costa County, CA - General Plan Update  
 Wednesday, April 24, 2019**

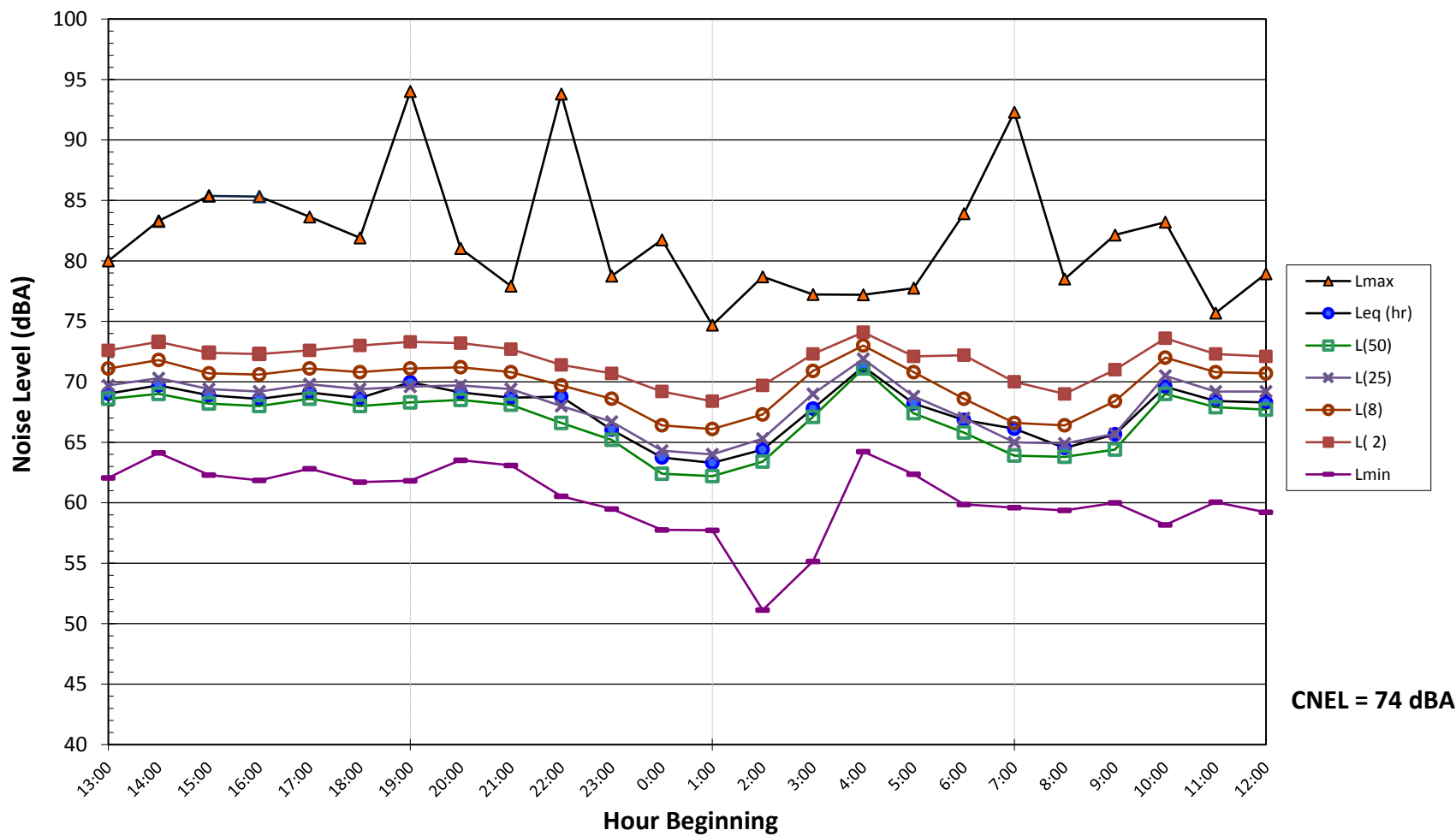




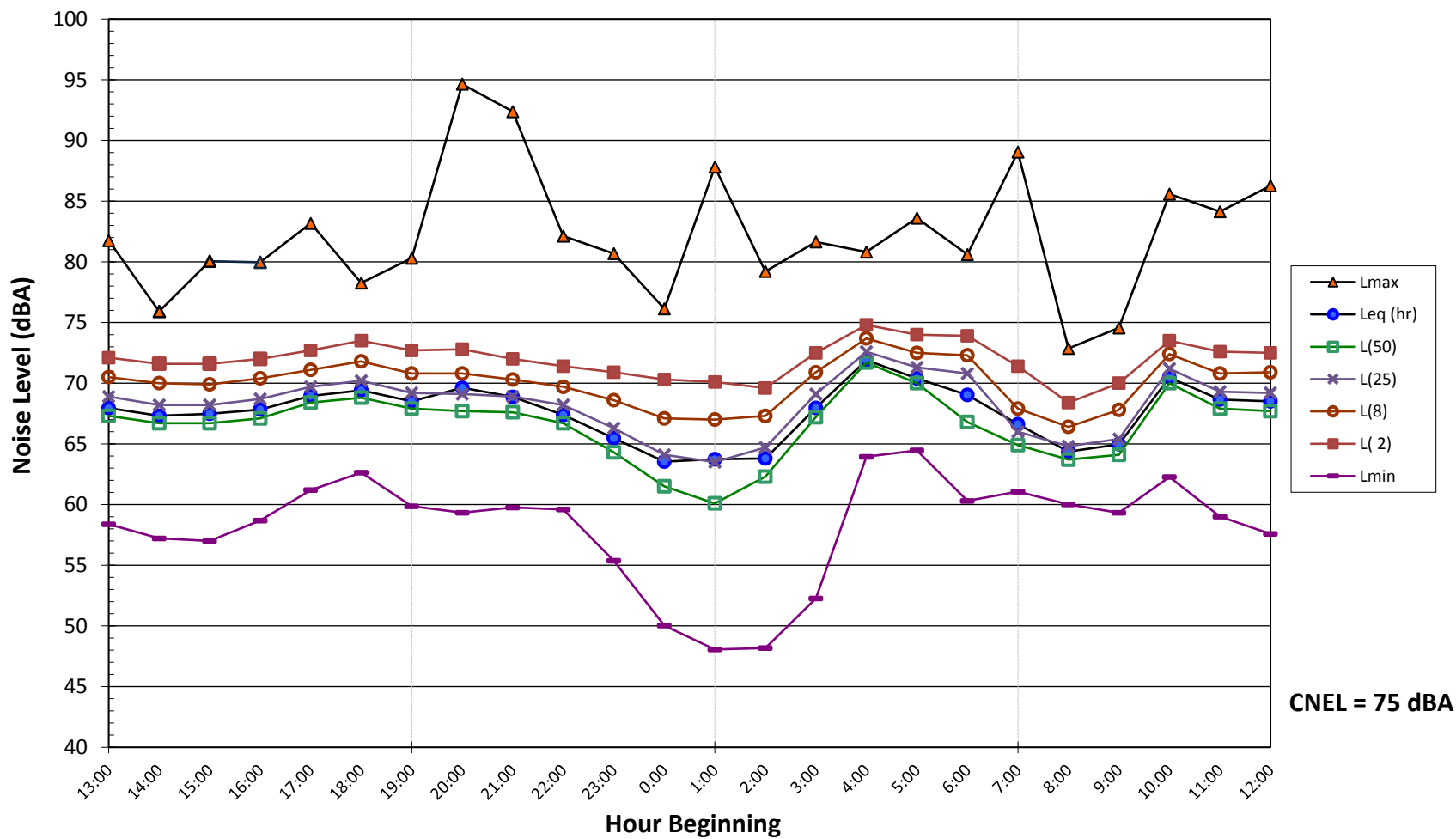
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 Contra Costa County, CA - General Plan Update  
 Thursday, April 25, 2019**



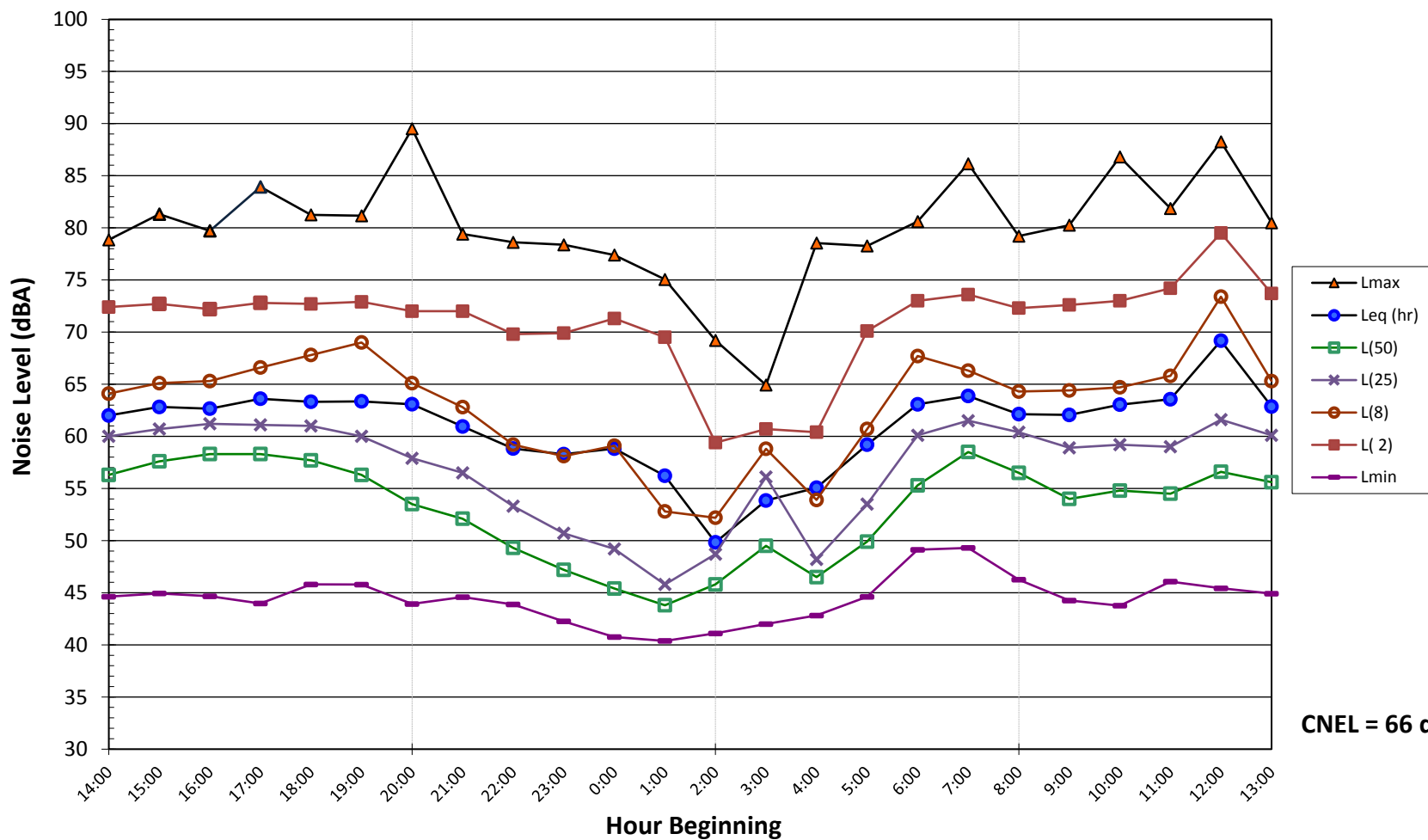
**Noise Levels at Noise Measurement Site LT-2  
 Contra Costa County, CA - General Plan Update  
 Tuesday, April 23, 2019**



**Noise Levels at Noise Measurement Site LT-2  
Contra Costa County, CA - General Plan Update  
Wednesday, April 24, 2019**

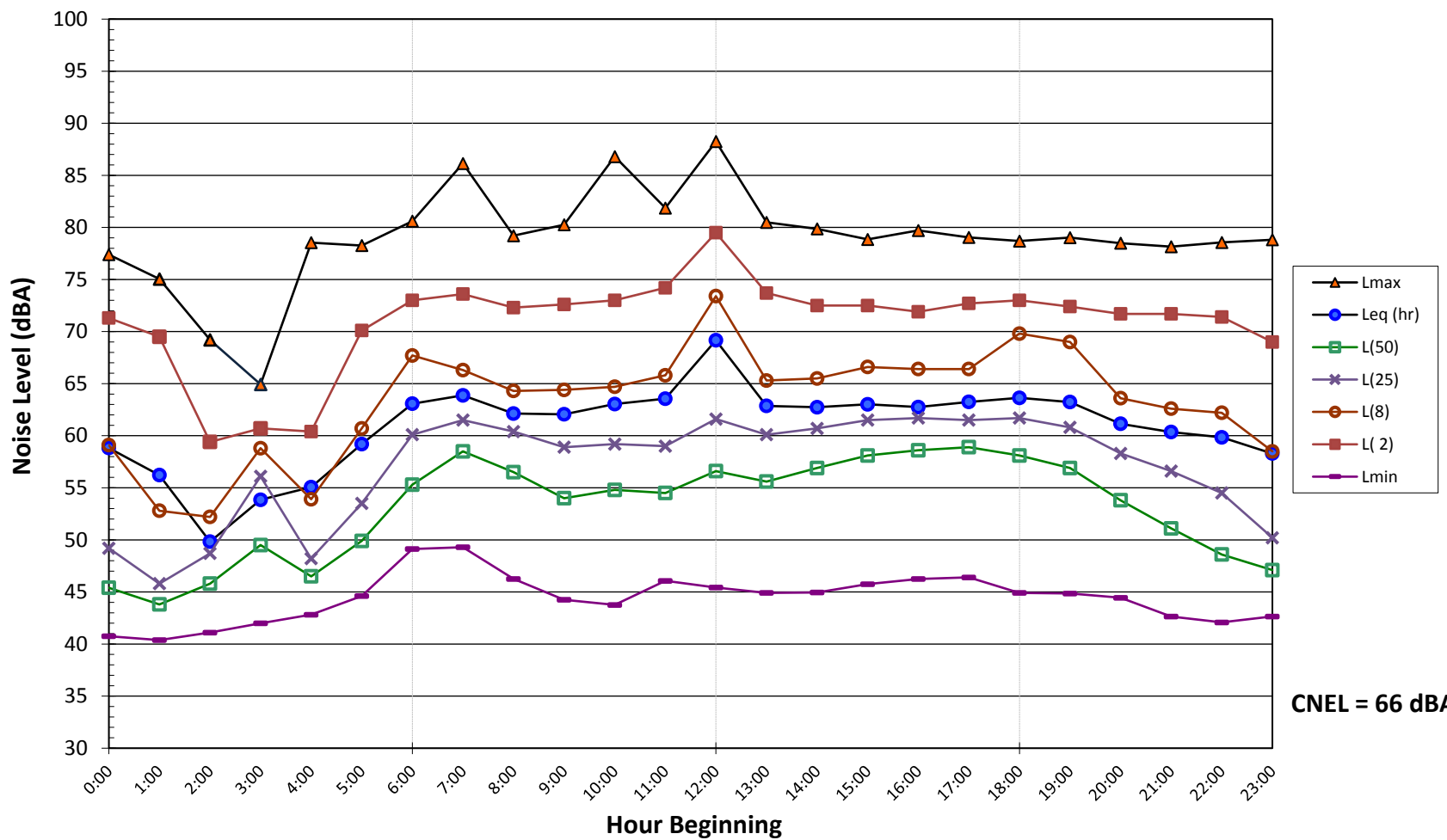


**Noise Levels at Noise Measurement Site LT-3  
Contra Costa County, CA - General Plan Update  
Tuesday, April 23, 2019**



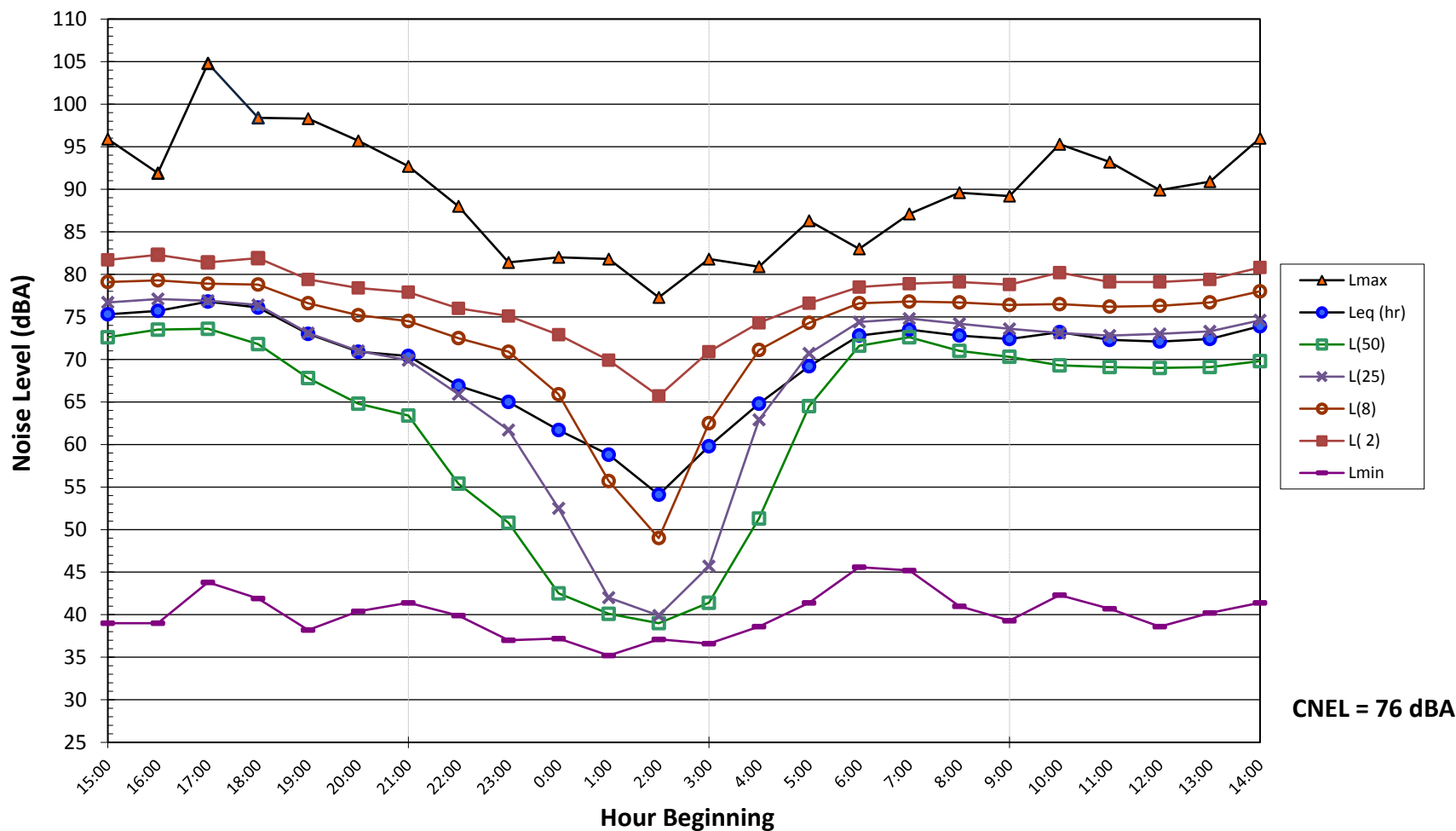
**CNEL = 66 dBA**

**Noise Levels at Noise Measurement Site LT-3  
 Contra Costa County, CA - General Plan Update  
 Wednesday, April 24, 2019**



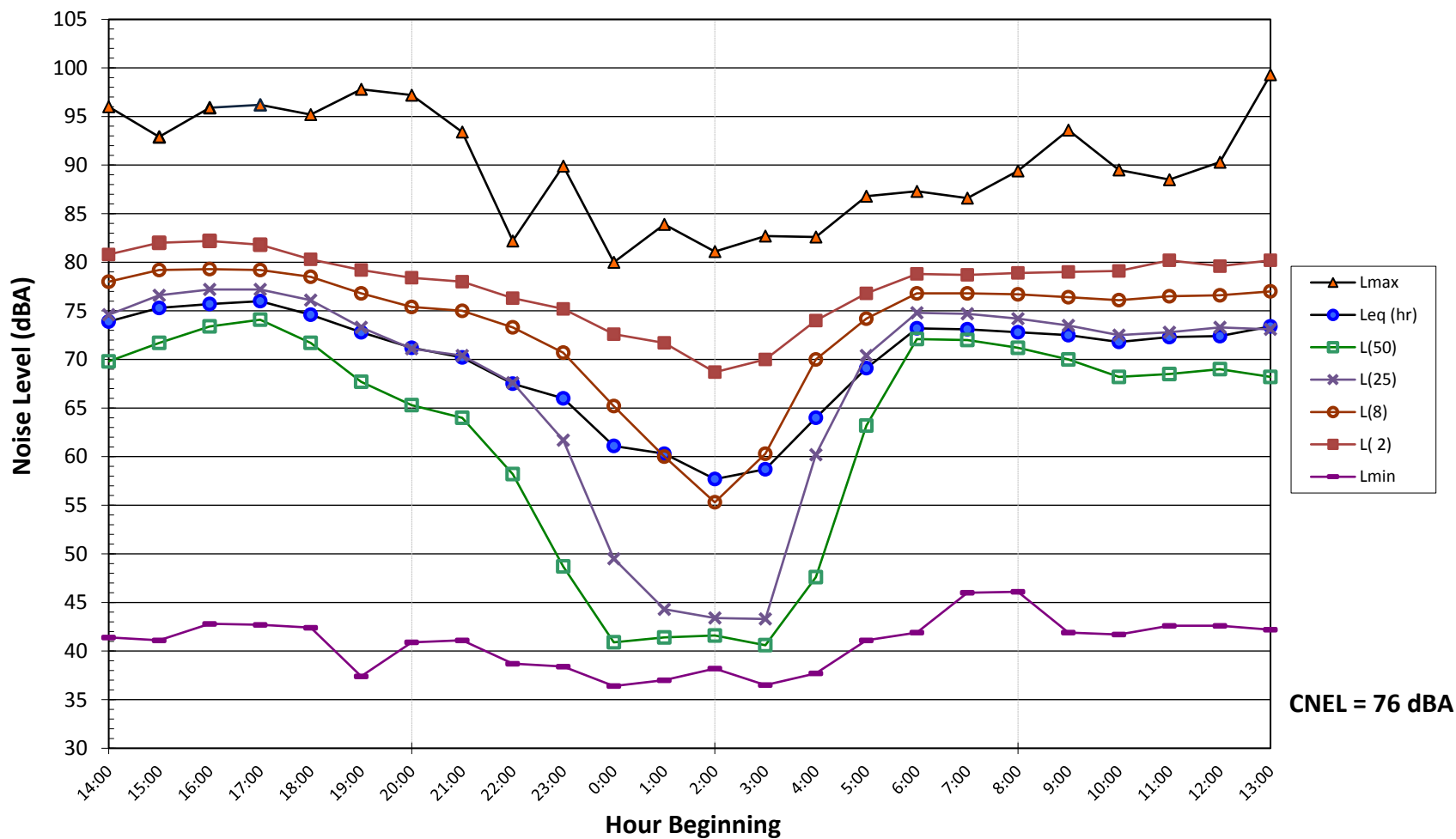
**CNEL = 66 dBA**

**Noise Levels at Noise Measurement Site LT-4  
 Contra Costa County, CA - General Plan Update  
 Tuesday, April 23, 2019**



**CNEL = 76 dBA**

### Noise Levels at Noise Measurement Site LT-4 Contra Costa County, CA - General Plan Update Wednesday, April 24, 2019



CNEL = 76 dBA

# EXISTING CONDITIONS RAIL MODELING



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	50
Future Train Speed (mph)	50
Number of Existing Trains in one Direction	9
Number of Future Trains in one Direction	9
Existing Number of Day Trains (7 am to 10 p.m.)	7
Future Number of Day Trains (7 am to 10 p.m.)	7
Existing Number of Night Trains (10 p.m. to 7 am)	2
Future Number of Night Trains (10 p.m. to 7 am)	2
Existing Average Number of Cars	44
Future Average Number of Cars	44
Existing Average Number of Locomotives	2.3
Future Average Number of Locomotives	2.3

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

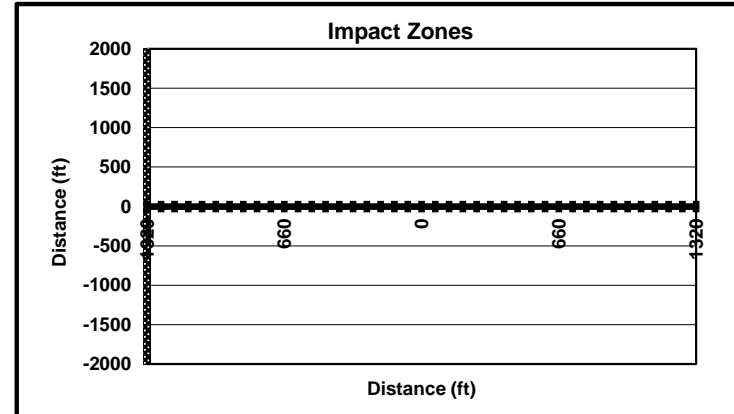
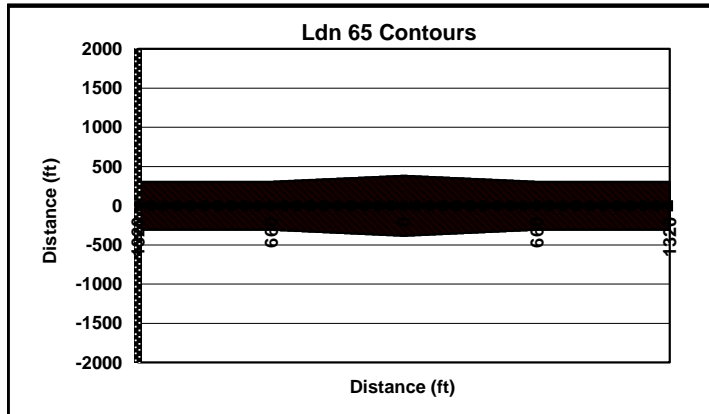
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	382
Future 65 Ldn Contour at X-ing	382
Existing 65 Ldn Contour at 1/2 zone length	305
Future 65 Ldn Contour at 1/2 zone length	305
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	50
Future Train Speed (mph)	50
Number of Existing Trains in one Direction	4
Number of Future Trains in one Direction	4
Existing Number of Day Trains (7 am to 10 p.m.)	2
Future Number of Day Trains (7 am to 10 p.m.)	2
Existing Number of Night Trains (10 p.m. to 7 am)	2
Future Number of Night Trains (10 p.m. to 7 am)	2
Existing Average Number of Cars	50
Future Average Number of Cars	50
Existing Average Number of Locomotives	4
Future Average Number of Locomotives	4

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

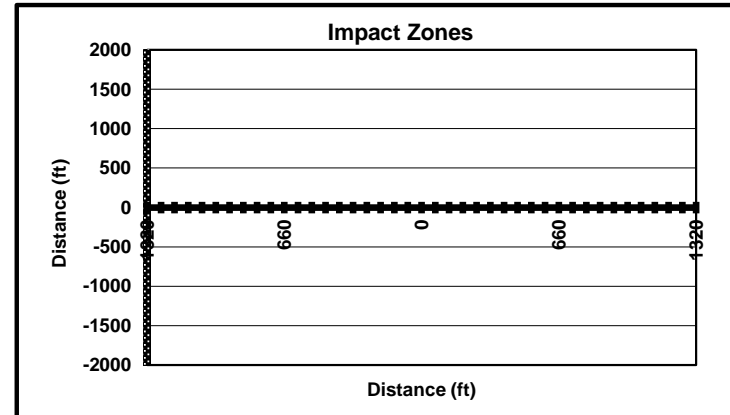
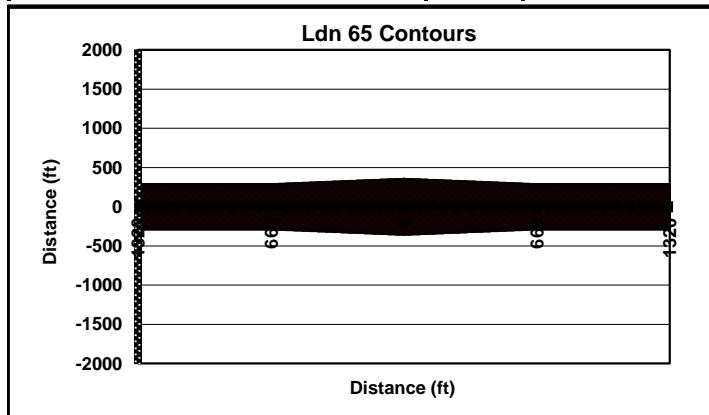
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	355
Future 65 Ldn Contour at X-ing	355
Existing 65 Ldn Contour at 1/2 zone length	286
Future 65 Ldn Contour at 1/2 zone length	286
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	1
Number of Future Trains in one Direction	1
Existing Number of Day Trains (7 am to 10 p.m.)	1
Future Number of Day Trains (7 am to 10 p.m.)	1
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

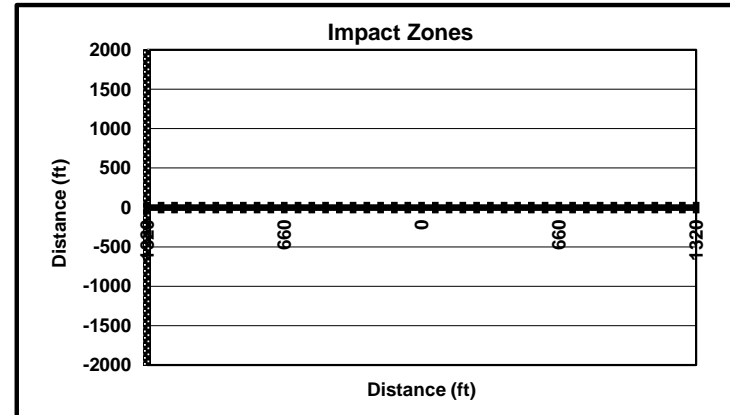
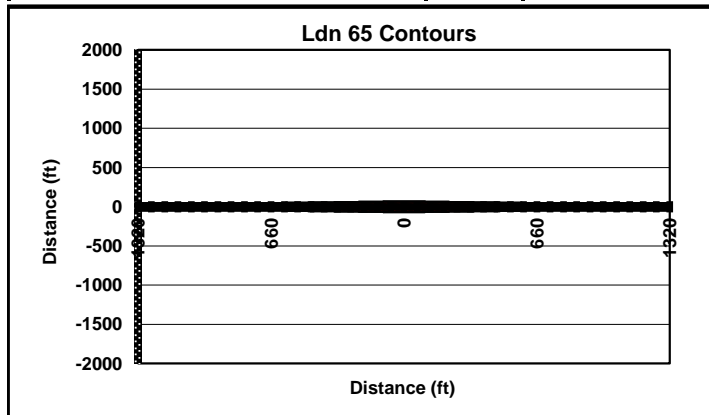
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	69
Future 65 Ldn Contour at X-ing	69
Existing 65 Ldn Contour at 1/2 zone length	47
Future 65 Ldn Contour at 1/2 zone length	47
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	1
Number of Future Trains in one Direction	1
Existing Number of Day Trains (7 am to 10 p.m.)	1
Future Number of Day Trains (7 am to 10 p.m.)	1
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

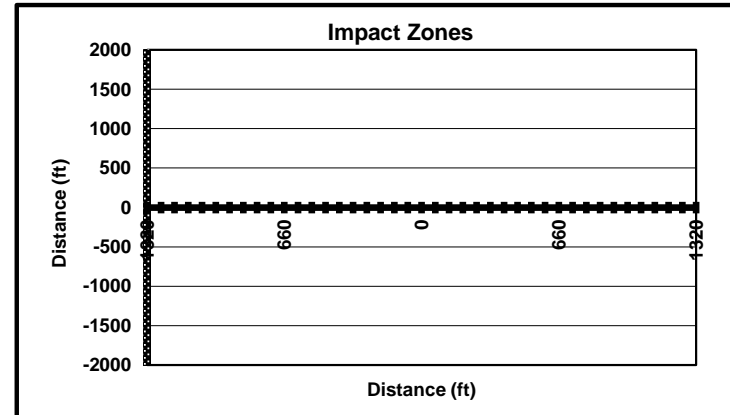
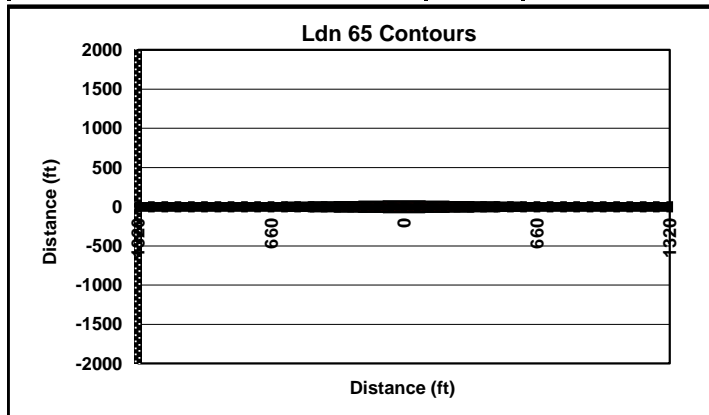
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	69
Future 65 Ldn Contour at X-ing	69
Existing 65 Ldn Contour at 1/2 zone length	47
Future 65 Ldn Contour at 1/2 zone length	47
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	7
Number of Future Trains in one Direction	7
Existing Number of Day Trains (7 am to 10 p.m.)	7
Future Number of Day Trains (7 am to 10 p.m.)	7
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive		
National Average (50% front, 50% middle)	1	
All Front Mounted	2	
All Middle Mounted	3	
User Defined	80 % front mounted horns	4

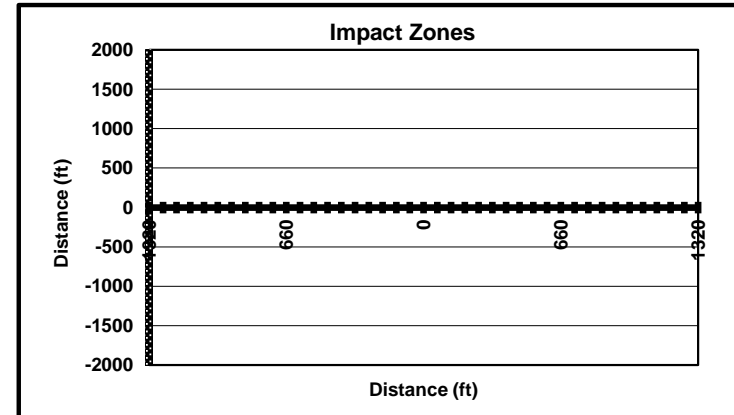
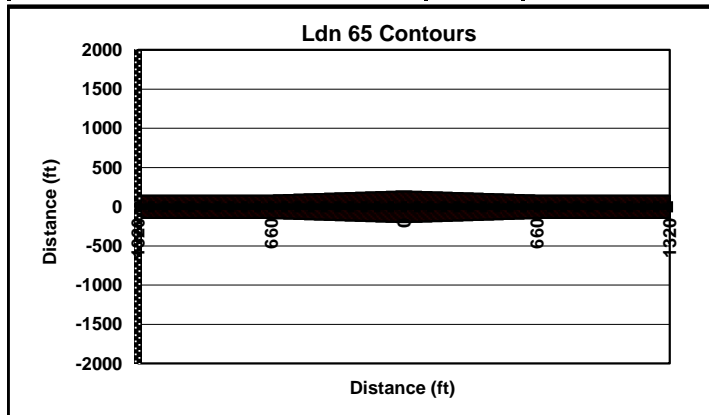
Non Train Noise Environment		
Urban	1	
Suburban	2	
Rural	3	
User Defined Ldn =	50 dBA	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	195
Future 65 Ldn Contour at X-ing	195
Existing 65 Ldn Contour at 1/2 zone length	142
Future 65 Ldn Contour at 1/2 zone length	142
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	11
Number of Future Trains in one Direction	11
Existing Number of Day Trains (7 am to 10 p.m.)	11
Future Number of Day Trains (7 am to 10 p.m.)	11
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

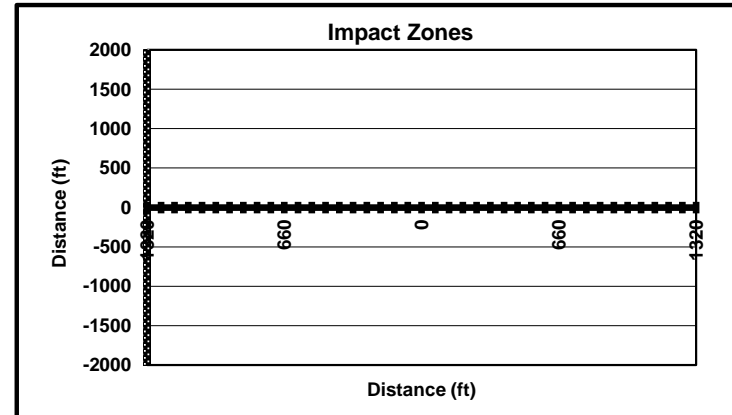
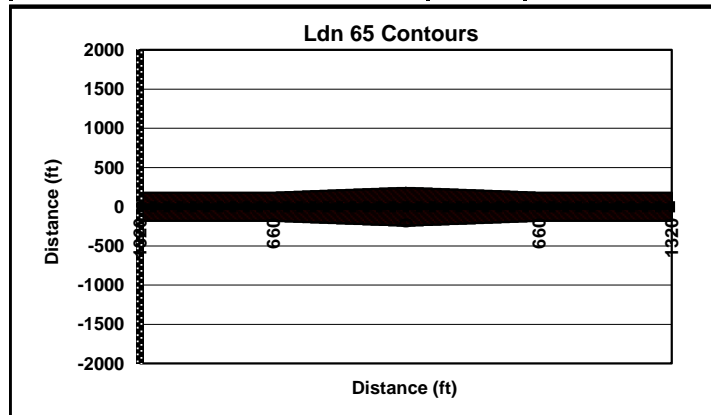
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	241
Future 65 Ldn Contour at X-ing	241
Existing 65 Ldn Contour at 1/2 zone length	178
Future 65 Ldn Contour at 1/2 zone length	178
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	97
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	50
Future Train Speed (mph)	50
Number of Existing Trains in one Direction	5
Number of Future Trains in one Direction	5
Existing Number of Day Trains (7 am to 10 p.m.)	5
Future Number of Day Trains (7 am to 10 p.m.)	5
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	5
Future Average Number of Cars	5
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

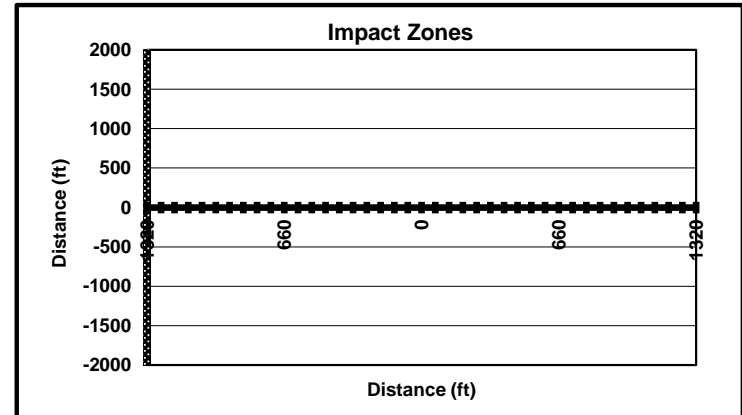
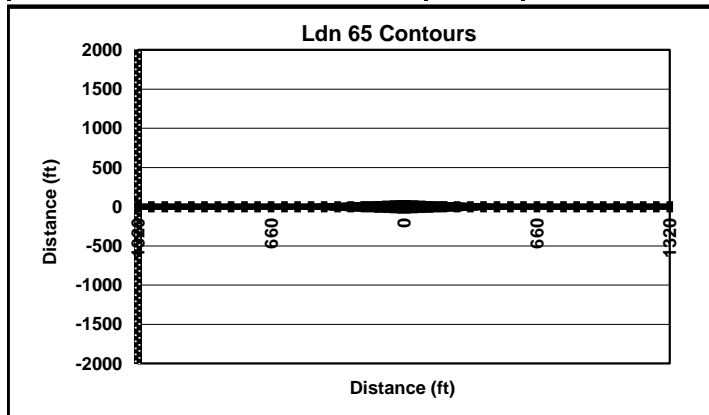
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	73
Future 65 Ldn Contour at X-ing	73
Existing 65 Ldn Contour at 1/2 zone length	0
Future 65 Ldn Contour at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: BNSF Richmond Yard Existing

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	61	58
Source 1	64	60	57
Source 2	59	55	52
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS					
Parameter	Source 1		Source 2		Source 3
Source Num.	Freight Locomotive	9	Freight Cars	10	
Distance (source to receiver)	distance (ft)	35	distance (ft)	35	
Daytime Hours (7 AM - 10 PM)	speed (mph)	10	speed (mph)	10	
	trains/hour	0.8	trains/hour	0.8	
	locos/train	1	length of cars (ft) / train	600	
Nighttime Hours (10 PM - 7 AM)	speed (mph)	10	speed (mph)	10	
	trains/hour	0.444	trains/hour	0.444	
	locos/train	1	length of cars (ft) / train	600	
Wheel Flats?		0.00%	% of cars w/ wheel flats	0.00%	
Jointed Track?	Y/N	n	Y/N	n	
Embedded Track?	Y/N	n	Y/N	n	
Aerial Structure?	Y/N	n	Y/N	n	
Barrier Present?	Y/N	n	Y/N	n	
Intervening Rows of Buildings	number of rows	0	number of rows	0	



<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: BNSF Siberia Lead Existing

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	61	58
Source 1	64	60	57
Source 2	59	55	52
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	35	distance (ft)	35	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.8	trains/hour	0.8	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.444	trains/hour	0.444	
	locos/train	1	length of cars (ft) / train	600	
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: BNSF Stockton Sub Existing

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	57	59
Source 1	44	45	31
Source 2	40	42	9
Source 3	62	53	56
Source 4	63	54	56
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS								
Parameter	Source 1		Source 2		Source 3		Source 4	
Source Num.	Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Freight Locomotive	9	Freight Cars	10
Distance (source to receiver)	distance (ft)	210	distance (ft)	210	distance (ft)	210	distance (ft)	210
Daytime Hours (7 AM - 10 PM)	speed (mph)	50	speed (mph)	50	speed (mph)	50	speed (mph)	50
	trains/hour	0.667	trains/hour	0.667	trains/hour	0.267	trains/hour	0.267
	locos/train	1	cars/train	5	locos/train	4	length of cars (ft) / train	4000
Nighttime Hours (10 PM - 7 AM)	speed (mph)		speed (mph)		speed (mph)	50	speed (mph)	50
	trains/hour		trains/hour		trains/hour	0.444	trains/hour	0.444
	locos/train		cars/train		locos/train	4	length of cars (ft) / train	4000
Wheel Flats?		0.00%	% of cars w/ wheel flats	0.00%		0.00%	% of cars w/ wheel flats	0.00%
Jointed Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of Buildings	number of rows	0	number of rows	0	number of rows	0	number of rows	0

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: BNSF Stockton Past Port Chicago Existing

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	58	59
Source 1	62	53	56
Source 2	63	56	56
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	210	distance (ft)	210	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	50	speed (mph)	50	
	trains/hour	0.267	trains/hour	0.444	
	locos/train	4	length of cars (ft) / train	4000	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	50	speed (mph)	50	
	trains/hour	0.444	trains/hour	0.444	
	locos/train	4	length of cars (ft) / train	4000	
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC Chevron Lead Existing

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	66	53
Source 1	64	65	53
Source 2	57	59	36
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	5	distance (ft)	5	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.133	trains/hour	0.133	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	



<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC Cutting Lead Existing

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	66	53
Source 1	64	65	53
Source 2	57	59	36
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	5	distance (ft)	5	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.133	trains/hour	0.133	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC Harbor Lead Existing

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	67	46
Source 1	64	66	46
Source 2	59	61	29
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	15	distance (ft)	15	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.933	trains/hour	0.933	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC LRT Lead Existing

<b>RESULTS</b>			
<b>Noise Source</b>	<b>Ldn (dB)</b>	<b>Leq - daytime (dB)</b>	<b>Leq - nighttime (dB)</b>
<b>All Sources</b>	65	67	44
Source 1	64	66	44
Source 2	59	61	27
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
<b>Parameter</b>	<b>Source 1</b>		<b>Source 2</b>		<b>Source 3</b>
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	20	distance (ft)	20	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	1.467	trains/hour	1.467	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: UP Martinez Sub Existing East of Pinole

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	59
Source 1	52	51	43
Source 2	49	48	40
Source 3	61	52	54
Source 4	63	54	57
Source 5	48	40	42
Source 6	46	38	40
Source 7	42	42	32
Source 8	37	39	10

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS												
Parameter	Source 1			Source 2			Source 3			Source 4		
Source Num.	Commuter Diesel Locomotive			Commuter Rail Cars			Freight Locomotive			Freight Cars		
Distance (source to receiver)	175 distance (ft)			175 distance (ft)			175 distance (ft)			175 distance (ft)		
Daytime Hours (7 AM - 10 PM)	speed (mph) 50			speed (mph) 50			speed (mph) 40			speed (mph) 40		
	trains/hour 1.934			trains/hour 1.934			trains/hour 0.267			trains/hour 0.267		
Nighttime Hours (10 PM - 7 AM)	trains/hour 1			cars/train 5			locos/train 3			length of cars (ft) / train 5000		
	locos/train 1			cars/train 5			locos/train 3			length of cars (ft) / train 5000		
Wheel Flats?	0.00% % of cars w/ wheel flats			0.00% % of cars w/ wheel flats			0.00% % of cars w/ wheel flats			0.00% % of cars w/ wheel flats		
Jointed Track?	Y/N n			Y/N n			Y/N n			Y/N n		
Embedded Track?	Y/N n			Y/N n			Y/N n			Y/N n		
Aerial Structure?	Y/N n			Y/N n			Y/N n			Y/N n		
Barrier Present?	Y/N n			Y/N n			Y/N n			Y/N n		
Intervening Rows of Buildings	number of rows 0			number of rows 0			number of rows 0			number of rows 0		

SOURCE REFERENCE LIST	
Source	Number
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Source 1 and 2 = Amtrak San Joaquin and Capitol Corridor  
 Source 3 and 4 = Freight trains  
 Source 5 and 6 - Amtrak Coast Starlight  
 Sources 7 and 8 - Amtrak California Zephyr



Source 5		Source 6		Source 7		Source 8	
Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Commuter Diesel Locomotive	2	Commuter Rail Cars	3
distance (ft)	175	distance (ft)	175	distance (ft)	175	distance (ft)	175
speed (mph)	50	speed (mph)	50	speed (mph)	50	speed (mph)	50
trains/hour	0.067	trains/hour	0.067	trains/hour	0.133	trains/hour	0.133
locos/train	2	cars/train	13	locos/train	2	cars/train	8
speed (mph)	50	speed (mph)	50	speed (mph)	0	speed (mph)	0
trains/hour	0.111	trains/hour	0.111	trains/hour	0	trains/hour	0
locos/train	2	cars/train	13	locos/train	0	cars/train	0
	0.00%	% of cars w/ wheel flats	0.00%		0.00%	% of cars w/ wheel flats	0.00%
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
number of rows	0	number of rows	0	number of rows	0	number of rows	0

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: UP Martinez Sub Existing South of Pinole

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	59
Source 1	50	49	41
Source 2	49	48	41
Source 3	60	52	54
Source 4	63	55	57
Source 5	46	37	39
Source 6	46	38	40
Source 7	40	40	31
Source 8	37	39	9

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS								
Parameter	Source 1		Source 2		Source 3		Source 4	
Source Num.	Commuter Diesel Locomotive 2		Commuter Rail Cars 3		Freight Locomotive 9		Freight Cars 10	
Distance (source to receiver)	220 distance (ft)		220 distance (ft)		220 distance (ft)		220 distance (ft)	
Daytime Hours (7 AM - 10 PM)	speed (mph)	60	speed (mph)	60	speed (mph)	50	speed (mph)	50
	trains/hour	1.934	trains/hour	1.934	trains/hour	0.267	trains/hour	0.267
Nighttime Hours (10 PM - 7 AM)	locos/train	1	cars/train	5	locos/train	3	length of cars (ft) / train	5000
	speed (mph)	60	speed (mph)	60	speed (mph)	50	speed (mph)	50
Wheel Flats?	trains/hour	0.333	trains/hour	0.333	trains/hour	0.444	trains/hour	0.444
	locos/train	1	cars/train	5	locos/train	3	length of cars (ft) / train	5000
Jointed Track?	0.00%	% of cars w/ wheel flats	0.00%	0.00%	% of cars w/ wheel flats	0.00%	% of cars w/ wheel flats	0.00%
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of Buildings	number of rows	0	number of rows	0	number of rows	0	number of rows	0

SOURCE REFERENCE LIST	
Source	Number
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Source 1 and 2 = Amtrak San Joaquin and Capitol Corridor  
 Source 3 and 4 = Freight trains  
 Source 5 and 6 - Amtrak Coast Starlight  
 Sources 7 and 8 - Amtrak California Zephyr

Source 5		Source 6		Source 7		Source 8	
Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Commuter Diesel Locomotive	2	Commuter Rail Cars	3
distance (ft)	220	distance (ft)	220	distance (ft)	220	distance (ft)	220
speed (mph)	60	speed (mph)	60	speed (mph)	60	speed (mph)	60
trains/hour	0.067	trains/hour	0.067	trains/hour	0.133	trains/hour	0.133
locos/train	2	cars/train	13	locos/train	2	cars/train	8
speed (mph)	60	speed (mph)	60	speed (mph)	0	speed (mph)	0
trains/hour	0.111	trains/hour	0.111	trains/hour	0	trains/hour	0
locos/train	2	cars/train	13	locos/train	0	cars/train	0
	0.00%	% of cars w/ wheel flats	0.00%		0.00%	% of cars w/ wheel flats	0.00%
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
number of rows	0	number of rows	0	number of rows	0	number of rows	0

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: UP Tracy Sub Existing

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	67	51
Source 1	64	65	51
Source 2	60	62	29
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Commuter Diesel Locomotive	2	Commuter Rail Cars	3	
<b>Distance (source to receiver)</b>	distance (ft)	10	distance (ft)	10	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	50	speed (mph)	50	
	trains/hour	0.667	trains/hour	0.667	
	locos/train	1	cars/train	5	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		cars/train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

# FUTURE RAIL CONDITIONS MODELING

FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	50
Future Train Speed (mph)	50
Number of Existing Trains in one Direction	6
Number of Future Trains in one Direction	6
Existing Number of Day Trains (7 am to 10 p.m.)	3
Future Number of Day Trains (7 am to 10 p.m.)	3
Existing Number of Night Trains (10 p.m. to 7 am)	3
Future Number of Night Trains (10 p.m. to 7 am)	3
Existing Average Number of Cars	50
Future Average Number of Cars	50
Existing Average Number of Locomotives	4
Future Average Number of Locomotives	4

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

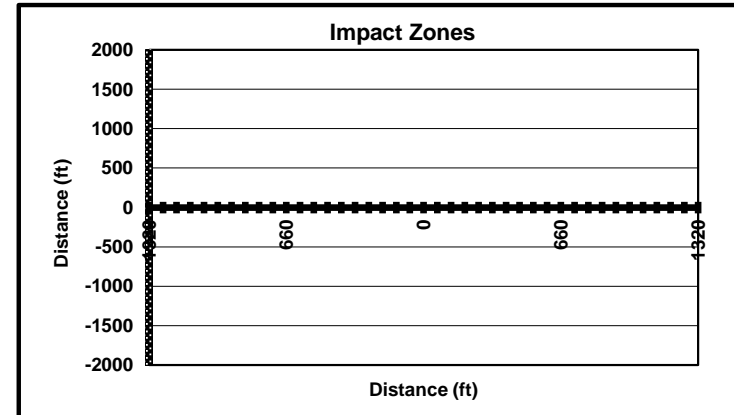
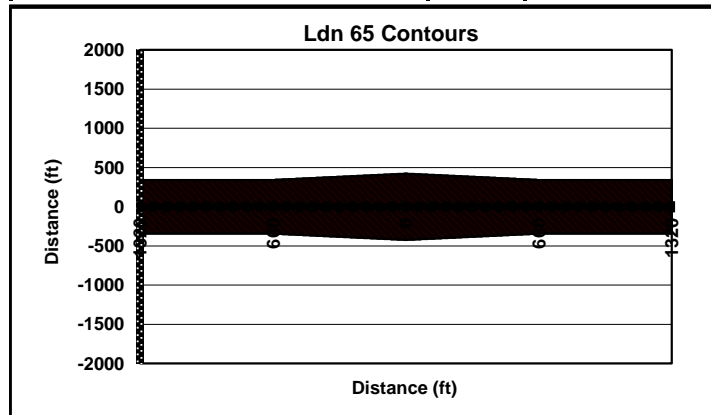
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	421
Future 65 Ldn Contour at X-ing	421
Existing 65 Ldn Contour at 1/2 zone length	341
Future 65 Ldn Contour at 1/2 zone length	341
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	50
Future Train Speed (mph)	50
Number of Existing Trains in one Direction	13
Number of Future Trains in one Direction	13
Existing Number of Day Trains (7 am to 10 p.m.)	10
Future Number of Day Trains (7 am to 10 p.m.)	10
Existing Number of Night Trains (10 p.m. to 7 am)	3
Future Number of Night Trains (10 p.m. to 7 am)	3
Existing Average Number of Cars	44
Future Average Number of Cars	44
Existing Average Number of Locomotives	2.38
Future Average Number of Locomotives	2.38

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

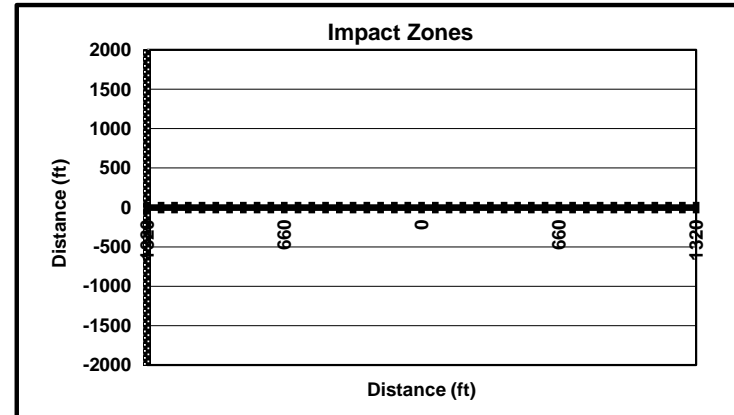
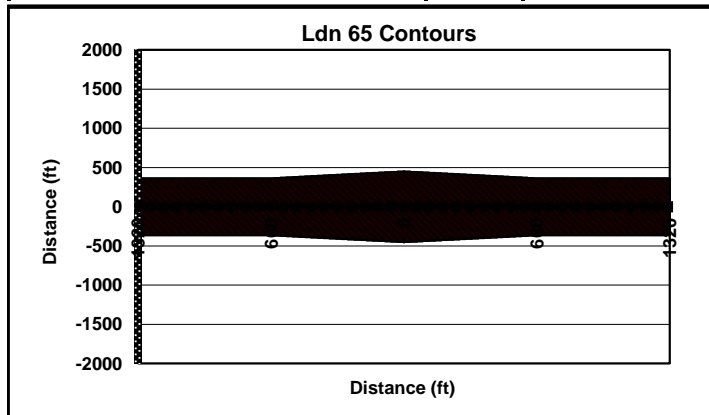
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	449
Future 65 Ldn Contour at X-ing	449
Existing 65 Ldn Contour at 1/2 zone length	361
Future 65 Ldn Contour at 1/2 zone length	361
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660





FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	1.5
Number of Future Trains in one Direction	1.5
Existing Number of Day Trains (7 am to 10 p.m.)	1.5
Future Number of Day Trains (7 am to 10 p.m.)	1.5
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

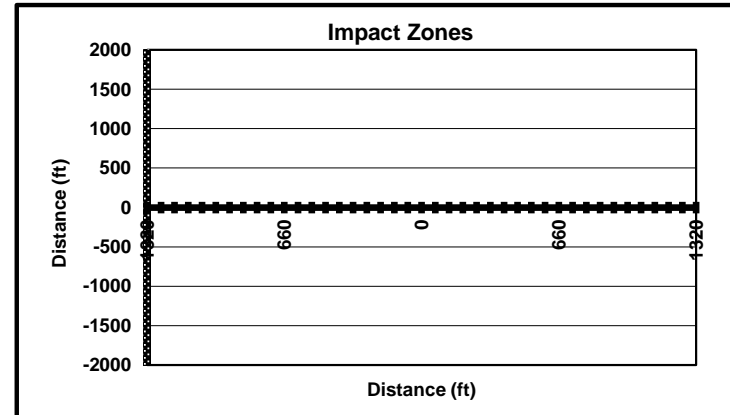
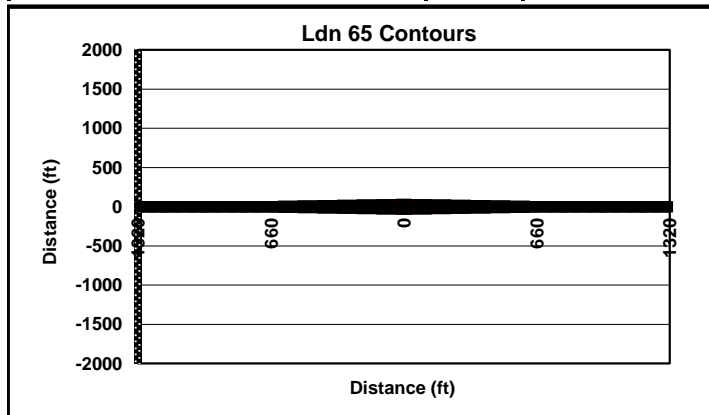
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	87
Future 65 Ldn Contour at X-ing	87
Existing 65 Ldn Contour at 1/2 zone length	60
Future 65 Ldn Contour at 1/2 zone length	60
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	1.5
Number of Future Trains in one Direction	1.5
Existing Number of Day Trains (7 am to 10 p.m.)	1.5
Future Number of Day Trains (7 am to 10 p.m.)	1.5
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

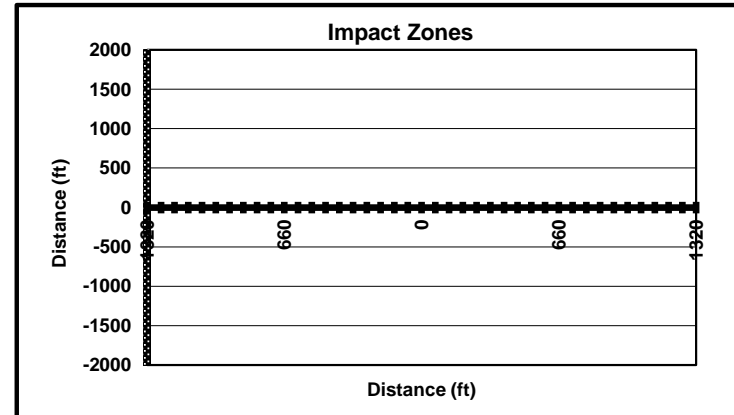
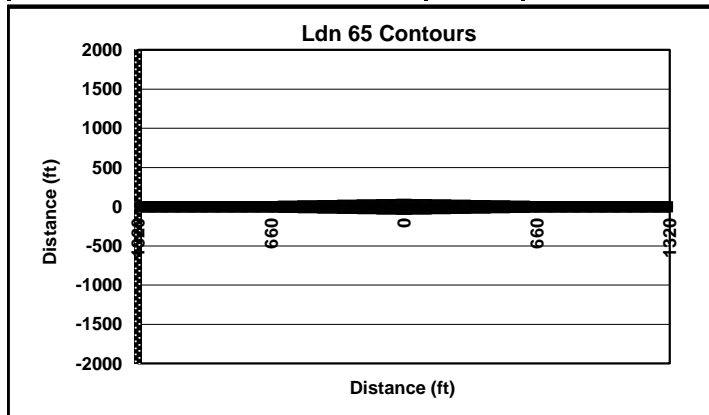
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	87
Future 65 Ldn Contour at X-ing	87
Existing 65 Ldn Contour at 1/2 zone length	60
Future 65 Ldn Contour at 1/2 zone length	60
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	10.5
Number of Future Trains in one Direction	10.5
Existing Number of Day Trains (7 am to 10 p.m.)	10.5
Future Number of Day Trains (7 am to 10 p.m.)	10.5
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

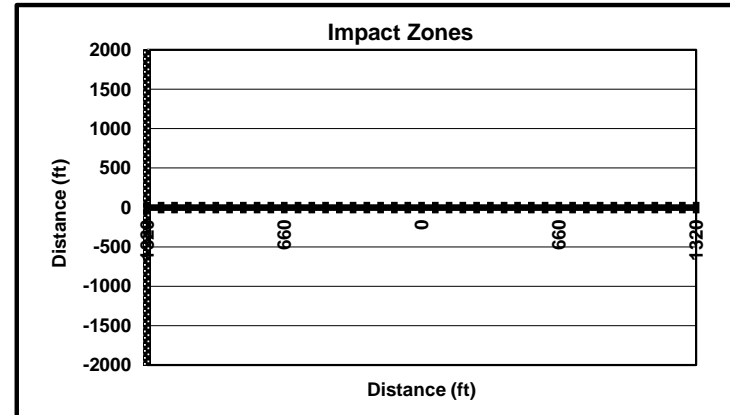
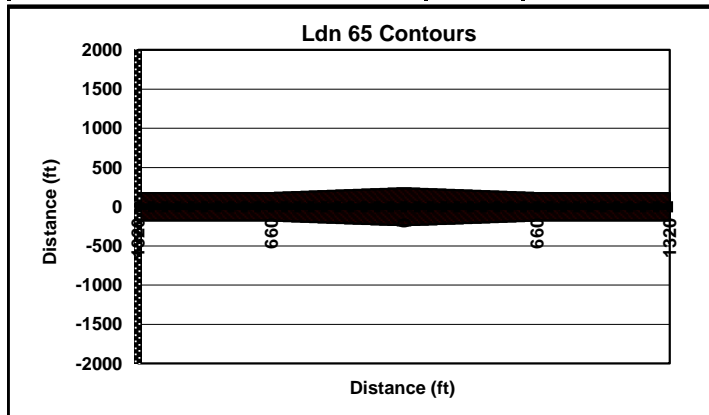
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	236
Future 65 Ldn Contour at X-ing	236
Existing 65 Ldn Contour at 1/2 zone length	174
Future 65 Ldn Contour at 1/2 zone length	174
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	10
Future Train Speed (mph)	10
Number of Existing Trains in one Direction	16.5
Number of Future Trains in one Direction	16.5
Existing Number of Day Trains (7 am to 10 p.m.)	16.5
Future Number of Day Trains (7 am to 10 p.m.)	16.5
Existing Number of Night Trains (10 p.m. to 7 am)	0
Future Number of Night Trains (10 p.m. to 7 am)	0
Existing Average Number of Cars	10
Future Average Number of Cars	10
Existing Average Number of Locomotives	1
Future Average Number of Locomotives	1

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive	
National Average (50% front, 50% middle)	1
All Front Mounted	2
All Middle Mounted	3
User Defined	80 % front mounted horns
	4

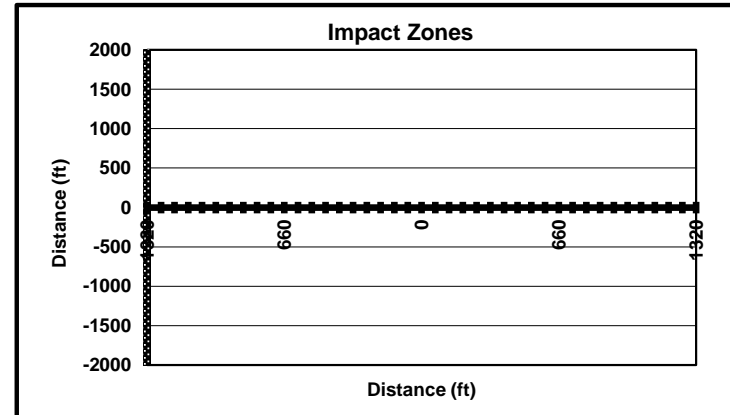
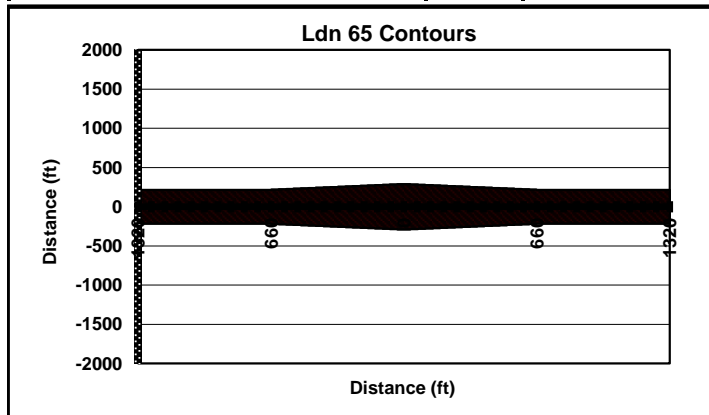
Non Train Noise Environment	
Urban	1
Suburban	2
Rural	3
User Defined Ldn =	50 dBA
	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	289
Future 65 Ldn Contour at X-ing	289
Existing 65 Ldn Contour at 1/2 zone length	216
Future 65 Ldn Contour at 1/2 zone length	216
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



FRA Grade Crossing Noise Model

User Input	
Noise Situation (Pick from List)	1
Horn Lmax (dBA) @ 100 feet	104
Horn Location on Locomotive(Pick from List)	1
Non Train Noise Environment (pick from list)	2
Shielding (Pick from List)	4
Length of Impact Area (pick from list)	1
Existing Train Speed (mph)	50
Future Train Speed (mph)	50
Number of Existing Trains in one Direction	12
Number of Future Trains in one Direction	12
Existing Number of Day Trains (7 am to 10 p.m.)	10.5
Future Number of Day Trains (7 am to 10 p.m.)	10.5
Existing Number of Night Trains (10 p.m. to 7 am)	1.5
Future Number of Night Trains (10 p.m. to 7 am)	1.5
Existing Average Number of Cars	119
Future Average Number of Cars	119
Existing Average Number of Locomotives	2.25
Future Average Number of Locomotives	2.25

Noise Situation	
Horns Existing and Future	1
Horns in Future Only	2
No Horns Existing and Future	3

Horn Location on Locomotive		
National Average (50% front, 50% middle)	1	
All Front Mounted	2	
All Middle Mounted	3	
User Defined	80 % front mounted horns	4

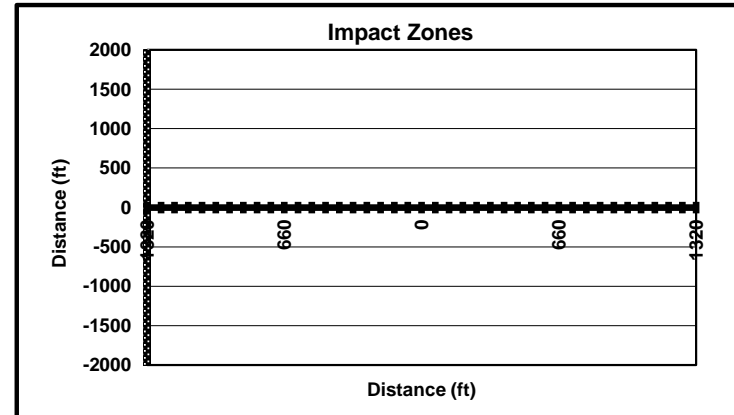
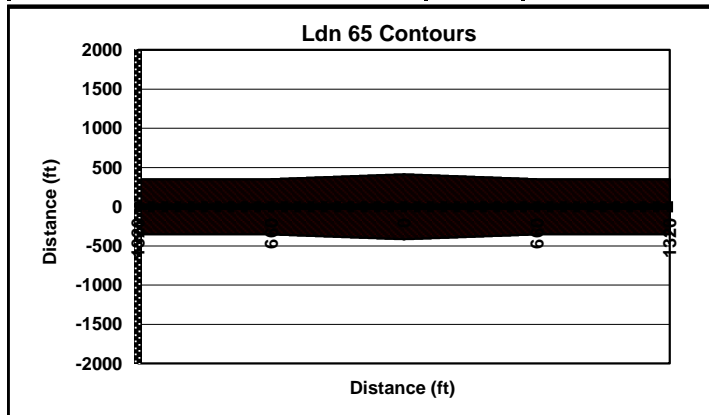
Non Train Noise Environment		
Urban	1	
Suburban	2	
Rural	3	
User Defined Ldn =	50 dBA	4

Shielding	
Dense Urban	1
Light Urban	2
Dense Suburban	3
Light Suburban	4
Rural	5
No Shielding	6

Length of Impact Area	
1/4 mile	1
20 seconds	2
15 seconds	3

Ldn 65 Contours Numeric Output (in feet)	
Existing 65 Ldn Contour at X-ing	413
Future 65 Ldn Contour at X-ing	413
Existing 65 Ldn Contour at 1/2 zone length	351
Future 65 Ldn Contour at 1/2 zone length	351
Zone Length	1320
1/2 Zone Length	660

Impact Zones Numeric Output (in feet)	
Impact Distance at X-ing	0
Severe Impact Distance at X-ing	0
Impact Distance at 1/2 zone length	0
Severe Impact Distance at 1/2 zone length	0
Zone Length	1320
1/2 Zone Length	660



Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: BNSF Stockton Sub Future

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	57	59
Source 1	44	45	30
Source 2	40	42	8
Source 3	62	54	56
Source 4	63	55	57
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS								
Parameter	Source 1		Source 2		Source 3		Source 4	
Source Num.	Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Freight Locomotive	9	Freight Cars	10
Distance (source to receiver)	distance (ft)	265	distance (ft)	265	distance (ft)	265	distance (ft)	265
Daytime Hours (7 AM - 10 PM)	speed (mph)	50	speed (mph)	50	speed (mph)	50	speed (mph)	50
	trains/hour	0.933	trains/hour	0.933	trains/hour	0.4	trains/hour	0.4
	locos/train	1	cars/train	5	locos/train	4	length of cars (ft) / train	4000
Nighttime Hours (10 PM - 7 AM)	speed (mph)		speed (mph)		speed (mph)	50	speed (mph)	50
	trains/hour		trains/hour		trains/hour	0.667	trains/hour	0.667
	locos/train		cars/train		locos/train	4	length of cars (ft) / train	4000
Wheel Flats?		0.00%	% of cars w/ wheel flats	0.00%		0.00%	% of cars w/ wheel flats	0.00%
Jointed Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of Buildings	number of rows	0	number of rows	0	number of rows	0	number of rows	0

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: BNSF Stockton Past Port Chicago Future

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	57	59
Source 1	62	54	56
Source 2	63	55	57
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	265	distance (ft)	265	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	50	speed (mph)	50	
	trains/hour	0.4	trains/hour	0.4	
	locos/train	4	length of cars (ft) / train	4000	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)	50	speed (mph)	50	
	trains/hour	0.667	trains/hour	0.667	
	locos/train	4	length of cars (ft) / train	4000	
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	



<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC Chevron Lead Future

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	66	52
Source 1	64	65	52
Source 2	58	60	35
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	6	distance (ft)	6	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.2	trains/hour	0.2	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC Cutting Lead Future

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	66	52
Source 1	64	65	52
Source 2	58	60	35
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	6	distance (ft)	6	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	0.2	trains/hour	0.2	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC Harbor Lead Future

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	67	44
Source 1	64	66	44
Source 2	59	61	27
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	20	distance (ft)	20	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	1.4	trains/hour	1.4	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train	1	length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	

<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: RPRC LRT Lead Future

<b>RESULTS</b>			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
<b>All Sources</b>	65	67	42
Source 1	64	66	42
Source 2	58	60	25
Source 3	0	0	0
Source 4	0	0	0
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

<b>LAND USE CATEGORY</b>	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

<b>NOISE SOURCE PARAMETERS</b>					
Parameter	Source 1		Source 2		Source 3
<b>Source Num.</b>	Freight Locomotive	9	Freight Cars	10	
<b>Distance (source to receiver)</b>	distance (ft)	28	distance (ft)	28	
<b>Daytime Hours (7 AM - 10 PM)</b>	speed (mph)	10	speed (mph)	10	
	trains/hour	2.2	trains/hour	2.2	
	locos/train	1	length of cars (ft) / train	600	
<b>Nighttime Hours (10 PM - 7 AM)</b>	speed (mph)		speed (mph)		
	trains/hour		trains/hour		
	locos/train		length of cars (ft) / train		
<b>Wheel Flats?</b>		0.00%	% of cars w/ wheel flats	0.00%	
<b>Jointed Track?</b>	Y/N	n	Y/N	n	
<b>Embedded Track?</b>	Y/N	n	Y/N	n	
<b>Aerial Structure?</b>	Y/N	n	Y/N	n	
<b>Barrier Present?</b>	Y/N	n	Y/N	n	
<b>Intervening Rows of Buildings</b>	number of rows	0	number of rows	0	



<b>SOURCE REFERENCE LIST</b>	
<b>Source</b>	<b>Number</b>
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: UP Martinez Sub Future East of Pinole

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	59
Source 1	53	51	45
Source 2	50	48	42
Source 3	61	52	54
Source 4	63	54	57
Source 5	46	38	40
Source 6	44	36	38
Source 7	41	41	30
Source 8	35	37	8

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS								
Parameter	Source 1		Source 2		Source 3		Source 4	
Source Num.	Commuter Diesel Locomotive 2		Commuter Rail Cars 3		Freight Locomotive 9		Freight Cars 10	
Distance (source to receiver)	distance (ft) 230		distance (ft) 230		distance (ft) 230		distance (ft) 230	
Daytime Hours (7 AM - 10 PM)	speed (mph)	50	speed (mph)	50	speed (mph)	40	speed (mph)	40
	trains/hour	2.733	trains/hour	2.733	trains/hour	0.4	trains/hour	0.4
	locos/train	1	cars/train	5	locos/train	3	length of cars (ft) / train	5000
Nighttime Hours (10 PM - 7 AM)	speed (mph)	50	speed (mph)	50	speed (mph)	40	speed (mph)	40
	trains/hour	0.667	trains/hour	0.667	trains/hour	0.667	trains/hour	0.667
	locos/train	1	cars/train	5	locos/train	3	length of cars (ft) / train	5000
Wheel Flats?	0.00% % of cars w/ wheel flats		0.00%		0.00%		0.00%	
Jointed Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of Buildings	number of rows	0	number of rows	0	number of rows	0	number of rows	0

SOURCE REFERENCE LIST	
Source	Number
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Source 1 and 2 = Amtrak San Joaquin and Capitol Corridor  
 Source 3 and 4 = Freight trains  
 Source 5 and 6 - Amtrak Coast Starlight  
 Sources 7 and 8 - Amtrak California Zephyr

Source 5		Source 6		Source 7		Source 8	
Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Commuter Diesel Locomotive	2	Commuter Rail Cars	3
distance (ft)	230	distance (ft)	230	distance (ft)	230	distance (ft)	230
speed (mph)	50	speed (mph)	50	speed (mph)	50	speed (mph)	50
trains/hour	0.067	trains/hour	0.067	trains/hour	0.133	trains/hour	0.133
locos/train	2	cars/train	13	locos/train	2	cars/train	8
speed (mph)	50	speed (mph)	50	speed (mph)		speed (mph)	
trains/hour	0.111	trains/hour	0.111	trains/hour		trains/hour	
locos/train	2	cars/train	13	locos/train		cars/train	
	0.00%	% of cars w/ wheel flats	0.00%		0.00%	% of cars w/ wheel flats	0.00%
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
number of rows	0	number of rows	0	number of rows	0	number of rows	0

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: UP Martinez Sub Future South of Pinole

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	58	59
Source 1	51	49	43
Source 2	50	48	42
Source 3	60	52	54
Source 4	63	55	57
Source 5	44	36	38
Source 6	44	36	38
Source 7	39	39	29
Source 8	35	37	7

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS								
Parameter	Source 1		Source 2		Source 3		Source 4	
Source Num.	Commuter Diesel Locomotive		Commuter Rail Cars		Freight Locomotive		Freight Cars	
Distance (source to receiver)	285		285		285		285	
Daytime Hours (7 AM - 10 PM)	speed (mph)	60	speed (mph)	60	speed (mph)	50	speed (mph)	50
	trains/hour	2.733	trains/hour	2.733	trains/hour	0.4	trains/hour	0.4
Nighttime Hours (10 PM - 7 AM)	locos/train	1	cars/train	5	locos/train	3	length of cars (ft) / train	5000
	speed (mph)	60	speed (mph)	60	speed (mph)	50	speed (mph)	50
	trains/hour	0.667	trains/hour	0.667	trains/hour	0.667	trains/hour	0.667
	locos/train	1	cars/train	5	locos/train	3	length of cars (ft) / train	5000
Wheel Flats?	0.00%		% of cars w/ wheel flats		0.00%		% of cars w/ wheel flats	
Jointed Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of Buildings	number of rows		0		number of rows		0	

SOURCE REFERENCE LIST	
Source	Number
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

Source 1 and 2 = Amtrak San Joaquin and Capitol Corridor  
 Source 3 and 4 = Freight trains  
 Source 5 and 6 - Amtrak Coast Starlight  
 Sources 7 and 8 - Amtrak California Zephyr

Source 5		Source 6		Source 7		Source 8	
Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Commuter Diesel Locomotive	2	Commuter Rail Cars	3
distance (ft)	285	distance (ft)	285	distance (ft)	285	distance (ft)	285
speed (mph)	60	speed (mph)	60	speed (mph)	60	speed (mph)	60
trains/hour	0.067	trains/hour	0.067	trains/hour	0.133	trains/hour	0.133
locos/train	2	cars/train	13	locos/train	2	cars/train	8
speed (mph)	60	speed (mph)	60	speed (mph)		speed (mph)	
trains/hour	0.111	trains/hour	0.111	trains/hour		trains/hour	
locos/train	2	cars/train	13	locos/train		cars/train	
	0.00%	% of cars w/ wheel flats	0.00%		0.00%	% of cars w/ wheel flats	0.00%
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
Y/N	n	Y/N	n	Y/N	n	Y/N	n
number of rows	0	number of rows	0	number of rows	0	number of rows	0

Noise Model Based on Federal Transit Administration General Transit Noise Assessment  
 Developed for Chicago Create Project  
 Copyright 2006, HMMH Inc.  
 Case: UP Tracy Sub Future

RESULTS			
Noise Source	Ldn (dB)	Leq - daytime (dB)	Leq - nighttime (dB)
All Sources	65	60	59
Source 1	44	45	29
Source 2	40	42	7
Source 3	59	54	53
Source 4	64	59	58
Source 5	0	0	0
Source 6	0	0	0
Source 7	0	0	0
Source 8	0	0	0

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS								
Parameter	Source 1		Source 2		Source 3		Source 4	
Source Num.	Commuter Diesel Locomotive 2		Commuter Rail Cars 3		Freight Locomotive 9		Freight Cars 10	
Distance (source to receiver)	distance (ft) 270		distance (ft) 270		distance (ft) 270		distance (ft) 270	
Daytime Hours (7 AM - 10 PM)	speed (mph)	50	speed (mph)	50	speed (mph)	50	speed (mph)	50
	trains/hour	0.933	trains/hour	0.933	trains/hour	0.467	trains/hour	0.467
	locos/train	1	cars/train	5	locos/train	4	length of cars (ft) / train	10000
Nighttime Hours (10 PM - 7 AM)	speed (mph)		speed (mph)		speed (mph)	50	speed (mph)	50
	trains/hour		trains/hour		trains/hour	0.333	trains/hour	0.333
	locos/train		cars/train		locos/train	4	length of cars (ft) / train	10000
Wheel Flats?	0.00%	% of cars w/ wheel flats	0.00%	% of cars w/ wheel flats	0.00%	% of cars w/ wheel flats	0.00%	0.00%
Jointed Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of Buildings	number of rows	0	number of rows	0	number of rows	0	number of rows	0

SOURCE REFERENCE LIST	
Source	Number
Commuter Electric Locomotive	1
Commuter Diesel Locomotive	2
Commuter Rail Cars	3
RRT/LRT	4
AGT, Steel Wheel	5
AGT, Rubber Tire	6
Monorail	7
Maglev	8
Freight Locomotive	9
Freight Cars	10
Hopper Cars (empty)	11
Hopper Cars (full)	12
Crossover	13
Automobiles	14
City Buses	15
Commuter Buses	16
Rail Yard or Shop	17
Layover Tracks	18
Bus Storage Yard	19
Bus Op. Facility	20
Bus Transit Center	21
Parking Garage	22
Park & Ride Lot	23

# TRAFFIC NOISE MODELING



**Traffic Noise Modeling Summary - CONT-01 HE**

		dBA CNEL		
<b>Roadway Segment</b>		<b>Existing</b>	<b>Future</b>	<b>Net Change</b>
Alhambra Valley Rd	Pereira Rd to Valley Orchard Ct	63.6	66.0	2.4
Alhambra Valley Rd	West 2/3 of Castro Ranch Rd to Pereira Rd	63.2	66.1	3.0
Alhambra Valley Rd	East 1/3 of Castro Ranch Rd to Pereira Rd	62.9	65.8	2.9
Alhambra Valley Rd	Vasa Creek Rd to Alhambra Valley Rd	63.8	66.0	2.2
Appian Way	Kister Cir to Valley View Rd/Appian Way	68.9	71.6	2.7
Appian Way	Northeast 2/3 of Santa Rita Rd to La Paloma Rd	67.7	70.8	3.1
Appian Way	Garden Rd to San Pablo Dam Rd	67.6	70.6	3.0
Appian Way	Sunhill Cir to Fran Way	66.6	69.5	2.9
Appian Way	La Paloma Rd to Pebble Dr	66.9	70.2	3.3
Appian Way	Pebble Dr to Sunhill Cir	66.7	69.7	3.0
Appian Way	Manor Rd to Kister Cir	69.2	71.9	2.7
Appian Way	Allview Ave to Rancho Rd	69.9	72.7	2.9
Appian Way	Rancho Rd to Manor Rd	69.9	72.8	2.9
Appian Way	Southwest 2/3 of Santa Rita Rd to La Paloma Rd	67.7	70.8	3.1
Appian Way	Garden Rd to Santa Rita Rd	67.6	70.7	3.0
Arlington Ave	Rincon Rd to Arlington Ct	60.3	63.2	2.8
Arlington Ave	Oberlin Ave to Coventry Rd	63.9	66.6	2.7
Arlington Ave	Arlington Ct to Oberlin Ave	60.9	63.9	2.9
Arlington Ave	Lam Ct to Rincon Rd	61.0	64.0	3.0
Arlington Ave	Roberta Dr to Lam Ct	63.4	66.8	3.4
Bailey Rd	North 1/2 of San Marco Blvd to Willow Ave	70.0	72.5	2.6
Bailey Rd	Second and third 1/6 from the South of Willow Av	69.9	72.5	2.6
Bailey Rd	North 1/3 of San Marco Blvd to Myrtle Dr	69.6	72.5	2.9
Bailey Rd	San Marco Blvd intersection	69.6	72.5	2.9
Bailey Rd	South 1/9 of Willow Ave to San Marco Blvd	69.7	72.5	2.9
Bailey Rd	California Delta HWY interchange	70.4	72.9	2.5
Bailey Rd	South 3/4 of Mary Ann Ln to Canal Rd	67.0	69.5	2.4
Bailey Rd	Canal Rd to California Delta HWY	70.7	73.2	2.5
Bailey Rd	South 1/2 of Canal Rd to Canal Rd	67.8	70.7	2.9
Bailey Rd	Willow Pass Rd to Mary Ann Ln/Placer Dr	66.5	68.8	2.4
Bailey Rd	North 1/4 of Mary Ann Ln to Canal Rd	66.7	69.1	2.4
Balfour Rd	Byron HWY to Bixler Rd	61.9	64.8	2.9
Balfour Rd	West 1/2 of Sellers Ave to Byron HWY	60.1	61.1	1.0
Balfour Rd	East 1/2 of Sellers Ave to Byron HWY	59.9	60.8	1.0
Bear Creek Rd	Bear Oaks Rd to Happy Valley Rd	60.0	63.6	3.6
Bear Creek Rd	Alhambra Valley Rd to Bear Oaks Dr	60.8	64.8	4.0
Bethel Island Rd	Dutch Slough Rd to Wells Rd	66.5	71.1	4.6
Bethel Island Rd	Wells Rd to Sandmound Blvd	66.5	71.1	4.6
Byron Hwy	Northwest 1/3 of Camino Diablo Rd to Byron Hot S	69.3	71.9	2.5
Byron Hwy	Northwest 1/4 of Holway Dr to Byron Hot Springs	69.4	71.9	2.5
Byron Hwy	Northwest 3/4 of Byron Hot Springs Rd to Clifton C	69.0	70.2	1.2
Byron Hwy	Southeast 2/3 of Camino Diablo Rd to Byron Hot S	69.2	71.7	2.5
California Delta HWY	Byron HWY to Regatta Dr	71.1	73.3	2.2
California Delta HWY	Newport Dr to Wayfarer Dr	71.3	73.6	2.3

California Delta HWY	Bixler Rd to Newport Dr	71.9	74.2	2.3
California Delta HWY	Regatta Dr to Bixler Rd	70.8	73.0	2.2
California Delta HWY	Wayfarer Dr to County line	65.6	68.8	3.2
Camino Diablo Rd	N Vasco Rd to Holway Dr	69.3	71.3	1.9
Camino Diablo Rd	McCabe Rd to Holway Dr	69.3	71.3	2.0
Camino Tassajara	Oak Gate Dr to Shadow Creek Dr	66.2	68.4	2.2
Camino Tassajara	Conejo Dr to Buckingham Dr	70.9	72.7	1.8
Camino Tassajara	Crow Canyon Rd to Blackhawk Plaza Cir/Tassajara	70.9	72.5	1.6
Camino Tassajara	Tassajara Ranch Dr to Conejo Dr	70.9	72.7	1.8
Camino Tassajara	Parkhaven Dr to Jasmine Way	69.5	71.4	1.8
Camino Tassajara	Rassani Dr to Parkhaven Dr	69.7	71.5	1.8
Camino Tassajara	East 3/4 of Mansfield Dr/Jasmine Way to Oak Gate	68.5	70.3	1.8
Camino Tassajara	West 1/4 of Mansfield Dr/Jasmine Way to Oak Gate	68.6	70.5	1.8
Camino Tassajara	North 1/2 of Highland Rd to Windemere Pkwy	62.0	65.3	3.3
Camino Tassajara	Johnston Rd to Highland Rd	62.9	65.9	3.0
Camino Tassajara	Finley Rd to Johnston Rd	63.0	66.0	3.0
Camino Tassajara	Third 1/6 from the North of Highland Rd to Windemere Pkwy	62.0	65.3	3.3
Camino Tassajara	Second 1/4 from the South of Highland Rd to Windemere Pkwy	61.8	65.0	3.2
Camino Tassajara	West 3/4 of Charbray St to Finley Rd	63.5	66.4	2.9
Camino Tassajara	Monterosso St to Knollview Dr	63.5	66.2	2.7
Camino Tassajara	West 9/10 of Knollview Dr to Blackhawk Dr	63.0	65.7	2.8
Camino Tassajara	East 1/10 of Knollview Dr to Blackhawk Dr	62.5	65.4	2.9
Camino Tassajara	Southeast 1/4 of Blackhawk Dr to Finley Rd	63.3	66.3	3.0
Castro Ranch Rd	Hillside Dr to San Pablo Dam Rd	63.1	66.0	2.9
Castro Ranch Rd	Olinda Rd to Amend Rd	63.8	67.3	3.5
Castro Ranch Rd	Country View Dr to Alhambra Valley Rd	61.4	65.0	3.6
Coggins Dr	Southeast 2/3 of Buskirk Ave/Oak Rd to Roble Rd	45.6	50.3	4.7
Coggins Dr	West 1/3 of Buskirk Ave/Oak Rd to Roble Rd	44.1	49.3	5.2
Cummings Skwy	Crockett Blvd to John Muir Pkwy	61.3	63.4	2.1
Danville Blvd	Casa Maria Ct to Camille Ave	67.5	69.5	1.9
Danville Blvd	Stone Valley Rd W to Casa Maria Ct	68.2	69.8	1.7
Danville Blvd	Camille Ave to El Portal	68.2	70.1	1.9
Deer Valley Rd	North 1/2 of Chadbourne Rd to Albers Ct	54.3	63.2	8.9
Deer Valley Rd	Central 2/4 of Chadbourne Rd to Marsh Creek Rd	54.3	63.2	8.9
Deer Valley Rd	South 1/2 of Briones Valley Rd to Marsh Creek Rd	54.3	63.2	8.9
Deer Valley Rd	Empire Mine Rd to Balfour Rd	66.4	68.5	2.1
Deer Valley Rd	Balfour Rd to Chadbourne Rd	61.0	65.6	4.5
Deer Valley Rd	South 3/4 of Deer Hill Ln to Empire Mine Rd	66.9	71.0	4.1
Deer Valley Rd	Second 1/8 from the North of Deer Hill Ln to Empire Mine Rd	66.6	70.9	4.4
Delta Rd	Sellers Ave to Curlew Connex	61.0	64.5	3.4
Evora Rd	Gwin Ave to Willow Pass Ct/Willow Pass Rd	62.9	62.5	-0.4
Evora Rd	Southwest 1/2 of Willow Pass Ct to Driftwood Dr	68.7	70.9	2.2
Evora Rd	Northeast 1/2 of Willow Pass Ct to Driftwood Dr	68.7	71.1	2.3
Fred Jackson Way	Pittsburg Ave to Market Ave	51.0	56.3	5.3
Imhoff Dr	Waterbird Way to Solano Way	57.5	59.6	2.1
Imhoff Dr	Blum Rd to Imhoff Pl	61.1	64.1	3.0
Imhoff Dr	Imhoff Pl to Waterbird Way	60.5	63.9	3.5
Kirker Pass Rd	Black Diamond Mines to Pheasant Dr	72.8	75.1	2.4
Kirker Pass Rd	Black Diamond Mines to Myrtle Dr	72.7	74.9	2.2
Market Ave	4th St to 6th St	54.1	60.1	6.0

Market Ave	Fred Jackson Way to 4th St	54.1	60.2	6.1
Market Ave	2nd St to Fred Jackson Way	50.7	57.2	6.5
Market Ave	West 3/4 of 6th St to Rumrill Blvd	56.8	63.2	6.3
Marsh Creek Rd	West 1/2 of Byron HWY to Bixler Rd	55.7	61.0	5.3
Marsh Creek Rd	Northwest 1/3 of Russelmann Park Rd to Morgan	60.5	65.1	4.7
Marsh Creek Rd	Northwest 1/3 of Marsh Creek Rd/Clayton Rd inte	60.7	65.3	4.6
Marsh Creek Rd	South 2/3 of Vineyard Pkwy to Marsh Creek Rd/Ca	57.6	61.7	4.0
Marsh Creek Rd	West 1/2 of Deer Valley Rd to Marsh Creek Rd	56.5	62.4	5.9
Marsh Creek Rd	Gill Dr to Deer Valley Rd	54.9	63.0	8.1
Marsh Creek Rd	Clayton Ranch of Russelmann Park Rd to Bragdon	59.4	64.3	4.8
Marsh Creek Rd	Bragdon Way to Gill Dr	59.3	64.2	4.9
Marsh Creek Rd	East 1/4 of Deer Valley Rd to Marsh Creek Rd	57.4	62.4	5.0
Marsh Creek Rd	Second 1/4 from the East of Deer Valley Rd to Old	57.4	62.4	5.0
Marsh Creek Rd	East 1/3 of California Delta HWY/Vasco Rd to Walr	68.9	62.3	-6.6
Marsh Creek Rd	North 1/3 of Vineyard Pkwy to Camino Diablo Rd	59.3	62.6	3.3
Marsh Creek Rd	Vineyard Pkwy intersection	59.3	62.3	3.0
Marsh Creek Rd	West 1/3 of Orchard Ln to Walnut Blvd	68.9	62.2	-6.7
Marsh Creek Rd	California Delta HWY to Orchard Ln	69.3	68.3	-1.0
Marsh Creek Rd	Sellers Ave to Byron HWY	68.7	63.3	-5.4
Marsh Creek Rd	Walnut Blvd to Sellers Ave	68.8	62.8	-6.0
Marsh Creek Rd	Fertado Ln to Bixler Rd	55.6	60.6	5.0
Marsh Creek Rd	East 1/3 of Byron HWY to Fertado Ln	55.7	60.7	5.0
N Vasco Rd	Central 1/3 of Camino Diablo to County line	63.2	68.1	5.0
N Vasco Rd	South 1/3 of Camino Diablo to County line	63.2	67.0	3.9
N Vasco Rd	North 1/3 of Camino Diablo to County line	73.6	76.6	3.0
Oak Rd	Wayne Dr to Treat Blvd	64.5	63.9	-0.6
Oak Rd	Coggins Dr to Elena Ct	61.5	65.2	3.8
Oak Rd	Elena Ct to Las Juntas Way	62.9	64.9	2.0
Oak Rd	Las Juntas Way to Wayne Dr	58.4	61.8	3.4
Old Marsh Creek Rd	Southwest 3/4 of Vineyard Pkwy to California Delt	60.3	62.7	2.4
Olympic Blvd	Boulevard Way to Willow Ave	71.1	72.7	1.5
Olympic Blvd	Newell Ct to Boulevard Way/Tice Valley Blvd	70.0	71.4	1.4
Olympic Blvd	Pleasant Hill Rd to Windtree Ct	69.9	71.3	1.4
Olympic Blvd	Windtree Ct to Newell Ct	69.9	71.4	1.5
Olympic Blvd	Crawford Cr to Newell Ave	71.3	72.9	1.6
Olympic Blvd	Newell Ave to Paulson Ln	69.6	71.2	1.6
Olympic Blvd	Willow Ave to Crawford Ct	70.9	72.5	1.5
Pacheco Blvd	Wygol Dr to Morello Ave	67.8	68.4	0.6
Pacheco Blvd	Camino del Sol to Arthur Rd/Pacheco Blvd	69.5	69.3	-0.3
Pacheco Blvd	Morello Ave to Adelaide Dr	68.0	67.8	-0.2
Pacheco Blvd	Adelaide Dr to Camino del Sol	68.7	68.5	-0.2
Pacheco Blvd	Southeast 2/3 of Arnold Dr to Blum Rd	64.1	69.2	5.1
Pacheco Blvd	Northwest 1/3 of Arnold Dr to Blum Rd	61.4	67.2	5.8
Pacheco Blvd	Arthur Rd to Arnold Dr	61.5	67.2	5.7
Pacheco Blvd	Carolos Dr to 1st Ave N	63.9	67.8	3.9
Pacheco Blvd	Muir Rd to N Buchanan Cir	65.7	69.0	3.3
Pacheco Blvd	Blum Rd to Muir Rd	67.5	70.6	3.0
Pacheco Blvd	Center Ave to 2nd Ave S	67.1	69.9	2.8
Pacheco Blvd	1st Ave N to Center Ave	65.4	68.2	2.8
Pacheco Blvd	West 1/2 of Howe Rd to Wygol Dr	67.3	68.0	0.7

Pacheco Blvd	Palm Ave to Santa Fe Ave	67.2	68.0	0.8
Pacheco Blvd	Shell Ave to Palm Ave	67.7	68.8	1.1
Pacheco Blvd	Santa Fe Ave to Howe Rd	67.6	68.3	0.7
Pacheco Blvd	Central 1/3 of Howe Rd to Morello Ave	67.0	67.5	0.5
Parr Blvd	East 2/3 of Richmond Pkwy to Fred Jackson Way	58.5	60.5	2.0
Parr Blvd	East 1/2 of Fred Jackson Way to Goodrick Ave	58.6	61.0	2.3
Parr Blvd	West 1/2 of Richmond Pkwy to Fred Jackson Way	59.5	61.1	1.6
Pinole Valley Rd	Marlin Ct to Alhambra Valley Rd/Castro Ranch Rd	60.0	64.6	4.6
Pittsburg Ave	West 1/2 of Richmond Pkwy to Central St	56.0	57.6	1.6
Pittsburg Ave	Central St to Fred Jackson Way	53.0	55.7	2.7
Pittsburg Ave	East 1/2 of Richmond Pkwy to Central St	55.4	56.7	1.3
Pleasant Hill Rd	Purson Ln to Rancho View Dr	70.7	72.1	1.4
Pomona St	West 2/3 of Merchant St to Eastshore FWY	67.1	68.7	1.6
Reliez Valley Rd	Grayson Rd to Gloria Ter	64.6	66.4	1.8
Reliez Valley Rd	Gloria Ter to Withers Ave	65.1	67.1	2.0
Reliez Valley Rd	Southeast 1/2 of Hidden Pond Rd to Silverhill Dr	66.9	68.4	1.5
Reliez Valley Rd	Tavan Estates Dr to Silverhill Way	67.1	68.6	1.5
Reliez Valley Rd	Silverhill Dr to Grayson Rd	67.9	69.5	1.6
Richmond Pkwy	Parr Blvd to Pittsburg Ave	75.0	75.8	0.8
San Pablo Ave	Kay Rd to Shamrock Dr	70.4	73.3	2.8
San Pablo Ave	Northeast 3/4 of Richmond Pkwy to Kay Rd	70.8	73.5	2.8
San Pablo Ave	Shamrock Dr to Tara Hills Dr	69.6	72.6	2.9
San Pablo Ave	Tara Hills Dr to Oconnor Dr	69.6	72.6	3.0
San Pablo Ave	Railroad Ave to California St	68.0	69.6	1.5
San Pablo Ave	San Pablo Ave and Parker Ave intersection to Railroad Ave	68.0	69.5	1.5
San Pablo Ave	West 1/2 of California St to A St	67.8	69.4	1.6
San Pablo Ave	Southwest 1/8 of California St to Refinery Rd	67.8	69.4	1.5
San Pablo Ave	Vista del Rio St to Merchant St	66.9	68.5	1.6
San Pablo Ave	Cummings Skwy to Vista del Rio St	66.9	68.6	1.6
San Pablo Ave	Union Oil Company to A St	67.3	69.0	1.8
San Pablo Ave	A St to Cummings Skwy	67.3	69.1	1.7
San Pablo Dam Rd	Greenridge Dr to Lila Ln	65.9	69.2	3.3
San Pablo Dam Rd	Hillcrest Rd to La Colina Rd	70.8	73.3	2.5
San Pablo Dam Rd	El Portal Dr to Hillcrest Rd	69.4	72.2	2.8
San Pablo Dam Rd	La Colina Rd to Campbell Ln	69.6	72.0	2.5
San Pablo Dam Rd	North 1/2 of Castro Ranch Rd to Old San Pablo Dam Rd	67.6	70.0	2.4
San Pablo Dam Rd	Southeast 1/2 of Old San Pablo Dam Rd to Bear Creek Rd	67.6	70.0	2.4
San Pablo Dam Rd	Central 1/3 of Old San Pablo Dam Rd to Old San Pablo Dam Rd	67.6	70.0	2.4
San Pablo Dam Rd	Third 1/6 from the South of Old Pablo Dam Rd to Old San Pablo Dam Rd	67.6	70.0	2.4
San Pablo Dam Rd	Oak Creek Rd to Castro Ranch Rd	65.8	68.4	2.6
San Pablo Dam Rd	Lila Ln to Valley View Rd	65.6	68.8	3.2
San Pablo Dam Rd	Valley View Rd to Jodie Ln	65.5	68.2	2.7
Sellers Ave	Central 1/3 of Sunset Rd to Chestnut St	54.1	58.0	4.0
Sellers Ave	Redhaven St to Balfour Ave	54.4	58.3	4.0
Sellers Ave	South 1/2 of Sycamore Ave to Chestnut St	54.0	57.9	4.0
Sellers Ave	Chestnut St to Redhaven Ave	56.5	61.8	5.2
Sellers Ave	Fourth 1/8 from the North of Sycamore Ave to Chestnut St	54.1	58.0	4.0
Sellers Ave	North 2/3 of Sunset Rd to Sycamore Ave	54.2	58.0	3.8
Sellers Ave	Second 1/6 from the South of Sunset Rd to Sycamore Ave	54.3	58.2	3.9
Sobrante Ave	Fran Way to Valley View Rd	66.2	69.1	3.0

Stone Valley Rd	Northeast 3/4 of Alamo Glen Dr/Stone Creek Pl to	66.2	69.0	2.8
Sunset Rd	Sellers Ave to Eden Plains Rd	59.4	60.4	1.0
Sunset Rd	Eden Plains Rd to Byron HWY	59.6	63.3	3.7
Taylor Blvd	Twinview Pl to Withers Ave	70.1	72.1	2.0
Taylor Blvd	North 1/2 of Withers Ave to Pleasant Hill Rd	70.4	72.0	1.6
Taylor Blvd	South 1/2 of Withers Ave to Pleasant Hill Rd	70.5	72.2	1.6
Treat Blvd	Augello Ct/Maywood Dr to Cherry Ln	72.2	73.6	1.4
Treat Blvd	Oak Rd to Jones Rd	72.5	73.4	0.8
Treat Blvd	Jones Rd to Augello Ct/Maywood Dr	72.7	73.8	1.1
Treat Blvd	Cherry Ln to Sheppard Rd	72.1	73.7	1.5
Valley View Rd	Sobrante Ave to Fleetwood Dr	66.3	69.4	3.0
Valley View Rd	Amend Rd to Olinda Rd	63.8	67.0	3.2
Valley View Rd	San Pablo Dam Rd to Olinda Rd	63.5	66.6	3.1
Valley View Rd	Southeast 2/3 of Morninside Dr to Via Giaramita	63.7	67.3	3.5
Valley View Rd	Pine Hill Dr to Quiet Ln	63.4	66.7	3.3
Valley View Rd	Appian Way to Sobrante Ave	68.9	71.7	2.7
Walnut Blvd	Marsh Creek Rd to Vasco Rd	65.7	73.3	7.6
Willow Pass Rd	Evora Rd to Goble Dr	69.3	73.4	4.1
Willow Pass Rd	Bella Vista Ave to Loftus Rd	66.3	68.8	2.6
Willow Pass Rd	West 1/3 of Clearland Dr to Bailey Rd	66.7	71.4	4.7
Willow Pass Rd	Port Chicago HWY to Alberts Ave	67.7	72.4	4.7
Willow Pass Rd	Goble Dr to Port Chicago HWY	69.2	73.2	4.0
Willow Pass Rd	Alberts Ave to Enes Ave	67.5	72.1	4.7
Willow Pass Rd	Alves Ln to Clearland Dr	66.9	71.7	4.8
Willow Pass Rd	Marin Ave to Alves Ln	67.1	71.9	4.8
Willow Pass Rd	Solano Ave to Fairview Ave	67.4	70.3	2.9
Willow Pass Rd	East 2/3 of Clearland Dr to Bailey Rd	66.6	71.4	4.8
Willow Pass Rd	Bailey Rd to Solano Ave	67.8	71.3	3.5
Willow Pass Rd	Madison Ave to Bella Vista Ave	66.8	69.5	2.8
Willow Pass Rd	Fairview Ave to Madison Ave	67.3	70.3	3.0









61.4	65.1	65.5	25	54	116	San Pablo Dam Rd	Valley View Rd to Jodie Ln	11,279	30	0.0%	98.4%	0.0%	1.6%	75.0%	10.0%	15.0%	4	Soft	50
50.0	53.7	54.1	4	9	20	Sellers Ave	Central 1/3 of Sunset Rd to Chestnut St	1,832	25	0.0%	99.5%	0.0%	0.5%	75.0%	10.0%	15.0%	2	Soft	50
50.3	54.0	54.4	5	10	21	Sellers Ave	Redhaven St to Balfour Ave	1,944	25	0.0%	99.5%	0.0%	0.5%	75.0%	10.0%	15.0%	2	Soft	50
49.9	53.6	54.0	4	9	20	Sellers Ave	South 1/2 of Sycamore Ave to Chestnut St	1,795	25	0.0%	99.5%	0.0%	0.5%	75.0%	10.0%	15.0%	2	Soft	50
52.5	56.2	56.5	6	14	29	Sellers Ave	Chestnut St to Redhaven Ave	3,560	25	0.0%	99.7%	0.0%	0.3%	75.0%	10.0%	15.0%	2	Soft	50
50.0	53.7	54.1	4	9	20	Sellers Ave	Fourth 1/8 from the North of Sycamore Ave to C	1,832	25	0.0%	99.5%	0.0%	0.5%	75.0%	10.0%	15.0%	2	Soft	50
50.1	53.8	54.2	4	10	21	Sellers Ave	North 2/3 of Sunset Rd to Sycamore Ave	1,846	25	0.0%	99.5%	0.0%	0.5%	75.0%	10.0%	15.0%	2	Soft	50
50.2	54.0	54.3	5	10	21	Sellers Ave	Second 1/6 from the South of Sunset Rd to Syc	1,925	25	0.0%	99.5%	0.0%	0.5%	75.0%	10.0%	15.0%	2	Soft	50
62.1	65.8	66.2	28	60	129	Sobranite Ave	Fran Way to Valley View Rd	11,329	35	0.0%	99.1%	0.0%	0.9%	75.0%	10.0%	15.0%	2	Soft	50
62.1	65.8	66.2	28	60	130	Stone Valley Rd	Northeast 3/4 of Alamo Glen Dr/Stone Creek Pl	11,847	35	0.0%	99.2%	0.0%	0.8%	75.0%	10.0%	15.0%	2	Soft	50
55.3	59.0	59.4	10	21	45	Sunset Rd	Sellers Ave to Eden Plains Rd	2,047	35	0.0%	98.4%	0.0%	1.6%	75.0%	10.0%	15.0%	2	Soft	50
55.5	59.3	59.6	10	22	47	Sunset Rd	Eden Plains Rd to Byron HWY	1,664	40	0.0%	98.6%	0.0%	1.3%	75.0%	10.0%	15.0%	2	Soft	50
66.0	69.7	70.1	51	110	236	Taylor Blvd	Twinview Pl to Withers Ave	15,249	40	0.0%	97.6%	0.0%	2.4%	75.0%	10.0%	15.0%	4	Soft	50
66.3	70.0	70.4	53	115	247	Taylor Blvd	North 1/2 of Withers Ave to Pleasant Hill Rd	15,633	40	0.0%	97.3%	0.0%	2.7%	75.0%	10.0%	15.0%	4	Soft	50
66.4	70.2	70.5	54	117	252	Taylor Blvd	South 1/2 of Withers Ave to Pleasant Hill Rd	16,292	40	0.0%	97.4%	0.0%	2.6%	75.0%	10.0%	15.0%	4	Soft	50
68.1	71.8	72.2	70	151	325	Treat Blvd	Augello Ct/Maywood Dr to Cherry Ln	50,170	30	0.0%	98.4%	0.0%	1.6%	75.0%	10.0%	15.0%	6	Soft	50
68.4	72.2	72.5	74	159	342	Treat Blvd	Oak Rd to Jones Rd	48,740	30	0.0%	98.0%	0.0%	2.0%	75.0%	10.0%	15.0%	6	Soft	50
68.6	72.3	72.7	76	163	351	Treat Blvd	Jones Rd to Augello Ct/Maywood Dr	52,461	30	0.0%	98.1%	0.0%	1.9%	75.0%	10.0%	15.0%	6	Soft	50
68.1	71.8	72.1	70	150	323	Treat Blvd	Cherry Ln to Sheppard Rd	49,670	30	0.0%	98.4%	0.0%	1.6%	75.0%	10.0%	15.0%	6	Soft	50
62.2	65.9	66.3	28	61	132	Valley View Rd	Sobranite Ave to Fleetwood Dr	17,797	30	0.0%	99.2%	0.0%	0.7%	75.0%	10.0%	15.0%	2	Soft	50
59.7	63.4	63.8	19	42	90	Valley View Rd	Amend Rd to Olinda Rd	9,250	30	0.0%	99.0%	0.0%	1.0%	75.0%	10.0%	15.0%	2	Soft	50
59.4	63.1	63.5	18	40	86	Valley View Rd	San Pablo Dam Rd to Olinda Rd	8,075	30	0.0%	98.7%	0.0%	1.2%	75.0%	10.0%	15.0%	2	Soft	50
59.6	63.4	63.7	19	41	89	Valley View Rd	Southeast 2/3 of Morninside Dr to Via Giaranita	9,325	30	0.0%	99.1%	0.0%	0.9%	75.0%	10.0%	15.0%	2	Soft	50
59.3	63.0	63.4	18	39	84	Valley View Rd	Pine Hill Dr to Quiet Ln	8,479	30	0.0%	99.0%	0.0%	1.0%	75.0%	10.0%	15.0%	2	Soft	50
64.8	68.5	68.9	42	91	197	Valley View Rd	Appian Way to Sobranite Ave	22,288	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	2	Soft	50
61.6	65.4	65.7	26	56	121	Walnut Blvd	Marsh Creek Rd to Vasco Rd	6,826	40	0.0%	98.7%	0.0%	1.3%	75.0%	10.0%	15.0%	2	Soft	50
65.2	68.9	69.3	45	97	209	Willow Pass Rd	Evora Rd to Goble Dr	23,875	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
62.2	65.9	66.3	28	61	131	Willow Pass Rd	Bella Vista Ave to Loftus Rd	11,203	35	0.0%	98.9%	0.0%	1.0%	75.0%	10.0%	15.0%	2	Soft	50
62.6	66.3	66.7	30	65	140	Willow Pass Rd	West 1/3 of Clearland Dr to Bailey Rd	12,971	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
63.6	67.3	67.7	35	76	163	Willow Pass Rd	Port Chicago HWY to Alberts Ave	16,448	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
65.1	68.8	69.2	44	95	205	Willow Pass Rd	Goble Dr to Port Chicago HWY	23,002	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
63.4	67.1	67.5	34	73	158	Willow Pass Rd	Alberts Ave to Enes Ave	15,763	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
62.8	66.5	66.9	31	67	144	Willow Pass Rd	Alves Ln to Clearland Dr	13,438	35	0.0%	99.2%	0.0%	0.8%	75.0%	10.0%	15.0%	4	Soft	50
63.0	66.7	67.1	32	69	149	Willow Pass Rd	Marin Ave to Alves Ln	14,229	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
63.3	67.0	67.4	33	72	155	Willow Pass Rd	Solano Ave to Fairview Ave	15,059	35	0.0%	99.1%	0.0%	0.9%	75.0%	10.0%	15.0%	2	Soft	50
62.5	66.2	66.6	30	64	138	Willow Pass Rd	East 2/3 of Clearland Dr to Bailey Rd	12,890	35	0.0%	99.3%	0.0%	0.7%	75.0%	10.0%	15.0%	4	Soft	50
63.7	67.4	67.8	36	77	166	Willow Pass Rd	Bailey Rd to Solano Ave	16,918	35	0.0%	99.2%	0.0%	0.8%	75.0%	10.0%	15.0%	2	Soft	50
62.7	66.4	66.8	30	66	141	Willow Pass Rd	Madison Ave to Bella Vista Ave	12,857	35	0.0%	99.0%	0.0%	1.0%	75.0%	10.0%	15.0%	2	Soft	50
63.2	66.9	67.3	33	71	154	Willow Pass Rd	Fairview Ave to Madison Ave	15,040	35	0.0%	99.2%	0.0%	0.8%	75.0%	10.0%	15.0%	2	Soft	50







64.1	67.8	68.2	38	82	176	San Pablo Dam Rd	Valley View Rd to Jodie Ln	15,090	30	0.0%	96.8%	0.0%	3.2%	75.0%	10.0%	15.0%	4	Soft	50
53.9	57.6	58.0	8	17	37	Sellers Ave	Central 1/3 of Sunset Rd to Chestnut St	1,985	25	0.0%	96.7%	0.0%	3.3%	75.0%	10.0%	15.0%	2	Soft	50
54.2	58.0	58.3	8	18	39	Sellers Ave	Redhaven St to Balfour Ave	2,207	25	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	2	Soft	50
53.9	57.6	57.9	8	17	36	Sellers Ave	South 1/2 of Sycamore Ave to Chestnut St	1,947	25	0.0%	96.7%	0.0%	3.3%	75.0%	10.0%	15.0%	2	Soft	50
57.7	61.4	61.8	14	31	66	Sellers Ave	Chestnut St to Redhaven Ave	4,782	25	0.0%	96.8%	0.0%	3.2%	75.0%	10.0%	15.0%	2	Soft	50
53.9	57.6	58.0	8	17	37	Sellers Ave	Fourth 1/8 from the North of Sycamore Ave to C	1,985	25	0.0%	96.7%	0.0%	3.3%	75.0%	10.0%	15.0%	2	Soft	50
53.9	57.7	58.0	8	17	37	Sellers Ave	North 2/3 of Sunset Rd to Sycamore Ave	1,991	25	0.0%	96.7%	0.0%	3.3%	75.0%	10.0%	15.0%	2	Soft	50
54.2	57.9	58.2	8	18	38	Sellers Ave	Second 1/6 from the South of Sunset Rd to Syc	2,096	25	0.0%	96.7%	0.0%	3.2%	75.0%	10.0%	15.0%	2	Soft	50
65.0	68.7	69.1	44	94	203	Sobranite Ave	Fran Way to Valley View Rd	14,714	35	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	2	Soft	50
65.0	68.7	69.0	43	93	200	Stone Valley Rd	Northeast 3/4 of Alamo Glen Dr/Stone Creek Pl	14,567	35	0.0%	96.9%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
56.3	60.0	60.4	11	25	53	Sunset Rd	Sellers Ave to Eden Plains Rd	1,967	35	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	2	Soft	50
59.2	63.0	63.3	18	39	84	Sunset Rd	Eden Plains Rd to Byron HWY	3,006	40	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	2	Soft	50
68.0	71.8	72.1	69	150	322	Taylor Blvd	Twinview Pl to Withers Ave	22,160	40	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	4	Soft	50
67.9	71.6	72.0	68	147	317	Taylor Blvd	North 1/2 of Withers Ave to Pleasant Hill Rd	21,522	40	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	4	Soft	50
68.1	71.8	72.2	70	151	324	Taylor Blvd	South 1/2 of Withers Ave to Pleasant Hill Rd	22,319	40	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	4	Soft	50
69.5	73.2	73.6	87	187	403	Treat Blvd	Augello Ct/Maywood Dr to Cherry Ln	51,052	30	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	6	Soft	50
69.3	73.0	73.4	84	181	390	Treat Blvd	Oak Rd to Jones Rd	47,370	30	0.0%	96.8%	0.0%	3.1%	75.0%	10.0%	15.0%	6	Soft	50
69.7	73.4	73.8	90	194	417	Treat Blvd	Jones Rd to Augello Ct/Maywood Dr	53,706	30	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	6	Soft	50
69.6	73.3	73.7	88	190	408	Treat Blvd	Cherry Ln to Sheppard Rd	50,828	30	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	6	Soft	50
65.3	69.0	69.4	45	98	211	Valley View Rd	Sobranite Ave to Fleetwood Dr	20,509	30	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	2	Soft	50
62.9	66.6	67.0	32	68	147	Valley View Rd	Amend Rd to Olinda Rd	12,195	30	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
62.5	66.2	66.6	30	64	138	Valley View Rd	San Pablo Dam Rd to Olinda Rd	10,551	30	0.0%	96.7%	0.0%	3.3%	75.0%	10.0%	15.0%	2	Soft	50
63.2	66.9	67.3	33	71	153	Valley View Rd	Southeast 2/3 of Morninside Dr to Via Giaranita	12,912	30	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
62.6	66.3	66.7	30	65	140	Valley View Rd	Pine Hill Dr to Quiet Ln	11,345	30	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
67.6	71.3	71.7	64	139	299	Valley View Rd	Appian Way to Sobranite Ave	26,557	35	0.0%	96.9%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
69.2	72.9	73.3	83	179	386	Walnut Blvd	Marsh Creek Rd to Vasco Rd	29,866	40	0.0%	96.9%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
69.3	73.0	73.4	84	181	391	Willow Pass Rd	Evora Rd to Goble Dr	38,698	35	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	4	Soft	50
64.7	68.4	68.8	42	90	194	Willow Pass Rd	Bella Vista Ave to Loftus Rd	13,781	35	0.0%	96.9%	0.0%	3.1%	75.0%	10.0%	15.0%	2	Soft	50
67.3	71.0	71.4	62	134	288	Willow Pass Rd	West 1/3 of Clearland Dr to Bailey Rd	23,920	35	0.0%	96.8%	0.0%	3.2%	75.0%	10.0%	15.0%	4	Soft	50
68.3	72.0	72.4	72	155	334	Willow Pass Rd	Port Chicago HWY to Alberts Ave	30,709	35	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	4	Soft	50
69.1	72.8	73.2	82	176	379	Willow Pass Rd	Goble Dr to Port Chicago HWY	37,052	35	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	4	Soft	50
68.1	71.8	72.1	70	150	323	Willow Pass Rd	Alberts Ave to Enes Ave	29,240	35	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	4	Soft	50
67.6	71.3	71.7	65	139	300	Willow Pass Rd	Alves Ln to Clearland Dr	25,384	35	0.0%	96.8%	0.0%	3.2%	75.0%	10.0%	15.0%	4	Soft	50
67.8	71.5	71.9	67	144	311	Willow Pass Rd	Marin Ave to Alves Ln	26,855	35	0.0%	96.8%	0.0%	3.2%	75.0%	10.0%	15.0%	4	Soft	50
66.2	69.9	70.3	52	113	243	Willow Pass Rd	Solano Ave to Fairview Ave	19,769	35	0.0%	97.0%	0.0%	2.9%	75.0%	10.0%	15.0%	2	Soft	50
67.3	71.0	71.4	62	133	287	Willow Pass Rd	East 2/3 of Clearland Dr to Bailey Rd	23,775	35	0.0%	96.8%	0.0%	3.2%	75.0%	10.0%	15.0%	4	Soft	50
67.2	70.9	71.3	61	131	283	Willow Pass Rd	Bailey Rd to Solano Ave	24,700	35	0.0%	97.0%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
65.5	69.2	69.5	47	100	216	Willow Pass Rd	Madison Ave to Bella Vista Ave	16,341	35	0.0%	96.9%	0.0%	3.0%	75.0%	10.0%	15.0%	2	Soft	50
66.2	69.9	70.3	52	113	243	Willow Pass Rd	Fairview Ave to Madison Ave	19,705	35	0.0%	97.0%	0.0%	2.9%	75.0%	10.0%	15.0%	2	Soft	50