



TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

December 11, 2017

9:00 A.M.

651 Pine Street, Room 101, Martinez

Supervisor Diane Burgis, Chair
Supervisor Karen Mitchoff, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference of the Committee

1. Introductions
2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).
3. **Administrative Items, if applicable.** (John Cunningham, Department of Conservation and Development) pg. 4 of 228
4. **REVIEW record of meeting for October 9, 2017, Transportation, Water and Infrastructure Committee.** This record was prepared pursuant to the Better Government Ordinance 95-6, Article 25-205 (d) of the Contra Costa County Ordinance Code. Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record. (John Cunningham, Department of Conservation and Development) pg. 5 of 228
5. **REVIEW record of special meeting for November 7, 2017, Transportation, Water and Infrastructure Committee.** This record was prepared pursuant to the Better Government Ordinance 95-6, Article 25-205 (d) of the Contra Costa County Ordinance Code. Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record. (John Cunningham, Department of Conservation and Development) pg. 9 of 228
6. **RECEIVE the report on Mobility Matters Ride's 4 Veteran's Program, and DIRECT staff as appropriate.** (John Cunningham, Department of Conservation and Development) pg. 12 of 228
7. **RECEIVE report on Sustainable Groundwater Management in Contra Costa County.** (Ryan Hernandez, Department of Conservation and Development & Water Agency) pg. 17 of 228

8. **RECEIVE** yearly update on the County's IPM Program from the IPM Coordinator, receive report on status of public comment/concerns and take **ACTION** as appropriate. (Tanya Drlik, IPM Coordinator, Department of Public Works) pg. 49 of 228
9. **RECEIVE** the Report on PG&E Coordination with Cities and Contra Costa County for Street Light Maintenance and **MONITOR** Implementation of the Letter of Understanding with PG&E for the maintenance of PG&E streetlights in Contra Costa County. (Rochelle Johnson, Department of Public Works) pg. 144 of 228
10. **CONSIDER** report on Local, State, and Federal Transportation Related Issues: Legislation, Studies, Miscellaneous Updates, take **ACTION** as appropriate, including specific recommendations in the report. (John Cunningham, Department of Conservation and Development) pg. 146 of 228
11. **CONSIDER** report to the Board of Supervisors on the status of items referred to the Committee for 2017, and take **ACTION** as appropriate. (John Cunningham, Department of Conservation and Development) pg. 190 of 228
12. **RECEIVE** Communication, News, Miscellaneous Items of Interest to the Committee and **DIRECT** staff as appropriate. (John Cunningham, Department of Conservation and Development) pg. 195 of 228
13. Adjourn to the next Transportation, Water and Infrastructure meeting, to be announced at a later date for 2018.

The Transportation, Water & Infrastructure Committee (TWIC) will provide reasonable accommodations for persons with disabilities planning to attend TWIC meetings. Contact the staff person listed below at least 72 hours before the meeting.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the TWIC less than 96 hours prior to that meeting are available for public inspection at the County Department of Conservation and Development, 30 Muir Road, Martinez during normal business hours.

Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

For Additional Information Contact: John Cunningham, Committee Staff, Phone (925) 674-7833, Fax (925) 674-7250, john.cunningham@dcd.cccounty.us

Glossary of Acronyms, Abbreviations, and other Terms (in alphabetical order): Contra Costa County has a policy of making limited use of acronyms, abbreviations, and industry-specific language in meetings of its Board of Supervisors and Committees. Following is a list of commonly used abbreviations that may appear in presentations and written materials at meetings of the Transportation, Water and Infrastructure Committee:

AB Assembly Bill
ABAG Association of Bay Area Governments

HOT High-Occupancy/Toll
HOV High-Occupancy-Vehicle

ACA Assembly Constitutional Amendment
 ADA Americans with Disabilities Act of 1990
 ALUC Airport Land Use Commission
 AOB Area of Benefit
 BAAQMD Bay Area Air Quality Management District
 BART Bay Area Rapid Transit District
 BATA Bay Area Toll Authority
 BCDC Bay Conservation & Development Commission
 BDCP Bay-Delta Conservation Plan
 BGO Better Government Ordinance (Contra Costa County)
 BOS Board of Supervisors
 CALTRANS California Department of Transportation
 CalWIN California Works Information Network
 CalWORKS California Work Opportunity and Responsibility
 to Kids
 CAER Community Awareness Emergency Response
 CAO County Administrative Officer or Office
 CCTA Contra Costa Transportation Authority
 CCWD Contra Costa Water District
 CDBG Community Development Block Grant
 CEQA California Environmental Quality Act
 CFS Cubic Feet per Second (of water)
 CPI Consumer Price Index
 CSA County Service Area
 CSAC California State Association of Counties
 CTC California Transportation Commission
 DCC Delta Counties Coalition
 DCD Contra Costa County Dept. of Conservation & Development
 DPC Delta Protection Commission
 DSC Delta Stewardship Council
 DWR California Department of Water Resources
 EBMUD East Bay Municipal Utility District
 EIR Environmental Impact Report (a state requirement)
 EIS Environmental Impact Statement (a federal requirement)
 EPA Environmental Protection Agency
 FAA Federal Aviation Administration
 FEMA Federal Emergency Management Agency
 FTE Full Time Equivalent
 FY Fiscal Year
 GHAD Geologic Hazard Abatement District
 GIS Geographic Information System
 HBRR Highway Bridge Replacement and Rehabilitation

HSD Contra Costa County Health Services Department
 HUD United States Department of Housing and Urban
 Development
 IPM Integrated Pest Management
 ISO Industrial Safety Ordinance
 JPA/JEPA Joint (Exercise of) Powers Authority or Agreement
 Lamorinda Lafayette-Moraga-Orinda Area
 LAFCo Local Agency Formation Commission
 LCC League of California Cities
 LTMS Long-Term Management Strategy
 MAC Municipal Advisory Council
 MAF Million Acre Feet (of water)
 MBE Minority Business Enterprise
 MOA Memorandum of Agreement
 MOE Maintenance of Effort
 MOU Memorandum of Understanding
 MTC Metropolitan Transportation Commission
 NACo National Association of Counties
 NEPA National Environmental Protection Act
 OES-EOC Office of Emergency Services-Emergency
 Operations Center
 PDA Priority Development Area
 PWD Contra Costa County Public Works Department
 RCRC Regional Council of Rural Counties
 RDA Redevelopment Agency or Area
 RFI Request For Information
 RFP Request For Proposals
 RFQ Request For Qualifications
 SB Senate Bill
 SBE Small Business Enterprise
 SR2S Safe Routes to Schools
 STIP State Transportation Improvement Program
 SWAT Southwest Area Transportation Committee
 TRANSPAC Transportation Partnership & Cooperation (Central)
 TRANSPLAN Transportation Planning Committee (East County)
 TWIC Transportation, Water and Infrastructure Committee
 USACE United States Army Corps of Engineers
 WBE Women-Owned Business Enterprise
 WCCTAC West Contra Costa Transportation Advisory
 Committee
 WETA Water Emergency Transportation Authority
 WRDA Water Resources Development Act



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

3.

Meeting Date: 12/11/2017

Subject: Administrative Items, if applicable.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE
COMMITTEE,

Department: Conservation & Development

Referral No.: N/A

Referral Name: N/A

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

This is an Administrative Item of the Committee.

Referral Update:

Staff will review any items related to the conduct of Committee business.

Recommendation(s)/Next Step(s):

CONSIDER Administrative items and Take ACTION as appropriate.

Fiscal Impact (if any):

N/A

Attachments

No file(s) attached.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

4.

Meeting Date: 12/11/2017
Subject: REVIEW record of meeting for October 9, 2017, Transportation, Water and Infrastructure Meeting.
Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,
Department: Conservation & Development
Referral No.: N/A
Referral Name: N/A
Presenter: John Cunningham, DCD **Contact:** John Cunningham
(925)674-7833

Referral History:

County Ordinance (Better Government Ordinance 95-6, Article 25-205, [d]) requires that each County Body keep a record of its meetings. Though the record need not be verbatim, it must accurately reflect the agenda and the decisions made in the meeting.

Referral Update:

Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record. Links to the agenda and minutes will be available at the TWI Committee web page: <http://www.cccounty.us/4327/Transportation-Water-Infrastructure>

Recommendation(s)/Next Step(s):

Staff recommends approval of the attached Record of Action for the October 9, 2017, Transportation, Water, and Infrastructure Committee meeting with any necessary corrections.

Fiscal Impact (if any):

N/A

Attachments

10-09-17 TWIC Sign-In
10-09-17 TWIC Mtg Minutes

SIGN-IN SHEET

[illegible]



TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

October 9, 2017

9:00 A.M.

651 Pine Street, Room 101, Martinez

Supervisor Diane Burgis, Chair
Supervisor Karen Mitchoff, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference of the Committee

Present: Karen Mitchoff, Vice Chair

Attendees: Alicia Nuchols, Office of Supervisor Diane Burgis

Paul Detjens, CC Public Works Dept.

Jerry Fahy, CC Public Works Dept.

Monish Sen, CC Public Works Dept.

Mike Carlson, CC Public Works Dept.

Mark Seedall, CC Water District

John Burgh, CC Water District

John Cunningham, CC DCD

Jamar Stamps, CC DCD

Jody London, CC DCD

Robert Sarmiento, CC DCD

1. Introductions
2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).
3. CONSIDER Administrative items and Take ACTION as appropriate.

The County's legislative advocate, Mark Watts, was unable to attend due to a meeting conflict. Mr. Watts was meeting with Caltrans on behalf of the County seeking resolution to the obligations imposed by the state regarding the Iron Horse Corridor. Mr. Watts will provide an update to the Committee at their November meeting.

4. Staff recommends approval of the attached Record of Action for the August 14, 2017, Committee Meeting with any necessary corrections.

The Committee APPROVED the meeting record.

5. RECEIVE Update and DIRECT staff as appropriate.

The Committee RECEIVED the update on the efforts to implement Complete Streets/"Vision Zero" policies.

6. RECOMMEND that the Board of Supervisors approve the submission of a grant application, "Feasibility of a Short-Line Railroad in the Northern Waterfront," for the *Planning and Local Technical Assistance Program* to the United States Economic Development Administration to study a short-line railroad in the Northern Waterfront.

The Committee APPROVED the recommendation.

7. RECEIVE update on the proposed Marsh Creek Corridor Multi-Use Trail Study, and DIRECT staff as appropriate.

Staff was directed to to address the following concerns and issues: develop a strategy and Request for Proposals that would increase the likelihood of the project moving ahead expeditiously, ensure that the East Bay Regional Park District and the East Contra Costa Habitat Conservancy are active partners, establish a study budget which clearly funds the local match, and return to the Committee for approval to proceed.

8. RECEIVE a status report on the Lower Walnut Creek Restoration Project, and DIRECT staff as appropriate.

The Committee RECEIVED the report with a comment to staff to ensure that, in the distribution of any information or announcements, libraries are included and distribution is consistent throughout the County.

9. RECOMMEND the Board of Supervisors approve and authorize the Director of Conservation and Development, or designee, to participate with the Contra Costa Transportation Authority in applying for a grant under the 2017-18 Sustainable Transportation Planning Grant Program to Caltrans for the "Accessible Transportation Strategic Plan", and direct staff to develop any necessary agreements with the Authority to 1) formalize cooperative grant administration and, 2) identify match funding.

The Committee RECEIVED an update from staff withdrawing the recommendation explaining indicating that a change in guidance from Caltrans resulted in it not being necessary for the County to submit the subject grant application, the Contra Costa Transportation Authority is an eligible applicant.

10. DISCUSS, REVISE and RECOMMEND that the Board of Supervisors approve TWIC revisions to the County's Federal and State Legislative Platform in preparation for the 2018 Legislative Session.

The Committee APPROVED the recommendation, directing staff to forward the platform revisions to the Legislation Committee.

11. CONSIDER report on Local, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate including CONSIDERATION of any specific recommendations in the report above.

The Committee RECEIVED the report.

12. RECEIVE communication and DIRECT staff as appropriate.

The Committee RECEIVED the communication.

13. The next meeting is currently scheduled for Monday, November 13, 2017.

14. Adjourn

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Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

5.

Meeting Date: 12/11/2017

Subject: REVIEW record of Special Meeting for November 7, 2017,
Transportation, Water and Infrastructure Meeting.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE
COMMITTEE,

Department: Conservation & Development

Referral No.: N/A

Referral Name: N/A

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

County Ordinance (Better Government Ordinance 95-6, Article 25-205, [d]) requires that each County Body keep a record of its meetings. Though the record need not be verbatim, it must accurately reflect the agenda and the decisions made in the meeting.

Referral Update:

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Recommendation(s)/Next Step(s):

Staff recommends approval of the attached Record of Action for the November 7, 2017, Transportation, Water, and Infrastructure Committee Special Meeting with any necessary corrections.

Fiscal Impact (if any):

N/A

Attachments

11-07-17 TWIC SP MTG Sign-In Sheet

11-07-17 TWIC Special Mtg Minutes

Transportation, Water and Infrastructure Committee Meeting November 7, 2017 SIGN-IN SHEET

Signing in is voluntary. You may attend this meeting without signing in. (If front is filled, please use back.)

Name	Representing	Phone	EMAIL
John Cunningham	TWIC / DCD	674-7833	
John Kopelick	DCD	674-7819	
Abigail Fakemon	ELC Habitat Conservancy	674-7820	
STEPHEN KOWALEWSKI	PUBLIC WORKS	313-2225	SKOWA@PW.COUNTY.TX.US
TERRY FARM	PUBLIC WORKS	313-2276	JERRY.FARM@COUNTY.TX.US
Jamar Stamps	DCD	674-7832	jamar.stamps@dc.dccounty.us
Alicia Nichols	Supervisor Bureau	252-4500	alicia.nichols@bos.dccounty.us
Nash Goodwin	BOS D-3	252-4530	nash.goodwin@bos.dccounty.us
Lia Bristol	BOS Mitchell	521-7100	lia.bristol@bos.dccounty.us
Michael Green	Malcolm East Bay Paved Area	510-367-0654	Michael.Green@malcolm.org



TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

****SPECIAL MEETING**** November 7, 2017
1:00 P.M. or after Veteran's Day Celebration
651 Pine Street, Room 101, Martinez

Supervisor Diane Burgis, Chair
Supervisor Karen Mitchoff, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference of the Committee

Present: Diane Burgis, Chair
Karen Mitchoff, Vice Chair

Attendees: Michaela Green, CSUEB
Alicia Nuchols, BOS D-3
Mark Goodwin, BOS D-3
Lia Bristol, BOS D-4
Jerry Fahy, PWD
Stephen Kowalewski, PWD
John Kopchik, DCD
Jamar Stamps, DCD
Abigail Fateman, ECCCHC - DCD
John Cunningham, DCD

1. Introductions
2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).

There was no public comment.

3. RECEIVE update on the proposed Marsh Creek Corridor Multi-Use Trail, RECOMMEND that the Board of Supervisors approve the submission of grant application(s), "Marsh Creek Multi-Use Trail Feasibility Study" to following agencies and grant programs, Caltrans Senate Bill 1 Sustainable Transportation Planning Grant, Coastal Conservancy Proposition 1 Grant, and the Metropolitan Transportation Commission's Priority Conservation Area Grant, and authorize staff to develop and release a Request for Proposals to select a consultant to conduct the study.

The Committee unanimously APPROVED the staff recommendation.

4. Adjourn to the next regular Transportation, Water and Infrastructure meeting scheduled for Monday, December 11, 2017, at 9:00 a.m.

The Committee adjourned in the afternoon of November 7, 2017.

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Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

6.

Meeting Date: 12/11/2017
Subject: RECEIVE Report and Presentation on Mobility Matters "Rides 4 Veterans" Program.
Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,
Department: Conservation & Development
Referral No.: 17
Referral Name: Review transportation plans and services for specific populations...low income...human services...senior mobility...mobility management...
Presenter: John Cunningham, DCD **Contact:** John Cunningham
(925)674-7833

Referral History:

The subject program was established in 2017 and has not been reviewed by the Committee.

Referral Update:

On March 14, 2017 the Board of Supervisors authorized a contract with Mobility Matters in the amount of \$83,645 to support the implementation of the "Rides 4 Veterans" Program. The action was a recommendation from Supervisors Candace Andersen and Karen Mitchoff who allocated the funding from the District II and District IV portions of the Livable Communities Trust Fund.

Sam Sotelo, Director of Programs for Mobility Matters, provided the attached program information and the narrative report below. Mr. Sotelo and Elaine Welch, Mobility Matters Chief Executive Officer, will be at the November Committee meeting to discuss the program and answer questions. Staff is prepared to bring this report to the Board of Supervisors if the Committee chooses to provide that direction.

Summary of Rides 4 Veterans Program

In June 2017, Mobility Matters implemented a new program, Rides 4 Veterans, focused on providing no cost rides to Veterans in need throughout Contra Costa County. Since June we have recruited more than 40 volunteers who have given more than 250 trips, over 300 volunteer hours and over 5000 miles providing essential transportation to medical appointments and even grocery shopping to veterans in our community.

We have attended many veteran group meeting and community events informing the public of our new program. (Town hall, American legion, VFW, DVG, Lions Club,

Concord Vet Center, Martinez VA, Contra Costa County Veteran's Service Office, CCTV Veterans Voices, Somerset Veterans, East County Resource, Monument Crisis Center, Pittsburgh Senior Center, Antioch Sr Center, Richmond Sr Center, Pinole Sr Center, Hercules Sr Center, Richmond Sr Health Fair, Walk of Honor, Stand Down on the Delta, Blue Star moms, National night out in Pinole, Concord Sr center, Danville Sr center/Veterans Memorial Center, Commanders Call, Salute To Veterans, Vets of Oakley, and SMAC. Just to name some.)

We have also worked with and have been shown support from some of the most influential people in the community, including elected officials and all levels of representatives in the veteran resource community.

The willingness of America's Veterans to sacrifice for our country has earned them our lasting gratitude. Now is our chance to show them our support by continuing to serve those who have served our country.

Recommendation(s)/Next Step(s):

RECEIVE the report on Mobility Matters Ride's 4 Veteran's Program, and DIRECT staff as appropriate.

Fiscal Impact (if any):

None.

Attachments

Rides 4 Veterans Volunteer Numbers

Rides 4 Veterans Flyer

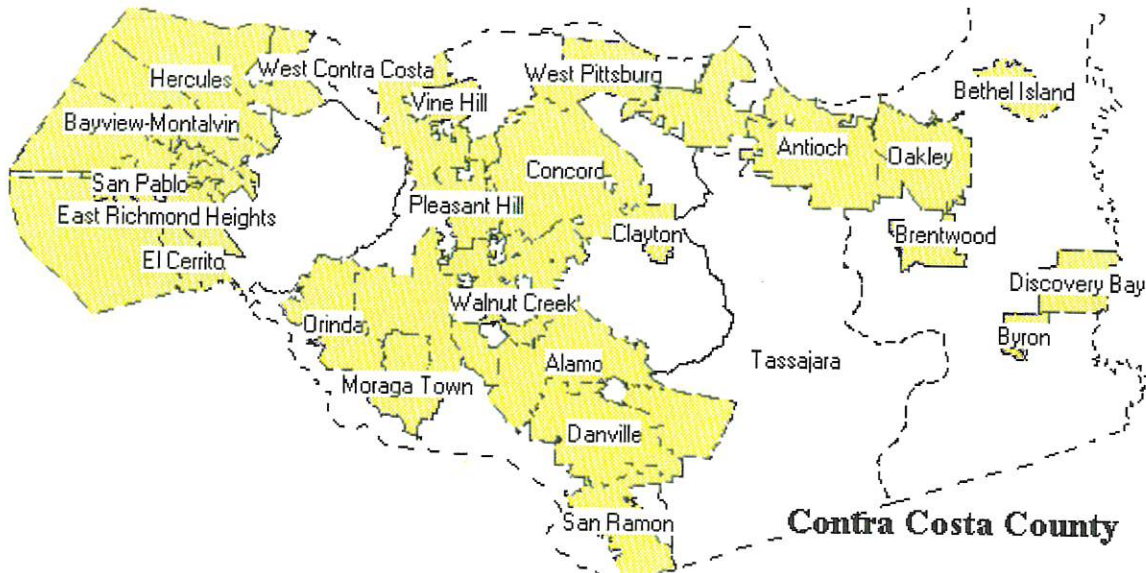
Rides 4 Veterans June 1, 2017 – Nov 30, 2017 Total Rides - 256

Volunteers - Clients

Total Mileage – 5033

41 - 32

Total Hours - 300



West

Central

East

	v-c		v-c		v-c
San Pablo	1-1	Concord	2-3	Antioch	6-5
Rodeo	2-2	Martinez	3-3	Brentwood	5-4
El Sobrante	0-1	Pleasant Hill	3-0	Oakley	3-3
Hercules	1-0	Lafayette	6-2	Pitt	1-3
4-4		Orinda	0-1	15-15	
		Alamo	3-1		
		Danville	1-1		
		Walnut Creek	3-2		
		Clayton	1-0		
		22-13			



Matching riders with providers

Another Way to Help

All Mobility Matters services and programs are provided at no charge to our clients.

If you are able to make a contribution to help us keep the promises we make to the vulnerable population we serve, please send your tax deductible donation by check or credit card

(Visa, MasterCard or Discover) to:



Matching riders with providers

1035A Carol Lane
Lafayette, CA 94549

Phone: **925-284-2207**

Email: office@mobilitymatterscc.com

Like us on Facebook!

www.facebook.com/mobilitymatterscc



Thank You!



Partially funded with Contra Costa County
Livable Communities Trust Funds

www.mobilitymatterscc.com

Thank You for Your Service



The willingness of America's veterans to sacrifice for our country has earned them our lasting gratitude.



July 2017

12-11-17 TWIC Mtg Packet Pg 15 of 228

Rides 4 Veterans

**SERVING
THOSE WHO
SERVED OUR
COUNTRY**



Matching riders with providers

Rides 4 Veterans

This program offers free, one-on-one, door-through-door rides provided by screened and trained volunteer drivers, many of whom are veterans. These rides are primarily for medical care, dental appointments, and basic necessities like grocery shopping for qualified veterans of any age.



Transportation Information & Referrals

If you have questions about mobility management or need help being matched with an appropriate transportation provider to meet your needs, please call our Transportation Information and Referrals Helpline. If you are not a veteran but need rides or can volunteer, ask about our Rides for Seniors program.

925-284-6109

OR TOLL FREE

1-855-234-RIDE (7433)

Our Mission

Mobility Matters provides mobility management services in Contra Costa County facilitating collaboration and coordination between public and private transportation providers creating a network of integrated options that primarily address the mobility needs of seniors, individual with disabilities, and low income individuals.



Need Rides?

Qualifications for Rides 4 Veterans clients:

- Honorable Discharge.
- Live in Contra Costa County.
- Able to walk with the aid of a cane, walker, knee scooter, crutches, or elbow assistance.
- Requires escorted, door-through-door assistance.
- Able to call in to request rides.
- Unable to use other forms of transportation for medical or dental care and basic necessities.

If you meet all of these qualifications, please call:

925-284-6161

Want to Help?

Requirements for Rides 4 Veterans volunteer drivers:

- Be a caring, mature individual (veteran a plus) who is willing and able to provide transportation to an ambulatory veteran who can no longer drive.
- Age 25 - 75 with a current driver's license.
- Excellent driving record and crime free background.
- Own or have access to a reliable, safe vehicle that is registered and insured.
- Participate in a three hour training class before giving first ride.

If you meet these requirements, come join our team and find out what a difference you can make in another person's life. It will change their life, and it will most certainly change yours!

If you would like more information about volunteering for the Rides 4 Veterans program please call:

925-284-2215



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

7.

Meeting Date: 12/11/2017

Subject: RECEIVE Report on Sustainable Groundwater Management in Contra Costa County.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: 6

Referral Name: Sustainable Groundwater Management

Presenter: Ryan Hernandez, DCD Water Agency **Contact:** Ryan Hernandez
(925)674-7824

Referral History:

The Committee received a report on the County's decision to become a Groundwater Sustainability Agency and prepare a Groundwater Sustainability Plan within a portion of the Tracy Subbasin to comply with the Sustainable Groundwater Management Act (SGMA) in April of 2017. This report is in fulfillment of the TWIC referral to monitor compliance of the SGMA.

Referral Update:

On April 25, 2017, the Board adopted Resolution Number 2017/148 declaring Contra Costa County's intent to become a Groundwater Sustainability Agency (GSA) and authorized execution of a Memorandum of Understanding (MOU) with east county entities to prepare a Groundwater Sustainability Plan for the portion of the Tracy Subbasin within Contra Costa County. The east county entities that also are parties to the MOU include the Cities of Antioch and Brentwood, Contra Costa Water District, Diablo Water District, East Contra Costa Irrigation District, and the Discovery Bay Community Services District. The MOU was executed shortly after the Board hearing and became effective on May 9, 2017.

Additionally, the County submitted an application to the Department of Water Resources declaring its decision to become a GSA on May 11, 2017 and 90 days later, on August 10, 2017, Contra Costa County became the exclusive Groundwater Sustainability Agency for a portion of the Tracy Subbasin within east Contra Costa County, as further described in the resolution. The other parties to the MOU also applied and became exclusive GSAs for their portion of the Tracy Subbasin within Contra Costa County, as described in the MOU.

The parties entered into the MOU in order to develop a groundwater sustainability plan (GSP) for the East Contra Costa County Portion of the Tracy Subbasin. The MOU reflects the Parties' general agreement that the costs of developing the GSP should be split evenly among the Parties. The MOU also generally allowed the County to provide in-kind services to satisfy some or all of its cost share obligations.

Subsequently, on December 5, 2017, the Board approved the first amendment to the MOU establishing a process, undertaken annually, through which the parties agree on the GSP-preparation services to be performed. The County will determine annually whether it will provide in-kind services. The County will be responsible for paying the other parties true-up payments at the end of the year if the value of its in-kind services is less than what the amount of its cost share would have been. If the value of in-kind services exceeds what the cost-share would have been, the excess is carried over to satisfy next year's in-kind service contribution. The MOU establishes how the value of County in-kind services will be calculated. In addition, this amendment designates Brentwood as the party that will serve as the contracting Party with the consultant on behalf of all of the other Parties.

The City of Brentwood is preparing a grant application to the State that would cover some of the costs of preparing a Groundwater Sustainability Plan. If awarded, such a grant would reduce local agencies' share of the costs.

Recommendation(s)/Next Step(s):

RECEIVE Report on Sustainable Groundwater Management in Contra Costa County and DIRECT staff as appropriate.

Fiscal Impact (if any):

Costs to prepare the groundwater sustainability plan will be divided evenly among the parties to the MOU, except that the County may elect to satisfy some or all of its cost-share obligation through in-kind services performed by County staff, which will be funded by the Water Agency.

Attachments

East CC GSA - MOU

First Amendment East CC GSA - MOU

MEMORANDUM OF UNDERSTANDING

Development of a Groundwater Sustainability Plan

for the East Contra Costa County Portion of the

Tracy Subbasin, (DWR Basin 5-22.15, San Joaquin Valley)

This Memorandum of Understanding for the Development of a Groundwater Sustainability Plan for the East Contra Costa County portion of the Tracy Subbasin, (DWR Basin 5-22.15, San Joaquin Valley) (“**MOU**”) is entered into and effective this 9th day of May, 2017 (“**Effective Date**”) by and among the City of Antioch (“Antioch”), City of Brentwood (“Brentwood”), Byron-Bethany Irrigation District (“BBID”), Contra Costa Water District (“CCWD”), Contra Costa County (“County”), Diablo Water District (“DWD”), East Contra Costa Irrigation District (“ECCID”), and Discovery Bay Community Services District (“Discovery Bay”). Each of the foregoing parties to this MOU is sometimes referred to herein as a “**Party**” and are collectively sometimes referred to as the “**Parties.**”

Recitals

A. In September 2014, the California Legislature enacted the Sustainable Groundwater Management Act of 2014 (“**SGMA**”), which established a statewide framework for the sustainable management of groundwater resources. That framework focuses on granting new authorities and responsibility to local agencies while holding those agencies accountable. The framework also provides for state intervention where a local agency fails to develop a groundwater sustainability plan in a timely manner.

23 B. The Tracy Subbasin (“**Basin**”) is referred to as DWR Basin 5-22.15, San Joaquin Valley
24 and is shown on the map attached hereto as Exhibit A and incorporated herein by reference as if
25 set forth in full. The Tracy Subbasin is located in eastern Contra Costa County and in San Joaquin
26 County, and Alameda County. The portion of the Basin within Contra Costa County is referred to
27 herein as the “**East CC Basin**,” the portion of the Basin within San Joaquin County is referred to
28 herein as the “**SJ Basin**,” and the portion of the Basin within Alameda County is referred to herein
29 as the “**Alameda Basin**.” The Parties collectively overlie all of the East CC Basin.

30 C. Under SGMA, one or more local agencies may form a groundwater sustainability agency
31 (“**GSA**”), by memorandum of agreement, joint exercise of powers agreement, or other agreement.
32 (Wat. Code, §§ 10723(a), 10723.6.) The Parties desire for each Party to be the GSA within all or
33 a portion of that Party’s boundary. The Parties further desire to develop a governance structure
34 for the East CC Basin to be considered during development of the groundwater sustainability plan
35 (a “**GSP**”) for the East CC Basin (the “**East CC Basin GSP**”). The Parties further desire to resolve
36 areas of jurisdictional overlap so that no two Parties serve as GSAs over the same area. The
37 purpose of this MOU is to coordinate the Parties’ activities related to each Party becoming a GSA,
38 development of the East CC Basin GSP, and each Party’s future consideration of whether to adopt
39 a GSP for the East CC Basin.

40 D. The Parties wish to collaborate in an effort to ensure sustainable groundwater management
41 for the East CC Basin, manage the groundwater basin as efficiently as practicable balancing the
42 financial resources of the agencies with the principles of effective and safe groundwater
43 management, while retaining groundwater management authority within their respective
44 jurisdictions. The Parties desire to share responsibility for East CC Basin management under
45 SGMA. The Parties recognize that the key to success in this effort will be the coordination of

activities under SGMA, and the collaborative development of the East CC Basin GSP, which each Party may consider adopting and implementing within its GSA management area. The Parties also will need to confer with GSAs for the SJ Basin and Alameda Basin regarding the terms of an agreement that coordinates the East CC Basin GSP with the GSP(s) of the GSA(s) for the SJ Basin and the Alameda Basin.

E. The Basin has been designated by the California Department of Water Resources (“DWR”) as a medium-priority groundwater basin, which, under the terms of SGMA, means that the Parties must submit an East CC Basin GSP to DWR by January 31, 2022.

F. The Parties wish to memorialize their commitments by means of this MOU.

Understandings

1. *Term.* The term of this MOU begins on the Effective Date, which shall occur upon execution of this MOU by all eight of the parties, and this MOU shall remain in full force and effect until the earliest of the following events: (i) January 31, 2022, (ii) the date upon which the Parties submit an East CC Basin GSP to DWR, or (iii) the date upon which the Parties then party to the MOU execute a document jointly terminating the provisions of this MOU. An individual Party’s obligations under this MOU terminate when the Party withdraws from the MOU in accordance with Section 4.

2. *Development of the GSP*

a. *Parties to Become GSAs.* Each Party, except Contra Costa Water District, agrees to take the necessary actions to become the GSA for all or a portion of that area of the East CC Basin that it overlies, as shown on Exhibit B, attached hereto, no later than April 1, 2017, or shortly thereafter. The Parties shall jointly submit the Parties’

individual elections to become GSAs and this MOU to DWR prior to April 1, 2017, or shortly thereafter. The Parties further agree to develop a governance structure for the East CC Basin to be considered during development of the East CC Basin GSP

- b. *Single GSP.* The Parties will collaborate to develop a single East CC Basin GSP that, at a minimum, satisfies the GSP requirements in the SGMA and the regulations promulgated under the SGMA. The East CC Basin GSP must include an analysis of implementation costs and revenue sources, and must include an analysis of governance structure options. The East CC Basin GSP shall be drafted in a manner that preserves, and does not purport to supersede, the land use authority of each city or county, or the statutory authority of each special district, that is a party to this MOU. The East CC Basin GSP must include provisions for consultation between a GSA and any public agency that the GSA overlaps before the GSA takes any action that may relate to that public agency's exercise of its statutory authority. Unless the Parties later agree otherwise, it is intended that the East CC Basin GSP will be implemented by each Party within its respective GSA management area, and that the Parties will coordinate their implementation of the East CC Basin GSP. The Parties will endeavor to negotiate terms of an agreement with the GSA(s) for the SJ Basin and the Alameda Basin, to ensure that the East CC Basin, SJ Basin, and Alameda Basin GSAs' GSP(s) are coordinated consistent with the SGMA. If the terms of that MOU are negotiated, the Parties will ask their governing bodies to consider approving the MOU.

90 c. *Overlap Areas.* Solely for the purpose of complying with the SGMA requirement
91 that GSA management areas not overlap, the Parties agree that there are no
92 overlapping GSA management areas, as shown on Exhibit B. This MOU does not
93 purport to limit any Party's legal authority to utilize and deliver groundwater or
94 surface water throughout its jurisdictional boundary (as may be amended from
95 time-to-time), which may include area outside of a Party's management area shown
96 on Exhibit B.

97 d. *Cooperation of Efforts.* The Parties will designate staff who will endeavor to meet
98 monthly or more frequently if necessary to develop the terms of the East CC Basin
99 GSP in an expeditious manner.

100 e. *Financing .*

101 (1) The outside technical/consultant costs associated with developing the East CC
102 Basin GSP ("GSP Costs") will be shared equally among the Parties. However,
103 the County, at its sole discretion, may satisfy its share of GSP Costs by providing
104 in-kind services, which may include mapping, graphics, and database
105 management services.

106 (2) The \$118,300 contract with Luhdorff and Scalmanini dated April 1, 2015, for
107 SGMA technical support has been paid one-fifth each by BBID, Brentwood,
108 DWD, ECCID and Discovery Bay. Antioch and CCWD agree that within 60 days
109 of the effective date of this MOU, they shall reimburse BBID, Brentwood, DWD,
110 ECCID and Discovery Bay each \$3,380 in order to reallocate the \$118,300
111 contract cost into one-seventh portions.

f. *Approval of the GSP.* The Parties agree that the East CC Basin GSP will become effective for each Party when all of the Parties adopt the East CC Basin GSP.

3. *Savings Provisions.* This MOU shall not operate to validate or invalidate, modify or affect any Party's water rights or any Party's obligations under any agreement, contract or memorandum of understanding/agreement entered into prior to the effective date of this MOU. Nothing in this MOU shall operate to convey any new right to groundwater to any Party. Each Party to this MOU reserves any and all claims and causes of action respecting its water rights and/or any agreement, contract or memorandum of understanding/agreement; any and all defenses against any water rights claims or claims under any agreement, contract or memorandum of understanding/agreement.

4. *Withdrawal.* Any Party shall have the ability to withdraw from this MOU by providing sixty (60) days written notice of its intention to withdraw. Said notice shall be given to each of the other Parties.

a. A Party shall not be fiscally liable for expenditures following its withdrawal from this MOU, provided that the Party provides written notice at least sixty (60) days prior to the effective date of the withdrawal. A withdrawal shall not terminate, or relieve the withdrawing Party from, any express contractual obligation to another Party to to this MOU or to any third party incurred or encumbered prior to the withdrawal.

b. In the event of a Party's withdrawal, this MOU shall continue in full force and effect among the remaining Parties. Further, a Party's withdrawal from this MOU does not, without further action by that Party, have any effect on the withdrawing Party's

134 decision to be a GSA. A withdrawing Party shall coordinate the development of its
135 groundwater sustainability plan with the other Parties to this MOU.

136 5. *CEQA*. Nothing in this MOU commits any Party to undertake any future discretionary
137 actions referenced in this MOU, including but not limited to electing to become a GSA and
138 adopting the East CC Basin GSP. Each Party, as a lead agency under the California
139 Environmental Quality Act (“CEQA”), shall be responsible for complying with all
140 obligations under CEQA that may apply to the Party’s future discretionary actions pursuant
141 to this MOU, including electing to become a GSA and adopting the East CC Basin GSP.

142 6. *Books and Records*. Each Party shall have access to and the right to examine any of the
143 other Party’s pertinent books, documents, papers or other records (including, without
144 limitation, records contained on electronic media) relating to the performance of that
145 Party’s obligations pursuant to this Agreement, *providing that* nothing in this paragraph
146 shall be construed to operate as a waiver of any applicable privilege and *provided further*
147 that nothing in this paragraph shall be construed to give either Party rights to inspect the
148 other Party’s records in excess of the rights contained in the California Public Records Act.

149 7. *General Provisions*

150 a. *Authority*. Each signatory of this MOU represents that s/he is authorized to execute
151 this MOU on behalf of the Party for which s/he signs. Each Party represents that it
152 has legal authority to enter into this MOU and to perform all obligations under this
153 MOU.

154 b. *Amendment*. This MOU may be amended or modified only by a written instrument
155 executed by each of the Parties to this MOU.

- c. *Jurisdiction and Venue.* This MOU shall be governed by and construed in accordance with the laws of the State of California, except for its conflicts of law rules. Any suit, action, or proceeding brought under the scope of this MOU shall be brought and maintained to the extent allowed by law in the County of Contra Costa, California.
- d. *Headings.* The paragraph headings used in this MOU are intended for convenience only and shall not be used in interpreting this MOU or in determining any of the rights or obligations of the Parties to this MOU.
- e. *Construction and Interpretation.* This MOU has been arrived at through negotiations and each Party has had a full and fair opportunity to revise the terms of this MOU. As a result, the normal rule of construction that any ambiguities are to be resolved against the drafting Party shall not apply in the construction or interpretation of this MOU.
- f. *Entire Agreement.* This MOU constitutes the entire agreement of the Parties with respect to the subject matter of this MOU and supersedes any prior oral or written agreement, understanding, or representation relating to the subject matter of this MOU.
- g. *Partial Invalidity.* If, after the date of execution of this MOU, any provision of this MOU is held to be illegal, invalid, or unenforceable under present or future laws effective during the term of this MOU, such provision shall be fully severable. However, in lieu thereof, there shall be added a provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible and be legal, valid and enforceable.

- h. *Waivers.* Waiver of any breach or default hereunder shall not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this MOU and forbearance to enforce one or more of the remedies provided in this MOU shall not be deemed to be a waiver of that remedy.
- i. *Necessary Actions.* Each Party agrees to execute and deliver additional documents and instruments and to take any additional actions as may be reasonably required to carry out the purposes of this MOU.
- j. *Compliance with Law.* In performing their respective obligations under this MOU, the Parties shall comply with and conform to all applicable laws, rules, regulations, and ordinances.
- k. *Liability.* Each Party agrees to indemnify and hold every other Party to the Agreement, and their officers, agents and employees, free and harmless from any costs or liability imposed upon any other Party, officers, agents, or employees arising out of any acts or omissions of its own officers, agents or employees.
- l. *Third Party Beneficiaries.* This MOU shall not create any right or interest in any non-Party or in any member of the public as a third party beneficiary.
- m. *Counterparts.* This MOU may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute but one and the same instrument.
- n. *Notices.* All notices, requests, demands or other communications required or permitted under this MOU shall be in writing unless provided otherwise in this MOU and shall be deemed to have been duly given and received on: (i) the date of

service if served personally or served by electronic mail or facsimile transmission on the Party to whom notice is to be given at the address(es) provided below, (ii) on the first day after mailing, if mailed by Federal Express, U.S. Express Mail, or other similar overnight courier service, postage prepaid, and addressed as provided below, or (iii) on the third day after mailing if mailed to the Party to whom notice is to be given by first class mail, registered or certified, postage prepaid, addressed as follows:

City of Antioch

City Manager

P.O. Box 5007

Antioch, CA 94531-5007

Telephone: (925) 779-7011

Facsimile: (925) 779-7003

City Of Brentwood

City Manager

150 City Park Way

Brentwood, CA 94513

Phone: (925) 516-5400

Fax: (925) 516-5441

225 **Byron Bethany Irrigation District**

226 General Manager

227 7995 Bruns Road

228 Byron, CA 94514-1625

229 Telephone: (209) 835-0375

230 Facsimile: (209) 835-2869

231

232

233 **Contra Costa Water District**

234 General Manager

235 Contra Costa Water District

236 P. O. Box H20

237 Concord, CA 94524

238 Phone (925) 688-8032

239 Fax (925) 688-8197

240

241

242

243 **Contra Costa County**

244 Director, Department of Conservation and Development

245 30 Muir Road

246 Martinez, CA 94553

247 Phone (925) 674-7866

248

249 **Diablo Water District**

250 Attn: General Manager

251 P.O. Box 127

252 87 Carol Lane

253 Oakley, CA 94561

254 Phone: (925) 625-3798

255 Fax: (925) 625-0814

256

257

258 **East Contra Costa Irrigation District**

259 General Manager

260 1711 Sellers Avenue

261 Brentwood, CA 94513

262 Phone: (925) 634-3544

263 Fax: (925) 634-0897

264

265

266 **Discovery Bay Community Services District**

267 C/O: Mike Davies, General Manager

268 1800 Willow Lake Road

269 Discovery Bay, CA 94505-9376

270 Telephone: (925) 634-1131

271 Facsimile: (925) 513-2705

272

273 8. Signatures. The Following signatures attest each Party's agreement hereto.

274 **CITY OF ANTIOCH**

275

276 By:  Date: 4/27/17

277 Ron Bernal, ~~Interim~~ City Manager

278 APPROVED AS TO FORM:

279
280 By:  Date: 4/20/17

281 Michael Vigilia, City Attorney

282

283 **CITY OF BRENTWOOD**

284

285 By: _____ Date: _____

286 Gustavo "Gus" Vina, City Manager

287

288 APPROVED AS TO FORM:

289

290 By: _____ Date: _____

291 Damien Brower, City Attorney

292

293 **BYRON BETHANY IRRIGATION DISTRICT**

294

295 By: _____ Date: _____

296 Rick Gilmore, General Manager

297

298 **CONTRA COSTA WATER DISTRICT**

299

300 By: _____ Date: _____

301 Jerry Brown, General Manager

302

273 8. Signatures. The Following signatures attest each Party's agreement hereto.

274 **CITY OF ANTIOCH**

275

276 By: _____ Date: _____

277 Ron Bernal, Interim City Manager

278 APPROVED AS TO FORM:

279

280 By: _____ Date: _____

281 Michael Vigilia, City Attorney

282

283 **CITY OF BRENTWOOD**

284

285 By:  Date: 5/9/17

286 Gustavo "Gus" Vina, City Manager

287

288 APPROVED AS TO FORM:

289

290 By:  Date: 5-8-17

291 Damien Brower, City Attorney

292

293 **BYRON BETHANY IRRIGATION DISTRICT**

294

295 By: _____ Date: _____

296 Rick Gilmore, General Manager

297

298 **CONTRA COSTA WATER DISTRICT**

299

300 By: _____ Date: _____

301 Jerry Brown, General Manager

302

273 8. Signatures. The Following signatures attest each Party's agreement hereto.

274 **CITY OF ANTIOCH**

275

276 By: _____ Date: _____

277 Ron Bernal, Interim City Manager

278 APPROVED AS TO FORM:

279

280 By: _____ Date: _____

281 Michael Vigilia, City Attorney

282

283 **CITY OF BRENTWOOD**

284

285 By: _____ Date: _____

286 Gustavo "Gus" Vina, City Manager

287

288 APPROVED AS TO FORM:

289

290 By: _____ Date: _____

291 Damien Brower, City Attorney

292

293 **BYRON BETHANY IRRIGATION DISTRICT**

294

295 By:  _____ Date: 3/27/17

296 Rick Gilmore, General Manager

297

298 **CONTRA COSTA WATER DISTRICT**

299

300 By: _____ Date: _____

301 Jerry Brown, General Manager

302

273 8. Signatures. The Following signatures attest each Party's agreement hereto.

274 **CITY OF ANTIOCH**

275

276 By: _____ Date: _____

277 Steven Duran, City Manager

278 **APPROVED AS TO FORM:**

279

280 By: _____ Date: _____

281 Michael Vigilia, City Attorney

282

283 **CITY OF BRENTWOOD**

284

285 By: _____ Date: _____

286 Gustavo "Gus" Vina, City Manager

287

288 **APPROVED AS TO FORM:**

289

290 By: _____ Date: _____

291 Damien Brower, City Attorney

292

293 **BYRON BETHANY IRRIGATION DISTRICT**

294

295 By: _____ Date: _____

296 Rick Gilmore, General Manager

297

298 **CONTRA COSTA WATER DISTRICT**

299

300 By:  acting for Date: 4/27/17

301 Jerry Brown, General Manager

302

303 APPROVED AS TO FORM:

304

305 By: 

Date: 4/19/17

306 District Legal Counsel

307

308 **CONTRA COSTA COUNTY**

309

310 By: _____

Date: _____

311 John Kopchik, Director of

312 Conservation and Development

313 APPROVED AS TO FORM:

314 Sharon L. Anderson, County Counsel

315

316 By: _____

Date: _____

317 Deputy County Counsel

318

319 **DIABLO WATER DISTRICT**

320

321 By: _____

Date: _____

322 Mike Yeraka, General Manager

323

324 **EAST CONTRA COSTA IRRIGATION DISTRICT**

325

326 By: _____

Date: _____

327 Patricia A. Corey, General Manager

328

329 **DISCOVERY BAY COMMUNITY SERVICES DISTRICT**

330

331 By: _____

Date: _____

332 Michael R. Davies, General Manager

303 APPROVED AS TO FORM:

304

305 By: _____

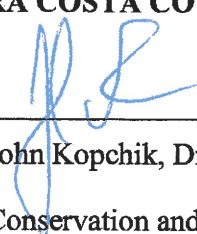
Date: _____

306 District Legal Counsel

307

308 **CONTRA COSTA COUNTY**

309

310 By:  _____

Date: April 25, 2017

311 John Kopchik, Director of

312 Conservation and Development

313 APPROVED AS TO FORM:

314 Sharon L. Anderson, County Counsel

315

316 By:  _____

Date: April 29, 2017

317 Deputy County Counsel

318

319 **DIABLO WATER DISTRICT**

320

321 By: _____

Date: _____

322 Mike Yeraka, General Manager

323

324 **EAST CONTRA COSTA IRRIGATION DISTRICT**

325

326 By: _____

Date: _____

327 Patricia A. Corey, General Manager

328

329 **DISCOVERY BAY COMMUNITY SERVICES DISTRICT**

330

331 By: _____

Date: _____

332 Michael R. Davies, General Manager

303 APPROVED AS TO FORM:

304

305 By: _____

Date: _____

306 District Legal Counsel

307

308 **CONTRA COSTA COUNTY**

309

310 By: _____

Date: _____

311 John Kopchik, Director of

312 Conservation and Development

313 APPROVED AS TO FORM:

314 Sharon L. Anderson, County Counsel

315

316 By: _____

Date: _____

317 Deputy County Counsel

318

319 **DIABLO WATER DISTRICT**

320

321 By:  _____

Date: 5-1-2017

322 Mike Yeraka, General Manager

323

324 **EAST CONTRA COSTA IRRIGATION DISTRICT**

325

326 By: _____

Date: _____

327 Patricia A. Corey, General Manager

328

329 **DISCOVERY BAY COMMUNITY SERVICES DISTRICT**

330

331 By: _____

Date: _____

332 Michael R. Davies, General Manager

303 APPROVED AS TO FORM:

304

305 By: _____ Date: _____

306 District Legal Counsel

307

308 **CONTRA COSTA COUNTY**

309

310 By: _____ Date: _____

311 John Kopchik, Director of

312 Conservation and Development

313 APPROVED AS TO FORM:

314 Sharon L. Anderson, County Counsel

315

316 By: _____ Date: _____

317 Deputy County Counsel

318

319 **DIABLO WATER DISTRICT**

320

321 By: _____ Date: _____

322 Mike Yeraka, General Manager

323

324 **EAST CONTRA COSTA IRRIGATION DISTRICT**

325

326 By: Patricia A. Corey Date: 3-29-2017

327 Patricia A. Corey, General Manager

328

329 **DISCOVERY BAY COMMUNITY SERVICES DISTRICT**

330

331 By: _____ Date: _____

332 Michael R. Davies, General Manager

303 APPROVED AS TO FORM:

304

305 By: _____ Date: _____

306 District Legal Counsel

307

308 **CONTRA COSTA COUNTY**

309

310 By: _____ Date: _____

311 John Kopchik, Director of

312 Conservation and Development

313 APPROVED AS TO FORM:

314 Sharon L. Anderson, County Counsel

315

316 By: _____ Date: _____

317 Deputy County Counsel

318

319 **DIABLO WATER DISTRICT**

320

321 By: _____ Date: _____

322 Mike Yeraka, General Manager

323

324 **EAST CONTRA COSTA IRRIGATION DISTRICT**

325

326 By: _____ Date: _____

327 Patricia A. Corey, General Manager

328

329 **DISCOVERY BAY COMMUNITY SERVICES DISTRICT**

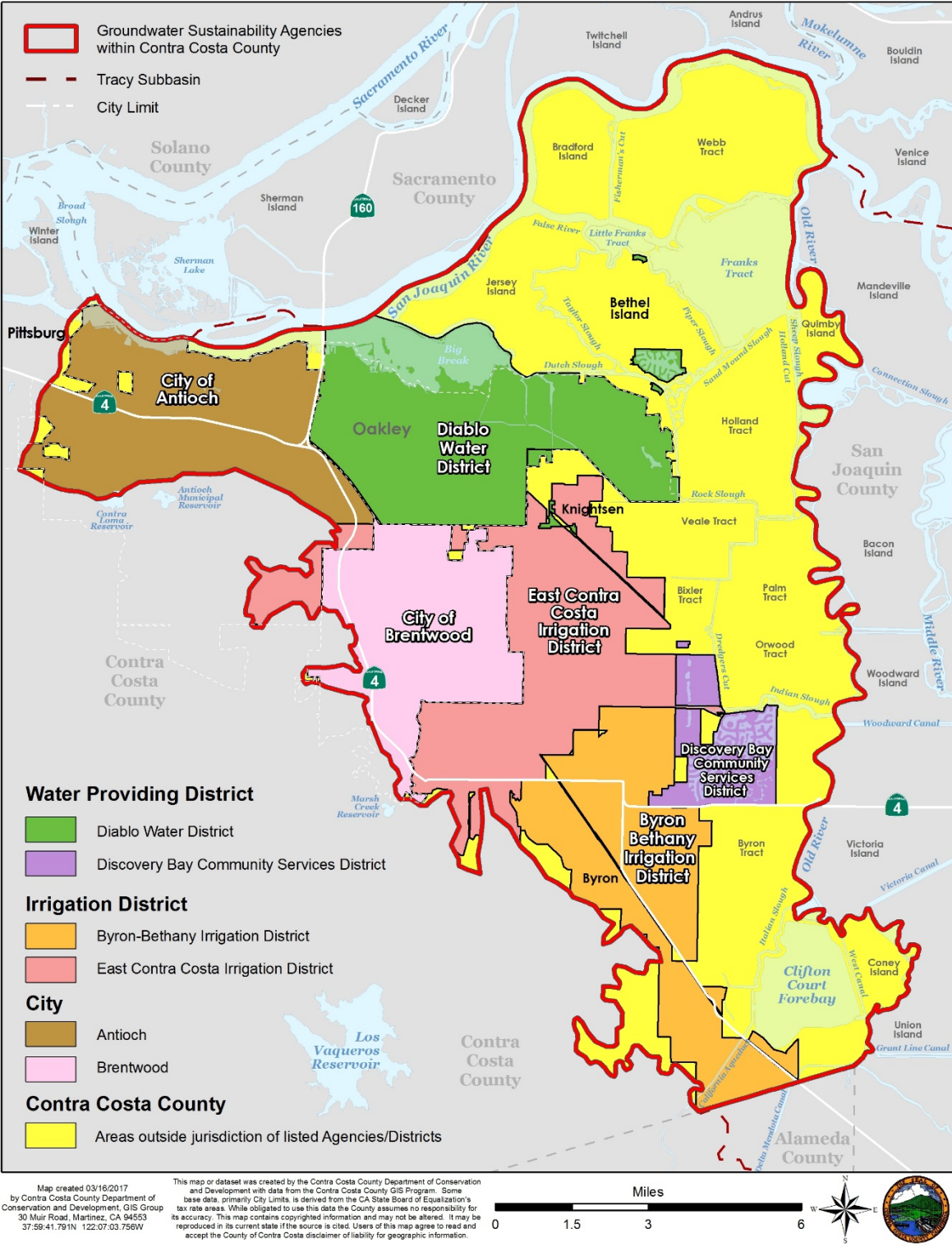
330

331 By:  Date: 4-6-17

332 Michael R. Davies, General Manager

[illegible]

Exhibit B - Contra Costa County Groundwater Sustainability Agency Formation



1 **FIRST AMENDMENT**

2 **Memorandum of Understanding for the Development of a Groundwater Sustainability**
3 **Plan for the East Contra Costa County Portion of the Tracy Subbasin,**
4 **(DWR Basin 5-22.15, San Joaquin Valley)**
5

6 This First Amendment to the Memorandum of Understanding (“**MOU**”) for the
7 Development of a Groundwater Sustainability Plan for the East Contra Costa County Portion of
8 the Tracy Subbasin, (DWR Basin 5-22.15, San Joaquin Valley) (“**First Amendment**”) is entered
9 into and effective this ____day of _____, 2017, by and among the City of Antioch (“**Antioch**”),
10 the City of Brentwood (“**Brentwood**”), Byron-Bethany Irrigation District (“**BBID**”), Contra
11 Costa Water District (“**CCWD**”), Contra Costa County (“**County**”), Diablo Water District
12 (“**DWD**”), East Contra Costa Irrigation District (“**ECCID**”), and Discovery Bay Community
13 Services District (“**Discovery Bay**”). Each of the parties to this First Amendment is sometimes
14 referred to as a “**Party**” and are collectively sometimes referred to as the “**Parties.**”
15

16 **Recitals**

17 A. On May 9, 2017, the Parties entered into the MOU in order to develop a
18 groundwater sustainability plan (“**GSP**”) for the East Contra Costa County Portion of the Tracy
19 Subbasin (the “**Basin**”).
20

21 B. The MOU reflects the Parties’ agreement that the costs of developing the GSP
22 should be split evenly among the Parties.
23

24 C. Previously, Brentwood contracted with Luhdorff and Scalmanini (“**Consultant**”) on behalf of Brentwood, Byron-Bethany Irrigation District, Diablo Water District, East Contra
25 Costa Irrigation District, and Discovery Bay Community Services District for technical work to
26 support compliance with the Sustainable Groundwater Management Act in the East Contra Costa
27 County portion of the Tracy Subbasin. Paragraph 2(e)(2) of the MOU required CCWD and
28 Antioch to make certain payments to BBID, Brentwood, DWD, ECCID, and Discovery Bay in
29 order to reallocate costs incurred under a contract with Consultant dated April 1, 2015. CCWD
30 and Antioch have made those payments.
31
32

D. The Parties now wish to embark on preparing the GSP and wish to share the cost of that effort equally as contemplated in the MOU. Moreover, the Parties desire for Brentwood, again, to serve as the contracting Party with Consultant on behalf of all of the other Parties.

E. The Parties wish to memorialize their mutual agreements by means of this First Amendment.

Agreements

1. *Contracting with Consultant & Cost Share Among the Parties*

As of the effective date of this First Amendment, Paragraph 2(e) in the MOU is deleted in its entirety and replaced with new Paragraph 2(e) to read:

e. Contracting with Consultant & Cost Share Among the Parties.

(1) *Contracting with Consultant.*

A. Contract for the Preparation of the GSP. Brentwood, acting on behalf of the other Parties, shall promptly enter into an agreement with Luhdorff and Scalmanini (“**Consultant**”) for the preparation of the GSP for the Basin.

B. Annual Budgets and Scopes of Work.

i. Fiscal Year 2017/18. Not later than December 1, 2017, Brentwood shall obtain a proposed budget and scope from Consultant for services during Fiscal Year (July 1 – June 30) 2017/18. Brentwood shall promptly provide the proposed budget and scope to the other Parties and shall give the other Parties at least ten business days to review the budget and scope and provide written comments to Brentwood. Such comments shall include each Party’s determination as to whether it is willing to pay its share of the cost of the work, as identified in Paragraph 2(e)(2) below. If, after ten business days, no Party has indicated in writing that it is unwilling to pay its share of the cost of the work, the Consultant’s budget and scope for Fiscal

Year 2017/18 shall be deemed approved and Brentwood shall take such actions as may be necessary to cause Consultant to perform the services included in that budget and scope of work. In the event that one or more Parties object to the proposed budget and scope of work, the Parties shall promptly meet and confer to determine an appropriate course of action.

ii. Subsequent Fiscal Years. Not later than each February 15, beginning on February 15, 2018, Brentwood shall obtain a proposed budget and scope from Consultant for services during the upcoming fiscal year. Brentwood shall promptly provide the proposed budget and scope to the other Parties and shall give the other Parties until each March 15 to review the proposed budget and scope, and provide written comments to Brentwood. Such comments shall include each Party's determination as to whether it is willing to pay its share of the cost of such work, as identified in Paragraph 2(e)(2). If, after each March 15, no Party has indicated in writing that it is unwilling to pay its share of the cost of such work, the Consultant's budget and scope for the upcoming fiscal year shall be deemed approved and Brentwood shall take such actions as may be necessary to cause Consultant to perform the services included in that budget and scope of work. In the event that one or more Parties object to the proposed budget and scope of work, the Parties shall promptly meet and confer to determine an appropriate course of action.

C. Payments by Parties to Brentwood. Brentwood shall, upon receipt of Consultant's monthly invoices, pay Consultant for services rendered during the previous month. Brentwood will promptly provide invoices to the other Parties identifying their shares of the cost of the previous month's work and such other Parties shall pay said invoices within 30 days of receipt.

(2) *Cost-Share for East CC Basin GSP.* The costs associated with developing the East CC Basin GSP ("**GSP Costs**"), including but not limited to, any local cost-shares required by state or federal grants, will be shared equally among the Parties.

A. In-Kind Services Provided by County. The County, at its sole discretion, may satisfy its share of GSP Costs by providing in-kind services, which may include but may not be

94 limited to mapping, graphics, and database management services. For Fiscal Year 2017/18, the
95 County will provide written notice to the other Parties by December 1, 2017, stating either that
96 the County will pay its share of GSP Costs during Fiscal Year 2017/18, or that the County will
97 provide in-kind services in lieu of paying its share of GSP Costs during Fiscal Year 2017/18.
98 For each fiscal year following Fiscal Year 2017/18, the County will provide written notice to the
99 other Parties by the March 15 immediately preceding the fiscal year stating either that the
100 County will pay its share of GSP Costs in the fiscal year, or that the County will provide in-kind
101 services in lieu of paying its share of GSP Costs in the fiscal year. In the case of payments to
102 Consultant or other vendors where the County wishes to substitute in-kind services for direct
103 payments, Brentwood shall allocate such invoices equally among the Parties other than the
104 County. Notwithstanding anything to the contrary contained herein, no Party shall be obligated
105 to pay the County for the value of any in-kind services provided by the County, and the value of
106 any in-kind services provided by the County shall only act as a credit towards the County's share
107 of GSP Costs, as more particularly described in Paragraph 2(e)(2)(B).

108 B. Annual Accounting. Brentwood shall prepare an annual accounting by October
109 1, 2018, and by each October 1 thereafter, that shows all GSP Costs for the previous fiscal year
110 and that identifies in-kind services provided by the County and the County's calculation of the
111 value of those in-kind services. By July 30th following the end of a fiscal year, the County will
112 provide Brentwood an accounting of the County's in-kind services during the prior fiscal year,
113 and any carry-over value of in-kind services provided during any fiscal years preceding the prior
114 fiscal year. The value of the County's in-kind services will be calculated based on (1) the then-
115 current fully-burdened hourly rates for County staff time, benefits, and overhead, and (2) the
116 County's actual costs for any materials or supplies required to provide the in-kind services.
117

118 i. Upon written notice to the other Parties no later than 15 days after
119 receiving Brentwood's annual accounting, any Party other than the County may dispute the
120 County's calculation of the value of the in-kind services that the County provided during the
121 fiscal year for which the accounting is prepared, but no Party may challenge the value of in-kind
122 services that were carried over from any fiscal year preceding the fiscal year for which the
123 accounting is prepared. In the event that one or more Parties provide notice of a dispute under

124 this subparagraph, the Parties shall promptly meet and confer in an effort to resolve the dispute
125 to the satisfaction of all Parties. The County's obligation to make any payments to other Parties
126 under Paragraph 2(e)(2)(B)(ii) shall be tolled until the County receives, from each disputing
127 Party, written notice that the dispute has been resolved to the disputing Party's satisfaction.

128
129 ii. Except as expressly provided in Paragraph 2(e)(2)(B)(i), in the event that
130 Brentwood's annual accounting shows that the value of the in-kind services provided by the
131 County during the fiscal year for which the accounting is prepared, plus any carry-over value for
132 in-kind services provided in any preceding fiscal years, is less than the individual contributions
133 of the other Parties during the fiscal year for which the annual accounting is prepared, the
134 County shall provide, by the November 30 following receipt of the annual accounting, payments
135 to each of the other Parties sufficient to equalize the values of the Parties' contributions during
136 the fiscal year for which the accounting is prepared. In the event that Brentwood's annual
137 accounting shows that the value of the in-kind services provided by the County during the fiscal
138 year for which the accounting is prepared, plus any carry-over value for in-kind services
139 provided in any preceding fiscal years, is greater than the individual contributions of the other
140 Parties, Brentwood shall credit the County with the difference and carry over that excess
141 contribution to be credited towards the value of the County's in-kind services provided in the
142 subsequent fiscal year.

143
144 2. *Other Provisions of the MOU Not Affected*

145
146 Except as expressly stated above, no provisions of the MOU shall be modified by the
147 terms of this First Amendment.

148
149
150
151 **CITY OF ANTIOCH**

152
153
154 By: _____
155 Ron Bernal, City Manager

Date: _____

161 APPROVED AS TO FORM:

162
163
164 By: _____
165 Derrek Cole, Interim City Attorney

Date: _____

166
167
168 **CITY OF BRENTWOOD**

169
170
171 By: _____
172 Gustavo "Gus" Vina, City Manager

Date: _____

173
174 APPROVED AS TO FORM:

175
176
177 By: _____
178 Damien Brower, City Attorney

Date: _____

179
180
181 **BYRON BETHANY IRRIGATION DISTRICT**

182
183
184 By: _____
185 Rick Gilmore, General Manager

Date: _____

186
187
188 **CONTRA COSTA WATER DISTRICT**

189
190 By: _____
191 Jerry Brown, General Manager

Date: _____

192
193 APPROVED AS TO FORM:

194
195
196 By: _____
197 District Legal Counsel

Date: _____

198
199
200 **CONTRA COSTA COUNTY**

201
202
203 By: _____
204 John Kopchik, Director of
205 Conservation and Development
206

Date: _____

207 APPROVED AS TO FORM:
208 Sharon L. Anderson, County Counsel
209

210
211 By: _____ Date: _____
212 Deputy County Counsel
213

214
215 **DIABLO WATER DISTRICT**
216

217
218 By: _____ Date: _____
219 Mike Yeraka, General Manager
220

221
222 **EAST CONTRA COSTA IRRIGATION DISTRICT**
223

224
225 By: _____ Date: _____
226 Patricia A. Corey, General Manager
227

228
229 **DISCOVERY BAY COMMUNITY SERVICES DISTRICT**
230

231
232 By: _____ Date: _____
233 Michael R. Davies, General Manager



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

8.

Meeting Date: 12/11/2017

Subject: RECEIVE the Integrated Pest Management Report from the IPM Coordinator and take ACTION as appropriate.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: 8

Referral Name: Monitor the implementation of the Integrated Pest Management policy.

Presenter: Tanya Drlik, IPM Coordinator

Contact: Tanya Drlik
(925)335-3214

Referral History:

The TWI Committee has asked the Integrated Pest Management Coordinator to update the Committee yearly on the County's integrated pest management program, unless serious public concern issues arise.

Referral Update:

The IPM Coordinator will present the IPM Annual Report to TWI (see attached annual report and report on public concerns).

Recommendation(s)/Next Step(s):

ACCEPT Integrated Pest Management report, and take ACTION as appropriate.

Fiscal Impact (if any):

None.

Attachments

11-29-17 IPM Annual Report

2000-2017 CCC Pesticide Use Chart

11-29-17 County Staff Responses to PfSE Concerns

Contra Costa County Integrated Pest Management Advisory Committee

2017 Annual IPM Program Status Report

to the

Transportation, Water, and Infrastructure Committee of the Contra Costa Board of Supervisors

Table of Contents

Executive Summary.....	3
History of the IPM Advisory Committee.....	5
Background on the IPM Advisory Committee.....	5
IPM Advisory Committee Priorities for 2017.....	5
2017 Accomplishments of the IPM Advisory Committee and the IPM Coordinator	6
2017 Department IPM Program Highlights and Challenges	9
Pesticide Use by Contra Costa County Operations.....	22
Departmental Integrated Pest Management Priorities For 2018.....	27
Attachment A.....	29
Report of the Decision-Making Subcommittee.....	31
Decision Documents.....	33
Attachment B.....	57
Report from the IPM Outreach Subcommittee.....	59
Pests and Rental Housing in California: <i>Know your rights and responsibilities!</i>	60
Script for Pest Management Awareness for In-home Visitors PowerPoint Presentation.....	61
Attachment C.	67
Pesticide Use Reporting.....	69

Contra Costa County Integrated Pest Management Advisory Committee

2017 Annual IPM Program Status Report

to the

Transportation, Water, and Infrastructure Committee of the Contra Costa Board of Supervisors

Executive Summary

Work of the IPM Advisory Committee

This year, the IPM Advisory Committee explored how vegetation in rights-of way is managed in Contra Costa and in other counties, and developed a pest management awareness training for County in-home visitors.

In 2012, the Committee developed a form for documenting pest management decisions. Since then, the Departments have been using this form to systematically document management decisions for the pests they work with. This year, Special Districts and the Grounds Division finalized a document (begun last year) for the management of gophers in Special Districts and in County landscaping. Decision documents for vegetation management along roadsides and flood control channels are under review.

This summer, the Committee developed a presentation to educate in-home visitors in various programs throughout the County about the health and other risks of having pests in the home. The presentation includes accompanying resource materials. Training sessions began in November and will continue in the new year.

Pesticide Use Reduction by County Operations

Since FY 00-01, County operations have reduced their pesticide use by 75%. During the same time period, they have reduced their use of “Bad Actor” pesticides by 86%.

Departmental IPM Programs

The Department of Agriculture continues to concentrate its invasive weed program on contracted work for parkland and municipalities within the County.

A new species, the three-lined cockroach, has been invading County buildings. Although this cockroach was identified from the County in 2009, it was only last year that it began causing problems in County buildings. Unlike other cockroaches, this species does not feed on human food and garbage. This makes controlling the three-lined cockroach with commercial baits very difficult because the insect is not interested in the food attractants in the currently available cockroach baits. This year the County IPM contractor thoroughly sealed Building 500 at 255 Glacier. No three-lined cockroaches have been found in monitoring traps inside the building since. Pest exclusion works because this insect lives outside in the mulch and leaf litter around the building.

The owl box installed last year in Livorna Park in Alamo housed its first tenants over the summer. The box has been cleaned and is ready for new occupants. The Public Works Department worked with Boy Scouts to install two owl boxes in the Kubicek Basin in Walnut Creek. The County also worked with the Peregrine Team of Pine Canyon to erect two nest boxes for American kestrels in Kubicek Basin. This is a project of Native Bird Connections to increase kestrel habitat in the Mt. Diablo region.

The Roadside and Flood Control Maintenance Division continues to incorporate grazing into its vegetation management program. This fiscal year the Division used goats to abate weeds on approximately 257 acres, mostly on flood control facilities. A record-breaking rainy season seriously damaged some roads and blocked others with downed trees. This tied up crews with repairs and tree removal. Heavy rains spurred the growth of a bumper crop of weeds in the County, although the County was spared the devastating fires that raged to the north in the fall fed by the heavy weed growth.

History of the IPM Advisory Committee

From 2002 to 2009, an informal IPM Task Force met to coordinate implementation of the IPM Policy that was adopted by the Board of Supervisors in November 2002. The Integrated Pest Management (IPM) Advisory Committee, a formal body, was created by the Board of Supervisors in November 2009. This report is the eighth annual status report from the IPM Coordinator and the IPM Advisory Committee.

Background on the IPM Advisory Committee

Purpose of the IPM Advisory Committee

The purpose of the Committee is to:

1. Protect and enhance public health, County resources, and the environment
2. Minimize risks and maximize benefits to the general public, staff, and the environment as a result of pest control activities conducted by County staff and contractors
3. Promote a coordinated County-wide effort to implement IPM in the County in a manner that is consistent with the Board-adopted IPM Policy
4. Serve as a resource to help the Agriculture and Public Works Departments and the Board of Supervisors review and improve existing pest management programs and the processes for making pest management decisions
5. Make policy recommendations upon assessment of current pest issues and evaluation of possible IPM solutions
6. Provide a forum for communication and information exchange among members in an effort to identify, encourage, and stimulate the use of best or promising pest management practices

Members of the IPM Advisory Committee

Currently the Committee has a total of 13 seats consisting of voting and non-voting members. Because the Public and Environmental Health Advisory Board was abolished in 2016, that seat was replaced by one for the County's Sustainability Commission.

The 8 voting members include:

- One representative from Contra Costa Health Services
- One representative from the County Storm Water Program
- One representative from the County Sustainability Commission
- One representative from the County Fish and Wildlife Committee
- One representative from an environmental organization
- Three at-large members of the public

The 4 non-voting members include

- A representative from the Agriculture Department
- Two representative from the Public Works Department (Facilities Division and Maintenance Division)
- One representative from the County's pest management contractor

The Committee also has one public member alternate who only votes if one or more of the three at-large public members, the Sustainability representative, or the Fish and Wildlife representative is absent from a meeting.

IPM Advisory Committee Priorities for 2017

The IPM Advisory Committee focused on the following two IPM program features:

- A. IPM decision-making—documenting pest management decisions in County IPM programs
- B. Outreach and education—reviewing and/or creating educational pieces for the public and County staff

The Committee formed two subcommittees to work on these priorities, the Decision-Making subcommittee and the Outreach subcommittee.

2017 Accomplishments of the IPM Advisory Committee and the IPM Coordinator

Accomplishments of the IPM Committee

The IPM Advisory Committee (the Committee) held six regular meetings in 2017. The two subcommittees held a total of 13 meetings to address the above priorities. The IPM Coordinator serves as staff to the Committee and any subcommittees. According to the wishes of the Committee, the IPM Coordinator arranged for speakers for three of the six regular Committee meetings held during 2017. The following were the topics and presenters:

1. *Pest Prevention by Design: Authoritative guidelines for designing pests out of structures*, presented by Chris Geiger, San Francisco IPM Coordinator
2. Carbon monoxide as a treatment for burrowing rodents, presented by Dr. Roger Baldwin, UC Cooperative Extension; carbon dioxide as a treatment for burrowing rodents, presented by Dr. Bill Donohue, Sierra Laboratories
3. Controversy surrounding the herbicide glyphosate, presented by Dr. Brad Hansen, UC Cooperative Extension

The accomplishments of the IPM Committee and its subcommittees are as follows:

Priority A: IPM Decision-Making

Through the work of the Decision-Making subcommittee, the IPM Advisory Committee

1. Reviewed and provided suggestions for changes to the County's Landscape Standards under the section on pest management. All the suggestions were accepted by Public Works staff and have been incorporated into the document (<http://www.contracosta.ca.gov/2147/Landscape-Standards>)
2. Gained a better understanding of the complexities involved in pest management along the County's road and flood control rights-of-way
3. Gained a better understanding of the challenges and complexities involved in the funding mechanisms for road maintenance
4. Reviewed and provided suggestions for improvement to three decision-making documents (the two vegetation management documents are still under review):
 - a. Gopher management in landscapes (Grounds Division and Special Districts)
 - b. Vegetation management along County roadsides and road rights-of-way (Public Works Roadside and Flood Control Channel Vegetation Management Division)
 - c. Vegetation management along flood control channels (Public Works Roadside and Flood Control Channel Vegetation Management Division)
5. Continued gathering information on vegetation management on rights-of-way in neighboring Bay Area Counties

The detailed decision-making documents follow a form devised by the IPM Coordinator and previous members of the Decision-Making subcommittee. Decision-making documents are considered current as of the date on the document and may be updated in the future.

See Attachment A for the Decision-Making subcommittee's final report and the gopher decision document.

Priority B: Outreach and Education

This year, the subcommittee chose to work with the County's most vulnerable populations through outreach to in-home visitors with the goals of

1. Informing County staff of the public health risks of having pests in the home
2. Helping staff to recognize pest problems in their clients' homes
3. Making staff aware of the resources available for their clients

Through the work of the Outreach subcommittee, the IPM Advisory Committee

1. Gained understanding of the capabilities and constraints of in-home visitors

2. Created a 20 to 30 minute PowerPoint presentation with an accompanying script and resource materials for training County in-home visitors
3. Provided training for County staff

See Attachment B for the Outreach subcommittee's final report.

Accomplishments of the IPM Coordinator

In addition to staffing the IPM Advisory Committee and working on the two subcommittees, the IPM Coordinator worked on the issues listed below.

Bed Bugs

The common bed bug continues to be one of the most serious pests in the County, a pest that has provoked citizens to misuse pesticides to an alarming extent. Pesticides do not solve the problem, and in many cases make the problem worse. We increasingly see bed bugs affecting the citizens of Contra Costa who have the fewest resources to combat them.

Answering calls from citizens

The IPM Coordinator records each bed bug complaint, but it is unclear how many calls other staff in the County are receiving that are not forwarded to the IPM Coordinator. We also have no way of knowing how many calls city staff receive. In 2017, the IPM Coordinator investigated by telephone (sometimes with the help of the Bed Bug Task Force) 69 bed bug calls (compared to 75 last year) and provided assistance to the callers. The IPM Coordinator also met in person with a number of citizens to answer questions about bed bugs and provide information on prevention and management.

A substantial number of complaints continue to come from West County. There are increasing numbers of complaints from Pittsburg and Antioch, as well as Walnut Creek and Alamo, and it is generally acknowledged that there are numerous apartment complexes in Concord with severe infestations throughout the buildings. Some of these complexes have been infested for 7 or more years.

Educating County staff and the public about bed bugs

The IPM Coordinator

- Continued to organize and staff the County's Bed Bug Task Force—the Task Force meets every two months and advocates for increasing public awareness of bed bug problems and for developing sound bed bug management policy throughout the County
- Maintained the County's bed bug website and added more information specific to various audiences—from July 1, 2016 through June 30, 2017, there were 29,202 visits to the site from 20,255 unique visitors (County staff visits were excluded from this tally in order to obtain a closer approximation of the public use of the site).
- Provided bed bug awareness training for the following:
 - Contra Costa Interfaith Housing in Concord
 - Alive Program's Idaho apartment complex in El Cerrito (housing for HIV patients)
 - Summerfield Group Home in Antioch
 - CCC WIC staff in Concord
- With the assistance of Pestec, provided a bed bug awareness and prevention training for a group of managers at the Calli House Youth Shelter in Richmond.

Healthy Schools Act compliance for County Head Starts

In 2015, the IPM Coordinator worked with the County's Head Start program to come into compliance with California's Healthy Schools Act. The IPM Coordinator developed an IPM plan for the Head Start program which included identifying responsible parties for the provisions of the Act. The IPM Coordinator updates this plan each year. The IPM Coordinator provided staff with templates for pesticide application posting and for parent and staff notification of pesticide use.

The IPM Coordinator continues to oversee compliance with the Healthy Schools Act.

Advice and Outreach on IPM

The IPM Coordinator

- Gave the IPM Presentation for the Bay Friendly certification training held in February
- Worked with Alameda County Healthy Homes program and IPM experts from the state and around the Bay to create a PowerPoint presentation on IPM for multi unit property owners
- Participated in the County's Sustainability Exchange
- Joined the County's Sustainability Exchange Steering Committee
- Attended quarterly meetings of the Head Start Health and Nutrition Services Advisory Committee to report on bed bug and pest management issues
- Worked with the County Facilities Division on a quality assurance review of the County's structural IPM provider, Pestec
- Responded to a number of requests for pest management information from County staff and citizens
- Worked with Pestec on managing three-lined cockroaches in Building 500 at 255 Glacier in Martinez, and joined Pestec and the County Facilities Division in a meeting with Public Works staff about the cockroach problem
- Provided the annual IPM update to the County's Fish and Wildlife Committee
- Provided regular IPM program updates to the Board of Supervisors through their Transportation, Water and Infrastructure Committee

Conferences and Trainings Attended

- Santa Clara County Agriculture Department's Weed Symposium in San Jose
- EPA Webinar on bed bugs
- National Pesticide Information Center (Oregon State) webinar: Glyphosate and Communicating Risk
- National Pesticide Information Center (Oregon State) webinar: All about the Herbicide Properties Tool
- Contra Costa County Grounds Division annual pesticide safety and IPM training

2017 Department IPM Program Highlights and Challenges

General Information about the Departments

Each Department maintains an IPM Plan that covers their pest management goals, sites under management, decision making processes, key pests and best management practices, environmental stewardship, and training requirements.

In order to help new IPM Committee members understand the working of each department, the IPM Coordinator has developed Department Overviews that cover department responsibilities in general, and pest management responsibilities in particular; funding sources and budget; pests under management and the methods used to manage them; and department challenges.

Each of the County's pest management programs must keep records of pesticides used and submit a report monthly to the County's Agriculture Department for transmission to the state Department of Pesticide Regulation. Once a year, the IPM Coordinator collates and analyzes this information for the annual report.

Agriculture Department

IPM Program Highlights

- Subcommittee work
The Department participated as a member of the Decision-Making subcommittee.
- Invasive weed program
The Department concentrates their efforts on contracted work for parkland and municipalities within the County. The Department has successfully reduced artichoke thistle and purple starthistle to a level at which private landowners can now manage these weeds on their own. The Department continues to recommend that landowners who lease property to cattlemen include invasive weed control in their lease agreements to encourage ranchers to maintain a weed management program.

The Department's invasive weed treatments include hand removal, mechanical removal, and targeted treatment with low toxicity herbicides. With rare exception, pesticide treatment involved highly focused spot spraying using backpack sprayers.

- Artichoke thistle (*Cynara cardunculus*)
The Department surveys and treats properties under contract for East Bay Regional Park District and Contra Costa Water District. This year staff surveyed 36 sites totaling 27,205 acres and treated 23 net acres for artichoke thistle.

Artichoke thistle is a highly invasive, non-native perennial weed that displaces herbaceous plants and annual grasses, decreasing the value of agricultural land, open space, and wildlands. Horses and cattle will not consume this thistle, and at high densities, the formidable spines on the leaves and stems and on the bracts around the flowers make it impossible for animals or people to walk through stands of the weed.

In 1979 Contra Costa County was identified as one of the most heavily infested counties in the state. At that time, at least 100,000 acres of land were infested with artichoke thistle. In that year, the Department began their management program in cooperation with property owners by using ground rigs and helicopters to spray large swaths of land. The artichoke thistle infestation has been reduced so much that staff primarily spot treat individual plants using a backpack sprayer. Because seedlings form deep, fleshy taproots within the first year, mechanical or hand removal (digging out the plants) is not an option. Mowing and burning are neither practical nor effective.



Rangeland infested with artichoke thistle

- Japanese dodder (*Cuscuta japonica*)

In 2017, staff surveyed 30 historically infested sites and did not find any recurrence of this weed. This is a California Department of Agriculture “A rated” weed that the Department is obligated to treat. Since three years have passed since staff have found any dodder in the County, the Department is declaring it eradicated.

Japanese dodder is an aggressive parasitic plant that has the potential to severely alter the composition and function of riparian areas. It also affects ornamental plantings and agricultural crops. Japanese dodder is native to Southeast Asia and was first discovered in the county in 2005.



First Japanese dodder find in CCC, 2005



Kangaroo Thorn

- Kangaroo thorn (*Acacia paradoxa*)

The County has one site infested with kangaroo thorn. The removal of the existing infestation in 2005 involved 52 hours of staff time. At that time the infestation covered a little less than one net acre. In 2014, it took only 2 hours of staff time to accomplish the surveying and seedling removal, all of which was done by hand. Only small seedlings of less than one foot in height were found, and the infested area totaled less than one hundredth of an acre.

After a several year hiatus, annual surveys have resumed.

- Purple starthistle (*Centaurea calcitrapa*)

Under contract to the East Bay Regional Park District, the Department surveyed 17 sites covering 1845 acres and treated 23.9 net acres for purple starthistle.

This weed is a highly invasive non-native biennial that displaces annual grasses, desirable vegetation, and wildlife and decreases the production value of agricultural land. The plant also has allelopathic properties, which means it produces chemicals that inhibit the growth of other vegetation. Its large spines and high densities can form an impenetrable barrier to wildlife and livestock in open rangeland and to horses and hikers in parkland. Seed can remain viable in the soil for ten or more years.

Purple starthistle in Contra Costa County is not as widespread as artichoke thistle. However, being a prolific seed producer, it has the potential to become as large scale a problem as artichoke thistle. Early identification and eradication of isolated populations is key to preventing its establishment in uninfested agricultural lands.



Purple Starthistle

- Managing ground squirrels to protect critical infrastructure

The Department manages ground squirrels to protect critical infrastructure including levees, earthen dams, railroad beds, and roadways. The goal is to maintain a 100 linear foot buffer around the infrastructure to reduce ground squirrel damage to a tolerable level. Ground squirrel burrowing is the single biggest threat to California levees. Burrowing can compromise the earthen embankments and create pathways for water leakage that can undermine the structural integrity of levees, as well as earthen dams and railroad embankments. Burrowing and the resulting pathways for water erosion can also cause damage to, or sudden failure of, roadsides and other structures.

The Department has been taking steps to reduce the amount of rodenticide it uses for ground squirrel control in the County in order to mitigate harm to endangered and other non-target species. In 2013 the Department modified its broadcast baiting treatment procedure for safety and efficiency. Staff are applying bait more precisely and have reduced the number of bait applications in an area from three to two. Staff initially spread untreated rolled oats to draw out squirrels and make it easy to find areas of squirrel activity. Treatments are carried out by a team of two staff members so that one person can concentrate on driving while the other operates the bait spreader to apply bait only where ground squirrel activity is observed.

- Exotic pest prevention

The Agriculture Department is the County's first line of defense against invading pests including insects, plants, and plant diseases. Every day staff perform inspections on incoming shipments at destination points, including nurseries, the post office, and express carriers (UPS, FedEx and others) to look for quarantined plants as well as pests that can hitchhike unnoticed on plant material and other items such as household goods.



Cairo inspecting packages at UPS

In 2006, the Department was the first in the state to incorporate dog teams into parcel inspection. Since then a number of other counties have followed Contra Costa's lead. The dogs greatly speed inspections and have significantly increased detections of quarantined plants and exotic pests. The dog teams are a shared resource with other Bay Area counties that do not have the expertise or resources to maintain an active surveillance program; therefore, as a result of Contra Costa's initiative, pest detections in those counties have increased.

This year the Department inspected 28,588 shipments and rejected 61 after finding various pests.

The Department also deploys and services numerous traps for the purpose of early detection of 11 different serious insect pests. This year the Department deployed 5,782 traps, and staff serviced those traps 61,643 times.

- Pesticide use

This year the Department reduced its pesticide use from 76 lbs. of active ingredient in FY 15-16 to 68 lbs. in FY 16-17. This is a 95% reduction from FY 00-01 when the County began collating pesticide use figures.

Agriculture Department Challenges

- Ground squirrel control alternatives

The department continues to search for alternatives to treated grain bait. Unfortunately, raptor perches and live trapping of ground squirrels have proved to be ineffective and/or too costly. Ground squirrels are native to this area and will never be eradicated. Since the Department aims to create a fairly narrow buffer zone around infrastructure, it is inevitable that in areas with ground squirrel pressure outside of the 100 ft buffer, the animals will eventually move back into the burrows left vacant by the squirrels that have been poisoned, although this happens slowly. This leads to a yearly management program. Altering the environment to prevent ground squirrel burrowing is difficult because of the extent of the infrastructure that must be protected and because the squirrels favor human-built infrastructure as sites for their burrows.

- Invasive weed management on private land

The Department budget, labor pool, and other mandates have curtailed invasive weed management on private land. Without diligent landowners who include invasive weed control in their land management, invasive weeds will proliferate throughout the County.

Public Works Facilities Division

IPM Program Highlights

- Area under management

The Facilities Division manages 147 sites that comprise almost 3.3 million sq. feet.

- Subcommittee work

A representative from Pestec, the County's structural pest management provider participated as a member of the County's Bed Bug Task Force.

- New cockroach causing problems in County buildings

The three-lined cockroach (*Phyllodromica trivittata*) is native to the Mediterranean and was first submitted for identification to the California Department of Food and Agriculture (CDFA) in September 2009. The samples were collected by Dr. William Shepard of the University of California at his residence in Pinole. Although this was the first official submission of this cockroach to CDFA, this insect was known to be in Marin County as early as 2004. In Europe and North Africa this cockroach is found in leaf litter and plant debris in dry habitats around the Mediterranean. This corresponds to the habitat in which the cockroach is found in Contra Costa.



Three-lined cockroach (*Phyllodromica trivittata*)

The three-lined cockroach has been invading buildings across the County for two years. This year, Building 500 of the Public Works Administration complex and the Contra Costa Regional Medical Center, both in Martinez, were again plagued by infestations from the late spring through the fall. Winter temperatures seem to suppress populations. Building occupants have complained of cockroaches dropping from the ceiling, crawling on their desks and out of their files. They have found cockroaches in their coffee cups and yogurt, but since this insect does not eat human food, it is likely that the insects accidentally fell into those containers.

Because this cockroach does not feed on human food or garbage and commercial cockroach baits are formulated with a food attractant, commercial baits have not been effective in attracting the insects to consume the bait. Pestec has tried Niban® granular bait (5% orthoboric acid), MotherEarth® granular bait (5% boric acid), Advion® insect granule (0.22% indoxacarb), Maxforce Impact gel bait (1% clothianidin), spot sprays of Alpine water soluble granule (40% dinotefuran), and dusting window weep holes with diatomaceous earth. Maxforce Impact bait is the only product that has shown some promise in killing the three-lined cockroach.



Niyokee Jones of Pestec caulking at 255 Glacier.

The most persistent problem has been at Building 500 of Public Works Administration at 255 Glacier in Martinez. No bait or spot spray has provided relief. In September, the Facilities Manager, the



Small gaps in stucco that had to be filled on the exterior of Bldg 500 at 255 Glacier in Martinez to prevent cockroaches from getting in.

IPM Coordinator, and Pestec met with the occupants of Building 500 to explain the problem and the next steps: pest exclusion since this cockroach lives mainly outdoors.

Last year, Pestec had installed three brush-style doorsweeps at Building 500 that may have helped, but at the end of September this year, they began meticulously sealing all holes they could find on the exterior of the building. This cockroach is small and the holes were numerous. Pestec staff worked more than 51 person hours to complete this task. Since completion, there have been no three-lined cockroaches in the sticky monitoring traps inside the building.

- Ground squirrels at the West County Detention Facility and Alamo School
In late summer, Pestec staff conducted a demonstration of the Gopher X[®] machine for Grounds Division staff at both Alamo School and the West County Detention Center in Richmond. The Grounds Division has a machine that uses carbon dioxide to kill gophers and ground squirrels, but they were interested in observing the Gopher X, which uses carbon monoxide.
- Increased ant infestations in County buildings
Once again, County buildings experienced serious and repeated Argentine ant invasions, especially in the late summer and early fall. Pestec has been using various ant baits mainly with the active ingredient indoxacarb, boric acid, or borate.
- Structural IPM program pesticide use
In FY 16-17, 17 lbs. of pesticide active ingredients were used in and around the approximately 2.75 million square feet of County buildings that Pestec is contracted to manage. This is 14 lbs. less than last fiscal year. Ant baits and soap solution accounted for 87% of the pesticide used. Pestec continues to successfully manage rats and mice exclusively with traps, sanitation, and pest proofing.
- Bed bugs in County buildings
This year Calli House, the County's youth shelter in Richmond, experienced a bed bug infestation that required heat treatments. Pestec found numerous bed bugs of all stages in several rooms, so the infestation had been there for some time. Last year Pestec joined the IPM Coordinator to train the staff in prevention and inspection for bed bugs and in bed bug biology and habits, but staff changes may have contributed to a lapse in vigilance and enforcement of prevention procedures. In September, the IPM Coordinator and Pestec provided another training session in prevention to Calli House staff.

Facilities Division Challenges

- Pest exclusion in County buildings
This continues to be a challenge, but the Facilities Division is doing what they can with their limited staffing and schedule. The Division's first priority is to address health, safety, and access issues. As we saw this year at 255 Glacier in Martinez, pest proofing has a significant impact on reducing pest problems.
- Ant baiting
Pestec continues to review the products used for baiting along with their baiting strategy in order to try to provide better control for the very large ant populations seen in the last two years. They are also working on a proprietary bait station that they hope will be more effective in the County.
- Three-lined cockroach
This new insect presents a considerable challenge since it invades buildings and is not attracted to commercial cockroach baits. It may be that pest proofing is the only way to treat this problem in County buildings. If so, that will be expensive and time consuming; however, tight buildings will exclude many other pests besides the three-lined cockroach so that pest invasions overall will be reduced.
- Bed bugs in County buildings
The biggest challenge with bed bugs is in the County shelters. An outbreak at Calli Youth Shelter in Richmond and another at the Concord Shelter have shown that we cannot rest on the past 5 years of

success, especially if staff change. The IPM Coordinator will be working on providing regular refresher trainings along with educational materials for shelter staff.

Public Works Grounds Division

IPM Program Highlights

- Subcommittee work
Staff worked with the IPM Coordinator to create decision documentation for managing gophers in landscapes.
- Premium mulch from pallets and dead trees
This year the Grounds Division stockpiled about 700 cubic yards of woodchips ground from pallets, trees



Woodchips stockpiled at the Grounds Corporation Yard

because they are a uniform color and don't contain bits of trash or leaf debris. Sites that receive this mulch have been very pleased with the look. This can be important in gaining acceptance for landscaping with fewer plants and more mulch.

The Grounds' tree removal contract includes transport back to the Grounds Corporation Yard so the logs can be easily chipped. PGE, Davey Tree, and the Public Works tree crew deliver logs to the Corporation Yard that are too big for their chippers. Pallets come from a number of sources. The Grounds manager temporarily suspended delivery of logs and pallets because the storage capacity was reached in their yard; however, he has begun accepting deliveries again.

downed in storms, and trees killed by the drought. Considering that high quality wood chips cost \$32/cu yd delivered, this represents \$22,400 worth of mulch for the County.

Staff continue to spread this woodchip mulch at various sites throughout the County. Where possible, trees are chipped and used onsite; otherwise chips are hauled from the Corporation Yard. The chips are of very high aesthetic quality



Logs and pallets awaiting chipping

- Using recycled water in County landscapes
There are now seven sites using reclaimed water:
 1. 2467 Waterbird (Grounds Division offices)
 2. 920 Mellus (Sheriff/Coroner)
 3. 2530 Arnold (Summit Center--Assessor, Redevelopment, Risk Management)
 4. Hemme Station Park in Alamo
 5. Livorna Park in Alamo
 6. Martinez Detention Facility
 7. Pittsburg Health Center

- Managing gophers with trapping, CO, and CO₂
The Division vertebrate pest manager continues to use trapping and CO₂ for gophers in County landscaping. This year the Division hosted a demonstration of a device called Gopher X[®], which produces carbon monoxide to kill burrowing rodents. The Division is considering buying the device to use on ground squirrels, moles, and gophers.
- Pesticide use decreased in FY 16-17
Seven years ago, the Grounds Division consciously decided to eliminate the use of any insecticides, miticides, fungicides, or rodenticides in their work. The Division has chosen to manage arthropod pests and plant diseases in County landscapes solely with good horticultural practices. If plants are severely affected, they are removed.

Herbicides are the only pesticide used by the Division, and this fiscal year, staff used 129 fewer pounds than in FY 15-16. This represents a 67% reduction in pesticide use compared to FY 00-01 when the County started collating pesticide use records. As noted last year, the Division is continuing to try to improve the condition of many of the County's properties in order to move away from crisis management and back to preventive maintenance. For a number of years the lack of funding made it impossible to properly manage weed problems around County buildings and in the Special Districts the Division is responsible for. This is now changing, but weeds that went unmanaged for years left huge amounts of seed that will produce large crops of weeds for years to come.

Grounds Division Challenges

- Staffing needs
Grounds has 16 permanent employees (up from 15 last year), and 2 temporary employees. This is still fewer staff than the 18 permanent employees and 3 temporary workers in 2015.

The Division's Senior Lead Gardener retired at the end of September after 40 years of service. The position is still open. The Division is also looking to hire an irrigation specialist and at least one more gardener.
- Drought stress in the County
The Division continues to deal with a large number of diseased, stressed, and dying trees, although the death rate is slowing. Many redwoods in the County are partially dead and it could take from 5 to 10 years for them to die completely. Unless failing trees pose a hazard, the Division will take them down over time since it will be easier aesthetically and financially. It has been challenging to try to drought-proof landscapes, but the woodchips the Division is producing play an important role.

Public Works Department Roadside and Flood Control Channel Maintenance Division

IPM Program Highlights

- Subcommittee work
Staff worked with the IPM Coordinator to create decision documentation for vegetation management on County roads and to revise the decision document for vegetation management on flood control channels.
- Annual habitat assessment refresher training
This year, 42 Public Works Maintenance employees attended the annual refresher training on habitat assessment for endangered and threatened species in order to comply with the California Department of Fish and Wildlife (CDFW) Routine Maintenance Agreement (RMA). The RMA stipulates that before any work can commence in an area, an assessment must be conducted to identify endangered species habitat. In FY 16-17 crews that were trained to identify potential habitat spent a total of 303 hours performing habitat assessments. As endangered species are identified, they are reported to CDFW, which then

provides County staff with guidelines to move forward with work. These guidelines may include full time monitoring of the jobsite by a professional biologist.

- Flood control vegetation and erosion management using California natives

The County Flood Control District is partnering with The Restoration Trust, an Oakland-based non-profit organization promoting habitat restoration and stewardship, in a native planting experiment along Clayton Valley Drain (near Hwy 4 adjacent to Walnut Creek). The study is examining the survival of several California natives: Santa Barbara sedge, (*Carex barbarae*), common rush (*Juncus effusus*), Baltic rush (*Juncus balticus*), field sedge (*Carex praegracilis*), and creeping wild rye (*Leymus triticoides*).



December 2016: Volunteers learn how to properly plant grass plugs at the Clayton Valley Drain site.

The original planting occurred in December 2013, and over the past four years, the Contra Costa County Flood Control District, The Restoration Trust, Boy Scout Troop 239, and numerous hardworking volunteers have planted over 33,000 native grass and sedge plugs, removed over 1,500 pounds of trash, and helped restore native habitat along the Clayton Valley Drain.

The Division continues, at the request of The Restoration Trust, to occasionally spray the area for broadleaf weeds to reduce competition and provide the native plants with an advantage. The Division has also been providing hand and mechanical mowing, as requested.

The native species that were planted spread from underground rhizomes that anchor the soil and provide erosion control. They are perennial species that stay green year around and thus are resistant to fire. The plants are compatible with flood control objectives since they do not have woody stems, and during flood events, they lie down on the slope which reduces flow impedance. They are not sensitive to broadleaf-specific herbicides, and unlike non-native annuals, they provide carbon sequestration and remove as much as ½ ton of carbon per acre per year.

The Restoration Trust will monitor these plots until 2018 to assess native plant survival and the degree to which they compete with the non-native annual species.



Feathers and bones inside the Livorna Park owl box

- Owl and kestrel boxes on County property

The owl box installed at Livorna Park in August 2016 by Boy Scout Troop 815, in cooperation with the County Clean Water Program and the Public Works Special Districts Division, has housed its first family of owls. The box was cleaned in October and is ready for

new occupants.

Public Works Special Districts, which manages Livorna Park, no longer uses rodenticide to control

rats in the park. Rats had been girdling plants along the edge of the park and rodenticide had been used to control



Scouts with one of the completed owl boxes in Kubicek Basin



Kestrel box in Kubicek Basin

the population. Traps were also used, but nothing was caught in the traps. The plants have grown considerably and are no longer in danger from the gnawing, so the rat bait boxes have been removed from the park.

In May of this year, Eagle Scout David Bachofer with members of Boy Scout Troup 239 built and installed two owl boxes in Kubicek Basin along Pine Creek in Walnut Creek. The Scouts created a flyer and did outreach in the neighborhood about the benefits of increasing owl habitat in the area.

The owl boxes are designed for barn owls. A family of owls can consume 3,000 rodents (voles, mice, rats, and squirrels) during a 4 month nesting period. Since gophers spend most of their time underground, owls will likely have little impact on that rodent. It is important to note that although predators like owls can prune a rodent population, they will not control the population, especially considering the fecundity of these animals.

In September, members of the Peregrine Team of Pine Canyon erected two nest boxes for American kestrels in Kubicek Basin. This is a project of Native Bird Connections to increase kestrel habitat in the Mt. Diablo region.

- Grazing as a vegetation management tool

The Division continues to use grazing as an effective tool for vegetation management, mainly on flood control facilities. Using grazing to manage vegetation is complicated and very dependent on site-specific conditions. Grazing is not appropriate in all situations and could not, for instance, be used on the side of County roads without endangering both the animals and motorists. Many factors raise or lower the cost per acre for grazing, including the size of the parcel (at



Pine Creek before grazing

larger sites the cost of moving the goats in and out is spread over a number of acres), whether the animals can easily enter the site, the amount of fencing necessary, how many times the animals must be moved within the job site coupled with the ease with which that can be done, whether water is available or must be trucked in, and the season in which the animals are being used (costs are lower when demand is lower, e.g., in fall and winter).



Pine Creek after grazing

- Ideal grazing situations for fire prevention

The Division has found that the following situations are ideal for meeting fire prevention standards with grazing:

1. Sensitive sites with endangered or threatened species where mowing could kill animals and where herbicides are restricted
2. Sites where access is difficult for people or machines
3. Sites with steep slopes or uneven terrain that would have to be mowed by hand and that present dangerous working conditions for staff
4. Sites that are too wet for either hand or machine mowing

- Areas not suited for grazing

1. One to two acre sites are not economical because of the cost of getting the animals in and out.

2. Unfenced areas along roadsides are not appropriate because of safety issues and because of the cost of fencing off a narrow band of land and continually moving animals along the road.
3. In the winter, grazing animals cannot be used on the rain softened creek banks and the ground adjacent to the banks because of the danger of causing erosion.

- Advances in grazing strategy

The Division continues to take advantage of the time after a site has been grazed. When goats remove vegetation, staff can inspect flood control facilities much more effectively. Goats are used to prepare



Goats on Rodeo Creek

various creeks for their annual or biennial inspection by the Army Corp of Engineers. This makes the Corp's job much easier, for which they are very grateful.

Staff have always monitored the integrity of the slopes and the presence of invasive and other problematic weeds, but when vegetation is very low, it is much easier to see the condition of the flood control facilities and easier to spot treat for hard-to-control weeds. This combination of grazing and herbicides has proven very effective.

- Grazing costs

Costs vary widely among sites. This year costs ranged from \$1,225/acre to graze Rodeo Creek to

\$546/acre to graze Trembath Basin. Difficult access and no water greatly increase the cost. Although Rodeo Creek has water available, there are access issues for off-loading and loading the goats. Trembath Basin is 15 acres of open area with water and easy access.

- Using mulch for weed suppression

The effects of the drought continue to kill thousands of trees in the County. The Division chips prunings and dead trees into mulch that is being used more extensively along fencelines above flood control channels and in empty County parcels. Logs that are too large for the Division's chipper go to the Grounds Division for chipping and use on County landscapes.



Mulch along the access road on Walnut Creek

- Diseased and beetle infested trees

This year the Division spent considerable time removing dead trees infected with sudden oak death (SOD), pine pitch canker, and pine bark beetles. These trees must be chipped or otherwise disposed of onsite to prevent spread of disease or infestation. These tree problems, especially the pine bark beetles, may have been exacerbated by the prolonged drought of the previous years that stressed and weakened many trees in the County.

- Fire fuel reduction challenges in 2017

Fire prevention weed abatement is time-sensitive, and historically the deadline has been July 1. If weed abatement was not completed by that date, the County could incur fines from the fire districts. In FY 16-17, the wet winter created a very large volume of weeds to be managed. This year fire districts were requiring weed abatement to be completed in some areas by May 30. The Routine Maintenance Agreement with the state Department of Fish and Wildlife stipulates that no work can begin in Contra Costa flood control channels prior to April 15. Once again, it was impossible for staff to complete all the mowing in the short four to six week window available before the deadline. Because some flood control

channels were mowed so early in the season, crews had to return to mow them a second time because vegetation had grown back.

Along flood control channels, the weed abatement crew is applying pre-emergents around gates, fencelines, and flood control structures so that when mowing crews come through, they can spend less time hand mowing thus making it more likely that the County can meet its fire fuel reduction deadlines.

- Buffer zones for certain pesticides enjoined by the courts

Several lawsuits brought by environmental organizations against the EPA have been temporarily settled by the delineation of buffer zones in and around habitat for a number of endangered or threatened species in the Bay Area. The Department continues to work within the guidelines of the injunctions to assess work sites and implement buffer zones before using any of the enjoined pesticides.

Roadside and Flood Control Maintenance Division Challenges

- Erratic weather conditions

With record rainfall in Contra Costa County during the 2016-17 winter, the Division faced a number of challenges. In January, flooding on Pinole Creek washed out a 70-ft. section of Alhambra Valley Road at Castro Ranch Road. The road is still closed for ongoing repairs. A portion of Morgan Territory Road near Whispering Pines Road failed and slid down the hill in February. There were numerous mudslides, drainage problems, and downed trees on many other roads in the County. Road maintenance crews were busy addressing storm-related damage to roads and removing downed trees from January through May which slowed the Division's regular vegetation management schedule.



The drought of the previous 5 years created conditions that selected for the tougher and weedier plant species along the roads and flood control channels. The dry soil conditions suppressed the growth of some weeds, and without competition, the hardier weeds had more room and freedom to grow. This winter's abundant rainfall has allowed these problem species to thrive and expand their foothold. Crews

continue to see an increase in kochia (*Bassia* sp.), Russian thistle (*Salsola* spp.), fleabane (*Conyza* sp.) and mare's tail (*Conyza canadensis*), all weeds that emerge late in the season and are difficult to control. Stinkwort (*Dittrichia graveolens*), another late emerging weed, has spread dramatically throughout the County. Volunteer trees have sprouted in abundance in response to the rain.

- Cost implications of regulations

Compliance with Routine Maintenance Agreement (RMA) requirements has considerable effect on the cost of operations. As mentioned above, work within CDFW jurisdiction requires a habitat assessment prior to start of work so that RMA-listed species are not harmed. Crews again identified listed species at a couple of job sites and consultation with CDFW resulted in using alternative work methods that were more costly.

Three years ago, the CalFire increased the safety requirements for mowing, and these measures



Morgan Territory Road near Whispering Pines Road
Winter 2017

continue in effect. These measures help prevent fires and injuries to workers but increase the cost of mowing.

1. Crews must have access to a water truck or a 5 gallon backpack type water fire extinguisher.
2. A worker trained in using the fire-fighting equipment on the truck must be added to a mowing crew to continuously monitor the weather and serve as a lookout.
3. If the height of the vegetation requires that a worker scout the ground ahead of the mower, a separate person must be assigned to perform that function.
4. If the ambient air temperature reaches 80° F, the relative humidity is 30% or lower, or if wind speeds reach 10 mph or higher, mowing cannot begin or must stop immediately.

- Cost implications of various management techniques

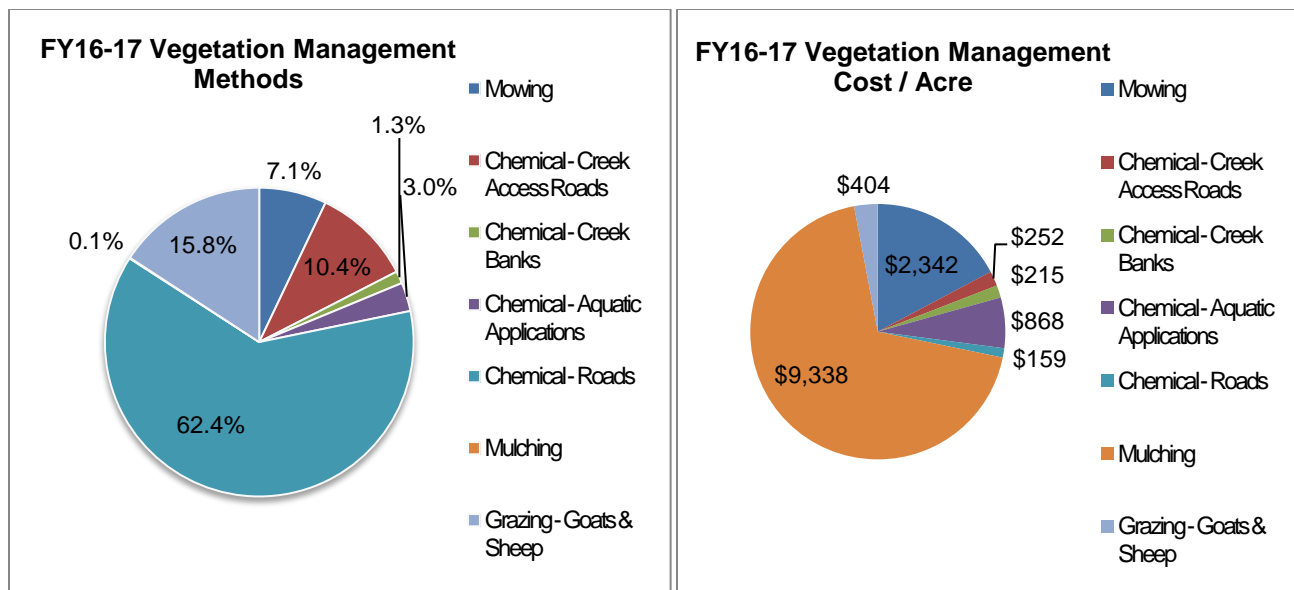
In FY 16-17, 60% of the Division's expenditures on vegetation management was spent on non-chemical treatment methods, on 23% of the total acres treated (see the table below for details).

A Cost* Comparison of Vegetation Management Methods for Roadsides and Flood Control Channels Fiscal Year 2016-17

Vegetation Management Method	Acres Treated	% of Total Acres Treated	Total Cost for all acres treated	Cost/Acre	% of Total Cost for all acres treated
Chemical Treatment - Roads	1014	62.4%	\$161,427	\$159	25%
Right of Way Mowing	115	7.1%	\$269,329	\$2,342**	42%
Chemical Treatment – Creek Access Roads	169	10.4%	\$42,590	\$252	7%
Chemical Treatment – Creek Banks	21	1.3%	\$4,515	\$215	0.7%
Grazing – Peak and Off Season	257	15.8%	\$103,910	\$404	16%
Chemical Treatment - Aquatic Applications	49	3.0%	\$42,523	\$868	7%
Mulching	1.2	0.1%	\$11,205	\$9,338	2%
Totals	1626		\$635,499		

* The cost figures above for each method include labor, materials, equipment costs, contract costs (for grazing), and overhead, which includes training, permit costs, and habitat assessment costs. Licensing costs for staff members are paid by the individual and not by the County. The cost of the Vegetation Management Supervisor when he supervises work is not included in any of the figures, but is comparable among the various methods.

** The cost of right-of-way mowing continues to increase due to new fire prevention regulations (FY13-14=\$762/A; FY14-15=\$828/A; FY15-16 \$1,445/A, FY 16-17 \$2,342).



Note: The legend to the right of the pie chart identifies slices starting from 12 o'clock and continuing clockwise.

With limited budget, staff, and equipment, the Division must make strategic decisions about where to deploy their resources in order to meet their mandates of managing vegetation for fire and flood prevention and for road safety. The Division is managing weeds in a biological system, and factors such as weather, rainfall, weed growth patterns, timing for optimum weed susceptibility to the treatment method, and threatened and endangered species issues must also be factored into management decisions. The pie charts above further illustrate the cost of various management techniques and show how the Division has allocated resources.

- Weather

Mowing, as well as the application of herbicides, is highly dependent upon weather conditions. Weather can affect when herbicides can or must be applied and can also affect when mowing can or should occur. Weather can substantially alter the size and type of the weed load or its distribution over time and space. The Department has a limited capacity to use mowing because of a number of factors including vacancies in vegetation management staff, the Department's limited budget for weed abatement, and the limited number of tractor mowers (two). The Department faces a continued challenge of balancing the use of herbicides to control weed growth with the Department's capacity to mow or to graze with goats or sheep within the confines of the budget and the timeline to prevent fires.

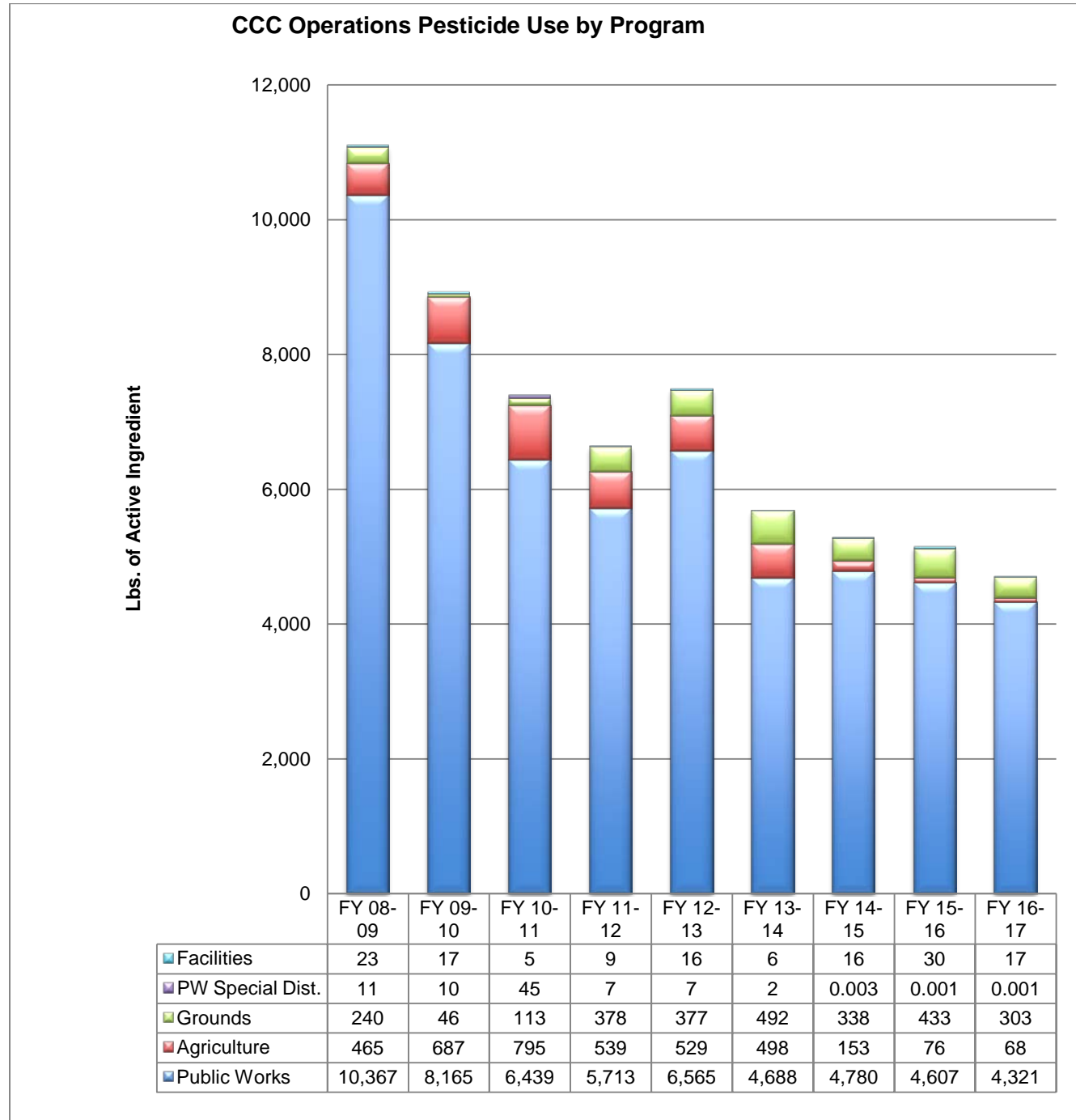
Using mowers during hot, dry weather also poses a hazard of its own: sparks caused by the metal mower blades striking rocks or metal debris can ignite tinder-dry grass.

- Staffing

The Vegetation Management crew is still understaffed with 4 personnel as compared to a staff of 6 in 2009, and is without a supervisor. Full staffing would consist of 3 vegetation management techs, two senior vegetation management techs, and one supervisor. Currently the crew is short 1 vegetation management tech, 1 senior tech, and has no supervisor. Peter Gollinger, who had been the Vegetation Management Supervisor and was promoted to Assistant Field Operations Manager, has now left the County for a job with the City of Palo Alto.

Pesticide Use by Contra Costa County Operations

Starting in FY 00-01, the IPM Task Force annually reported pesticide use data to the Transportation, Water, and Infrastructure Committee for the County departments involved in pest management. The IPM Coordinator has continued this task. Below is a bar chart of pesticide use over the last 9 years. For information on pesticide use reporting and for more detailed pesticide use data including total product use, see Attachment C and the separate County Pesticide Use Spreadsheet.



Decrease in Pesticide Use by County Operations

In FY 16-17, all County Departments reduced their pesticide use from the previous fiscal year. Since FY 00-01, the County has reduced its use of pesticide by 75%. Note that pesticide use fluctuates from year to year depending on many factors.

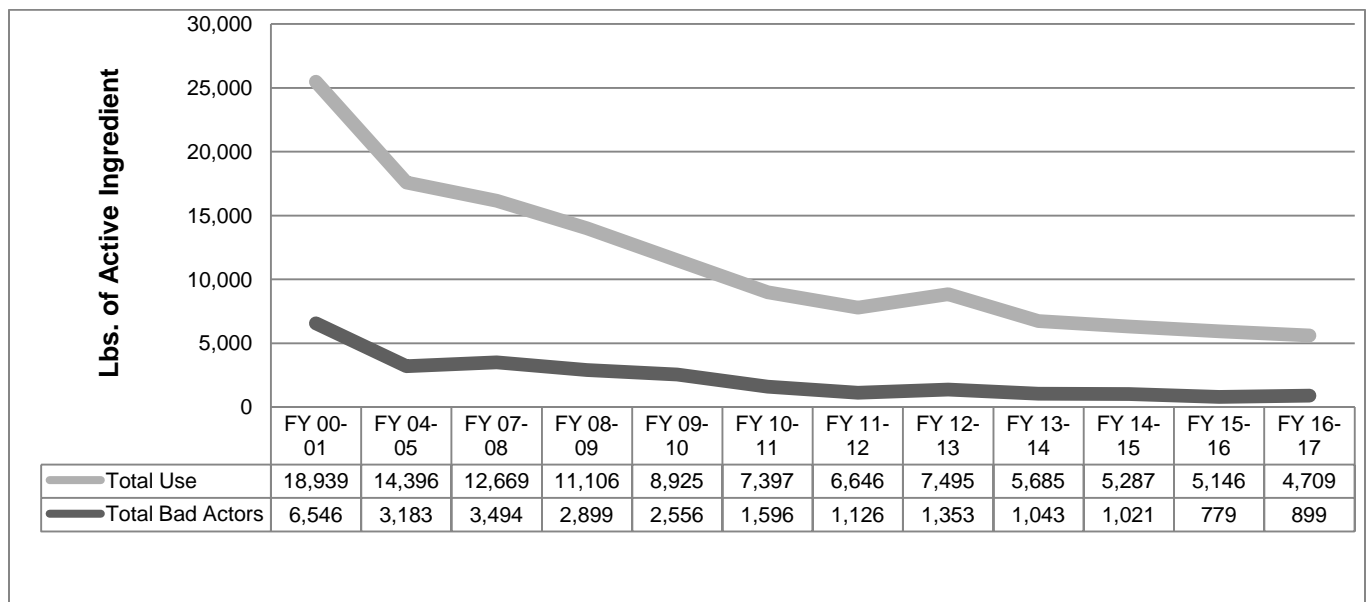
Concern about “Bad Actor” Pesticides

There has been concern among members of the public and within the County about the use of “Bad Actor” pesticides by County departments. “Bad Actor” is a term coined by the Pesticide Action Network (PAN) and Californians for Pesticide Reform to identify a “most toxic” set of pesticides. These pesticides are at least one of the following: known or probable carcinogens, reproductive or developmental toxicants, cholinesterase inhibitors, known groundwater contaminants, or pesticides with high acute toxicity.

Parents for a Safer Environment has requested that additional pesticides be reported as “Bad Actors”, but in 2013 after studying this request and consulting Dr. Susan Kegley, who was instrumental in developing the PAN pesticide database, the IPM Advisory Committee decided that the County will report as “Bad Actor” pesticides only those that are designated as such in the PAN database.

The County’s use of these particular pesticides has decreased dramatically since FY 00-01 as shown in the graph below. In Fiscal Year 00-01, County operations used 6,546 lbs. of “Bad Actor” active ingredients and this year used 899 lbs.

CCC Operations Total Pesticide Use vs. ‘Bad Actor’ Use



Rodenticide Use

The Department of Agriculture uses rodenticide for ground squirrels whose burrowing threatens critical infrastructure in the County, such as roads, levees, earthen dams, and railroad embankments. In Special Districts, at Livorna Park and around the playing field at Alamo School, gophers, moles, and voles are managed by trapping with occasional limited use of rodenticides.

“First generation” vs. “second generation” anticoagulant rodenticides

Anticoagulants prevent blood from clotting and cause death by internal bleeding. In small doses they are used therapeutically in humans for a number of heart ailments. Vitamin K₁ is the antidote for anticoagulant poisoning, and is readily available. (There are some types of rodenticides for which there is no antidote.)

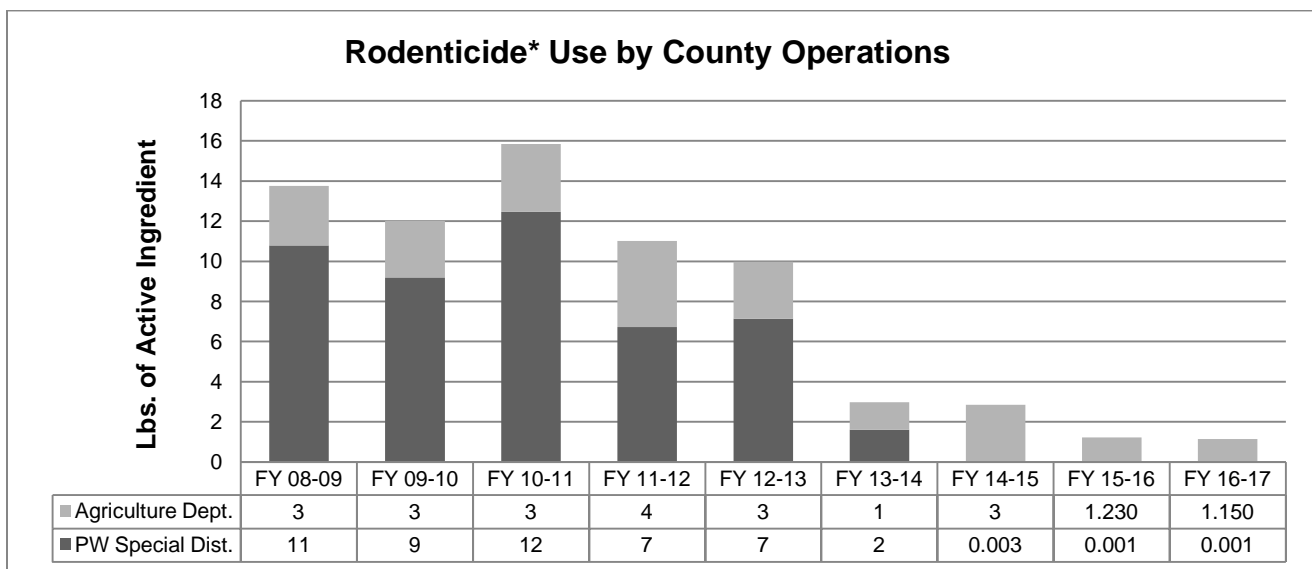
When anticoagulant rodenticides are necessary, the County uses first generation anticoagulant baits. First generation anticoagulants require multiple feedings over several days to a week to kill.

Second generation anticoagulants are designed to kill after a single feeding and pose a greater risk to animals that eat poisoned rodents. If the rodent continues to feed on a second generation anticoagulant after it eats a toxic dose at the first meal, it may build up more than a lethal dose in its body before the clotting factors run out and the animal dies. Residues of second generation anticoagulants may remain in liver tissue for many weeks. Because rodents poisoned by second generation anticoagulants can carry a heavier load of more toxic poison that persists in their bodies for a long period of time, the risk of death is increased for a predator that eats rodents poisoned by second generation anticoagulants.

The first generation materials are cleared much more rapidly from animal tissues and have a much reduced potential for secondary kill when compared to second generation materials. However, the first generation anticoagulants can also kill animals that eat poisoned rodents.

As noted earlier in this report, the Agriculture Department has revised its ground squirrel baiting procedure to reduce the amount of treated grain used. The Agriculture Department also mitigates the risk of secondary poisoning by performing carcass surveys in all areas treated with anticoagulants whether or not it is required by endangered species restrictions.

Only the Agriculture Department and Special Districts use rodenticides. Below is a bar chart to illustrate the decline in rodenticide use by the County.



* The Agriculture Department uses primarily diphacinone treated grain bait, but in years past they also used some gas cartridges as fumigation agents.

From FY 14-15 to the present, Special Districts has used only diphacinone, but in years past, their use was more than 99% aluminum phosphide, which is a fumigant and not an anticoagulant rodenticide.

Trends in Pesticide Use

A change in pesticide use from one year to the next does not necessarily indicate a long-term trend. Long-term trends are more meaningful than short-term changes. It is important to understand that pesticide use can increase and decrease depending on the pest population, the weather, the invasion of new and perhaps difficult to control pests, the use of new products that contain small percentages of active ingredient, the use of chemicals that are less hazardous but not as effective, the addition or subtraction of new pest management projects to a department's workload, and cuts to budgets or staff that make it difficult or impossible to use alternate methods of control.

The County's pesticide use trend follows a trend typical of other pollution reduction programs. Early reductions are dramatic during the period when changes that are easy to make are accomplished. When this "low-hanging fruit" has been plucked, it takes more time and effort to investigate and analyze where additional changes can be made. Since FY 00-01, the County has reduced its use of pesticide by 75%. If further reductions in pesticide use are to be made, it will require time for focused study and additional funding for implementation.

Departmental Integrated Pest Management Priorities For 2018

Agriculture Department Priorities for 2018

- Continue the County's highly effective invasive weed program
The Agriculture Department will give priority to weed work under contract with local parks and municipalities. Artichoke thistle and purple starthistle will remain the primary target weeds for the 2018 season. The Department will move toward a more collaborative role with private landowners and will encourage landowners to take the primary role for weed control on their properties.

The Department will continue to respond to any "A rated" weed that enters the county with surveys and treatment.

- Ground Squirrel Management Program

The Agricultural Department will continue to provide information and resources to the County, municipalities, growers, and the general public on the control of ground squirrels. Without effective control measures, ground squirrels will damage crops, and infrastructure such as earthen dams, levees, and highways. The economic and environmental consequences would be substantial.

Over the years the Department has experimented with raptor perches, exclusion techniques, and live trapping as alternatives to traditional baiting. Although some of these methods could provide reasonable control with small, limited infestations of ground squirrels, all of these methods are considerably more costly and less effective on a larger scale. The Department continues to search for the most effective, least toxic, and most economical ways to reduce ground squirrel damage to a tolerable level within our county by consulting with researchers, the University of California Cooperative Extension Service, the California Department of Food and Agriculture, other counties, and with industry.

Public Works Department Priorities for 2018

Facilities Division

- Continue working to fix structural deficiencies in County buildings
- Continue monitoring the bed bug situation in County buildings and providing awareness training if necessary

Grounds Division

- Fill the Grounds Supervisor position
- Continue removing hazard trees and trees killed by the drought—where appropriate and where there is funding, trees will be replaced with drought tolerant species
- Continue installing smart irrigation controllers throughout the County, and continue to conserve water as much as possible
- Continue diverting green waste from the landfill by chipping prunings and using the material in place
- Continue chipping large logs from PGE, tree companies, and Public Works Maintenance for mulch—the mulch will be used to suppress weeds wherever possible
- Continue hand weeding wherever and whenever feasible—using mulch facilitates hand weeding
- Continue educating the public to help them raise their tolerance of weeds
- Continue working on the rejuvenation of aging County landscapes
- Continue raising the level of service on County property

Roadside and Flood Control Maintenance Division

- Fill the Vegetation Manager position
This position has been vacant for several years. The County has had difficulty in attracting candidates who possess the minimum requirements for the job.
- Ensure continuity in the vegetation management program as the Assistant Field Operations Manager/Vegetation Manager leaves the County for another job
This will be important for maintaining the high quality of the vegetation management program.
- Continue to refine IPM practices
The Division would like to incorporate more innovation into the vegetation management program, and will be looking at testing and/or incorporating new vegetation management techniques, technology, software, equipment, machinery, and chemicals.
- Coordinate work efforts more closely with other Public Works Department crews
There are many instances where the Vegetation Management Crew could anticipate performing work that can aid other Department crews such as Road Maintenance, Flood Control, and Airport Operations.

Attachment A.

- **Report of the Decision-Making Subcommittee to the Contra Costa County IPM Committee**

- **Decision-Making Documents**
 - **Gophers in County Landscaping**
 - **Vegetation on Roadsides and Rights-of-Way (draft)**
 - **Vegetation on Flood Control Channels (draft)**

Report of the Decision-Making Subcommittee to the Contra Costa County IPM Advisory Committee

Prepared by Andrew M. Sutherland, Subcommittee Chair, and Tanya Drlik, IPM Coordinator

November 2017

Members

Susan Captain

Jim Cartan

Jim Donnelly – vice chair

Andrew Sutherland - chair

Larry Yost

During the past year, the Decision-Making Subcommittee, as a service to the Contra Costa County IPM Advisory Committee and the residents of the County, continued its work to document situation-specific pest management decision-making processes and to revise existing decision documents. The subcommittee is charged with making recommendations that may improve the County's pest management processes while considering the needs of the communities affected, seeking to minimize negative impacts, and attempting to maximize efficiency associated with pest management programs.

Since our last report (September 2016), the Decision-Making Subcommittee has met six times: October 27, December 12, January 20, May 11, June 29, and August 3. The subcommittee will also meet on September 14 and October 12, 2017. For this report, recent activities have been grouped into three broad themes below: pest management in Special Districts, weed management along rights-of-way, and ground squirrel management by the Department of Agriculture.

Special Districts and County Landscape Standards

In 2016, the subcommittee began work on a decision-making document for gophers in County landscapes. This document was finalized in May 2017 and is attached to this report. Work on this document led to a series of conversations with Special Districts staff members about pest management contracts and the County's Landscape Standards, which informs the work of County staff and contractors engaged in pest management. The subcommittee made recommendations on revisions to the pest management section of the Standards and discussed the suggestions with Special Districts staff. All the subcommittee's recommendations were adopted and are now reflected in the current version of this County document. The revised pest management section can be found under "Maintenance" in the Standards at <http://www.contracosta.ca.gov/2147/Landscape-Standards>. The subcommittee believes these changes will clarify the IPM process by emphasizing monitoring for pests, use of nonchemical tactics, and consideration of the nontarget effects associated with pesticide use. The subcommittee recommends a continuation of the Special Districts' outreach efforts to County contractors and residents in these areas to help them understand the IPM process. This helps alert residents to pest management activities in their communities so they might be more invested in the process.

Weed management along rights-of-way

The subcommittee also continued work on documenting decision-making for vegetation management along County road rights-of-way. The draft decision-making document is attached.

A separate document has been created for vegetation management along flood control channels and is under review by the subcommittee. The draft document is attached.

In 2016 and 2017, subcommittee members and County staff interviewed vegetation managers from the counties of Alameda, Yolo, San Mateo, Santa Clara, and Solano about their management practices, equipment, and budgets.

The subcommittee recommends that the IPM Advisory Committee consider convening a panel of county vegetation managers from around the Bay in order to understand IPM strategies used elsewhere. Information from

Bay Area colleagues could help guide the conversation about the County's existing programs, available alternatives, and recommendations for the future.

Funding is the limiting factor for vegetation management programs in all counties. Funding for road maintenance is a complex issue, so in September 2017 the subcommittee arranged a presentation on the subject before the full IPM Advisory Committee from the head of the Public Works Maintenance Division.

At this point, it appears that mowing is the only viable alternative to pesticide use for vegetation management along roadsides in Contra Costa. The County already uses a mix of mowing and pesticides along roads, but there are questions and issues associated with increasing the amount of mowing. For example:

- How many areas are actually suitable for mowing? Many of the County roads are constructed on terrain that cannot be mowed because of trees, rocks, and utilities infrastructure.
- How much would it cost to mow the suitable roadsides?
 - Currently, about 60% of the County's expenditures on vegetation management are spent on non-chemical treatment methods (mainly mowing and grazing). This is spent on about 23% of the acreage managed (includes both roadsides and flood control channels).
 - How many more staff would be needed to mow all suitable roadsides?
 - Would the staff have to be new hires or could they be moved from other duties?
 - What kinds of new equipment would be needed?
 - How many times per year would those areas have to be mowed? Without adequate staff and equipment to mow weeds at the proper time, they can regrow and require multiple mowings.
- How are other counties, especially those with larger vegetation management budgets, funding their programs?
- How does the dollar amount of gas tax revenue (the primary funding for road maintenance) received vary in counties on a per mile managed basis?
- The County is under strict fire prevention regulations, and any changes in vegetation management would have to conform to those regulations. How would that affect where and how many times areas might have to be mowed?
- County salaries and benefits have been a stumbling block to hiring new employees in the Maintenance Division. How long would it take to hire new employees if they were needed? Would salaries and benefits need to be increased in order to attract people?
- The County's Climate Action Plan, adopted by the Board of Supervisors in 2015, requires Contra Costa to reduce its greenhouse gas emissions by 15% below 2005 baseline levels by 2020. On-road vehicles currently account for about 45% of the County's emissions. Increasing the use of large diesel powered mowers and trucks would increase significantly the greenhouse gas emissions by County operations, especially if areas required multiple mowings per season.

The Public Works Roadside and Flood Control Maintenance Division has reduced its use of pesticide by 74% since FY 2000-2001. If the Board of Supervisors chooses to make further reductions of pesticide use along rights-of-way a priority, funding for vegetation management will have to be increased.

Ground squirrel control by the Department of Agriculture

In 2013, the Decision-Making subcommittee created a decision document for ground squirrels in critical infrastructure. In May 2017, the subcommittee decided to review the document because this pest situation is responsible for the largest County use of anticoagulant rodenticide. The nontarget issues surrounding use of anticoagulants continue to be important to the County and its residents. The review process is ongoing.

Contra Costa County

Decision Documentation for Gopher Management in Landscapes

Date: 5/24/17

Department: Public Works Grounds Division and Special Districts

Location: Countywide

Situation: Gophers in parks, frontage landscaping, and County landscaping

What is the management goal for the sites?	<p>Gopher management in the County does not seek to eradicate the animals. The management goals are to prevent gopher damage to landscaping and to building foundations or other infrastructure such as irrigation pipes and tubing, and prevent tripping hazards where children, adults, and pets play. Historically, there was such a large population of gophers in the area above Reliez Valley Rd. in the Hidden Pond Landscaping Zone that gophers were being controlled to minimize destabilization of the slope to prevent landslides.</p>
Who has jurisdiction over the areas in question?	<p>The County has jurisdiction over the sites; however, in Special District frontage or other landscaping, the County does not control the allocation of funds for landscape maintenance, including pest management.</p> <p>Note that Special District landscaping zones formed before 1996 do not have a built-in CPI escalator, which makes it difficult to increase the funding available for landscape maintenance. The 3 zones currently monitored for gophers are Livorna Park, Hidden Pond Landscaping Zone, and Driftwood Landscaping Zone. Hidden Pond was formed in 1990, and Driftwood was formed in 1993.</p>
How often are the sites monitored?	<p>This varies from site to site.</p> <p>In the course of her other work, the Grounds Division gopher manager surveys for evidence of gophers. She also responds to complaints about gophers from County staff and to information relayed by other members of the Grounds crew.</p> <p>The vertebrate pest manager for Special Districts regularly surveys for gophers in Livorna Park, Hidden Pond Landscaping Zone, and Driftwood Landscaping Zone and responds to complaints relayed through Special Districts staff.</p>
The problem species has been identified as the following:	<p>Pocket gopher, <i>Thomomys</i> sp.</p> <p>From the UC IPM Pest Notes on pocket gophers (http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7433.html):</p> <p>"Pocket gophers are herbivorous and feed on a wide variety of vegetation but generally prefer herbaceous plants, shrubs, and trees. Gophers use their sense of smell to locate food. Most commonly they feed on roots and fleshy portions of plants they encounter while digging. However, they sometimes feed aboveground, venturing only a body length or so from their tunnel opening. Burrow openings used in this manner are called "feed holes." You can identify them by the absence of a dirt mound and by a circular band of clipped vegetation around the hole. Gophers also will pull entire plants into their tunnel from below. In snow-covered regions, gophers can feed on bark several feet up a tree by burrowing through the snow.</p> <p>"...A single gopher moving down a garden row can inflict considerable damage in a very short time. Gophers also gnaw and damage plastic water lines and lawn sprinkler systems. Their tunnels can divert and carry off irrigation water, which leads to soil erosion. Mounds on lawns interfere with mowing equipment and ruin the aesthetics of well-kept turfgrass."</p>

	<p>Gophers sometimes girdle trees and shrubs and can kill trees with trunks several inches in diameter.</p> <p>Gophers also mix, aerate, and loosen soil, all of which can promote plant growth.</p>	
What is the tolerance level for this species?	<p>One gopher burrowing in ornamental landscaping or a lawn will trigger management actions. Gophers in adjacent fields or in areas that are more wild are not managed except where gophers become numerous enough to destabilize the hillsides. Currently this applies to Hidden Pond Landscaping Zone only.</p>	
Are these sensitive sites?		
	Are any sites under management part of any of the court-ordered injunction?	No for the 2 sites where rodenticide might be used: Hidden Pond and Driftwood.
	Are any of the sites known or potential habitats for any endangered or threatened species?	No
	<p>Are any of the sites on or near an area where people walk or children play?</p> <p>Care must be taken when using gopher traps, so that neither pets nor children are likely to encounter them.</p>	Yes
	Are any of the sites near a drinking water reservoir?	Not applicable
	Are any of the sites near a creek or flood control channel?	Not applicable
	Are any of the sites near crops?	No
	Are any of the sites near desirable trees or landscaping?	Yes
	Are any of the sites on soil that is highly permeable, sandy, or gravelly?	Not applicable
	At any of the sites, is the ground water near the surface?	Not applicable
	Are there any well heads near the sites?	Not applicable
What factors are taken into account when determining the management technique(s) for gophers?	<p>The proximity to foot traffic—currently traps are not used where children or other passersby might find and try to remove or tamper with the trap. Other considerations are the following: safety to the gopher manager, the environment, and non target species; endangered species considerations; the effectiveness of the method; and the cost to the Department or the Special District.</p>	
What factors contribute the cost of gopher management?	<ol style="list-style-type: none"> 1. The number of gophers at the site. 2. The number of gopher mounds at the site—each must be tamped down to determine which tunnels are active. 3. The size of the site—if a large site must be surveyed on foot, it will take longer. 4. The distance of the site from the corporation yard. 5. The skill and experience of the pest manager—someone with little experience and skill will take 	

	<p>longer to find and trap gophers or kill them with CO₂.</p> <p>6. The frequency of re-invasion—sites near open fields, vacant lots, construction sites, and wildlands will experience repeated gopher invasions.</p>
Are special permits required to trap or otherwise kill gophers?	<p>No special permits are required. Gophers are considered nongame animals by the California Department of Fish and Wildlife, which means that if a property owner finds gophers that are injuring garden or landscape plants or other property, the property owner can control the gophers at any time in any manner that is legal.</p>
Which cultural controls were considered?	<p>Flooding: This method is not particularly effective and would use large amounts of precious water. Most gophers survive flooding in their burrows. Some may be forced to the surface, but the pest manager would have to use something like a shovel to kill those exiting burrows.</p> <p>Planting buffers or repellent plants: A 50 ft. buffer planted in a grain, such as wheat, is mentioned in the literature, but this is not practical for the County. There is no evidence for the efficacy of planting so-called gopher repellent plants such as castor bean.</p> <p>Conclusion: There are no practical or effective cultural controls for gophers in County landscaping.</p>
Which physical controls were considered?	<p>Trapping: Trapping is a very effective management method. There is skill and art to trapping, especially in finding the proper burrow in which to place traps; therefore, the more experienced the trapper, the more successful they are. Each management situation is unique and must be assessed at the time of inspection to determine a plan of action.</p> <p>There are a number of styles of gopher traps. The Grounds Division uses the Victor Black Box Trap. The Special District contractor uses the Gophinator trap, and the GopherHawk trap.</p> <ul style="list-style-type: none"> • The gopher manager surveys the area to determine which gopher mounds look the freshest and flags those mounds. The remaining mounds are flattened. • The following day, the manager returns to determine which mounds are actually the newest. Brand new mounds, or mounds that had been flattened and were then pushed up again, indicate the gopher is working in those areas. Otherwise the flagged mounds are still the most recent. • Working near the newest mounds, the manager uses a probe (a long pole) find the main gopher tunnel. • A small area above the main tunnel is excavated so the traps can be inserted. Two traps are set, one in each direction back to back, so that a gopher travelling along the tunnel in either direction will encounter the business end of the trap. • The hole is covered with a board. Recommendations vary on whether or not to cover the hole, and some sources indicate that it doesn't matter, but in the County, the hole should be covered to help prevent the public from investigating the trap. The spot is marked with a small flag. <p>In an April 2013 paper in <i>Crop Protection</i>, Baldwin, et al. found that the Gophinator trap was more effective than the Macabee trap [another similar body gripping trap], probably because it was able to capture larger gophers. They also found that covering traps in late spring to early summer increased catches, but not during autumn. They recommended that if efficacy is paramount, traps should be covered from late spring to early summer, but if time is a constraining factor, traps can be left uncovered.</p> <ul style="list-style-type: none"> • Sometimes gophers are trapped immediately while the manager is still working at the site. If not, the manager returns within 24 hours to check the traps. <p>Explosive Devices: The Rodenator injects a combination of 3% propane and 97% oxygen into a burrow and ignites these gases. The resulting explosion collapses the tunnel and creates a shockwave that kills gophers in the burrow. Approximately 5 years ago, the Grounds Division conducted a trial of the Rodenator outside the Public Works Administration building on Glacier Drive in Martinez. Gophers were burrowing close to the building, and it was feared that they might undermine the foundation. The device worked well and no gophers have been seen in that area since. There are, however, some problems with this device. All the windows on the treatment side of</p>

	<p>the building had to be protected with sheets of plywood, and the explosions rattled the windows and the occupants of the building. The reports from the explosions, which sound like gunshots, precipitated calls to the police, even though the surrounding neighbors had been notified. The Division has not pursued this strategy because of this last issue. There is also a fire risk with this method.</p> <p>Exclusion with wire mesh: Three-foot high ½" wire mesh buried 2 feet below ground and encircling a plant can exclude gophers temporarily. These wire cages are only effective in protecting a small area and are very expensive to make and install.</p> <p>Conclusion: Trapping is the most effective and practical physical control for gophers in County landscaping.</p>
Which biological controls were considered?	<p>Great blue herons, coyotes, domestic dogs and cats, foxes, and bobcats capture gophers at their burrow entrances; badgers, long-tailed weasels, skunks, rattlesnakes, and gopher snakes corner gophers in their burrows. Owls and hawks capture gophers above ground.</p> <p>Predators can prune a population, but none of these predators can control gophers to the extent that is necessary in County landscaping. Owl boxes could attract more owls to certain areas of the County. More owls could mean somewhat fewer gophers in open fields.</p> <p>Conclusion: Biological controls alone for gophers have not been shown to reliably reduce populations to the level that will prevent damage to plants and infrastructure.</p>
Which chemical controls were considered?	<p>The risk to predatory animals must be considered before any rodenticides are used for gopher management.</p> <p>Fumigants</p> <p>Extension and university literature recommend against using fumigants for gophers because the animals can quickly backfill a tunnel when they perceive a threat, which prevents the gas from reaching them. Injecting gas far enough into their extensive burrow system is difficult, and since their tunnels are close to the surface, gas can leak out and never reach a concentration high enough to kill.</p> <p>CO₂ Injection</p> <ul style="list-style-type: none"> • The Grounds Division has purchased a CO₂ injection device called the Eliminator which injects carbon dioxide into the burrow system. So far the gopher manager has had good luck with this device. Perhaps this is more effective since the CO₂ initially sinks to the floor of the burrow. • The gopher manager uses this device where foot traffic prohibits the use of traps. • The manger uses the same preliminary procedures for using this device as she used for trapping (see above). • Before she deploys the device in the burrow, she closes any openings and flattens any remaining mounds to help keep the gas inside the burrow. • When the trigger on the device is pulled, there should be no hissing sounds. • The day after the treatment the manager returns to determine the success of the treatment. <p><i>A note on "signal words," below: these designations from the USEPA pertain to the acute toxicity of a pesticide.</i></p> <p>Aluminum Phosphide</p> <p>Signal Word: DANGER</p> <ul style="list-style-type: none"> • Fumigation with aluminum phosphide <u>is</u> effective for gophers, although it is a restricted use material that requires a permit from the County Department of Agriculture. Aluminum Phosphide is not used in the County for gophers.

	<p>Baiting</p> <p>Diphacinone (005%) Multiple Dose Bait Blocks (Eaton's Answer®)</p> <p>Signal Word: CAUTION.</p> <ul style="list-style-type: none"> • This product overcomes a shortcoming of grain baits, which can degrade in the moist soils inside gopher tunnels. It is blended with a water-resistant paraffin material and formulated in bait blocks. This bait was developed with the objective of providing long-term control because the bait remains effective in moist environments after killing resident gophers. Then, newly invading gophers feed on the bait and die as well. • Bait blocks are placed underground in the main tunnel, about 4" to 12" deep and then covered. Usually one block is used for an approximately 20' run of main tunnel where fresh mounds are found on the surface. <p>Diphacinone is a first generation anticoagulant that prevents blood from clotting and causes death by internal bleeding. First generation anticoagulants require multiple feedings over several days to a week to kill. This is different from second generation anticoagulants that are far more toxic and can kill within days of a single feeding if enough bait is ingested.</p> <p>Second generation anticoagulants pose a greater risk to animals that eat poisoned rodents. If the rodent continues to feed on the single-dose anticoagulant after it eats a toxic dose at the first meal, it may build up more than a lethal dose in its body before the clotting factors run out and the animal dies. Residues of second generation anticoagulants may remain in liver tissue for many weeks, so a predator that eats many poisoned rodents may build up a toxic dose over time. However, even the first generation anticoagulants may be poisonous to animals that eat poisoned rodents. The first generation materials break down much more rapidly in animal tissues and have a much reduced potential for secondary kill when compared to second generation materials.</p> <p>Conclusion: CO₂ injection seems to be useful for the Grounds Division, but more experience with the tool is necessary.</p> <p>Diphacinone bait blocks are used from time to time at Hidden Pond and Driftwood. The landscaping in these two areas is located on frontage property. The County does not have control over the fees assessed for maintenance on these properties and the budget is currently insufficient to afford trapping as a control for gophers.</p>
Recommendations from the IPM Advisory Committee	<p>On-going monitoring should be used to adjust control activities to a level appropriate to the population of gophers. Trapping and CO₂ injection are the preferred control methods when sufficient funding is available.</p> <p>Consider expanding trapping into areas where children or other passersby have access after investigating techniques used in school IPM programs or other programs where trapping is conducted in sensitive sites.</p>
References	<p>UC IPM Pest Notes on pocket gophers: http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7433.html</p> <p>Baldwin, R.A., D.B. Marcum, S.B. Orloff, S.J. Vasquez, C.A. Wilen, and R.. Engeman (2013). The influence of trap type and cover status on capture rates of pocket gophers in California, <i>Crop Protection</i>, 46: 7-12.</p> <p>Baldwin, Roger. Personal communication</p>

Contra Costa County

DRAFT DECISION DOCUMENTATION for VEGETATION MANAGEMENT

on County Roadsides and Road Rights-of-Way

Date: February 3, 2017

Department: Public Works Maintenance Division

Location: Unincorporated rural areas

Situation: Vegetation management along roadsides and road rights-of-way

Note that management decisions are site specific for roads. Not every management technique will work equally well at all sites and for all weeds, and the costs of each technique will vary depending on the site. The County has developed a flowchart to aid the decision-making process.

What are the management goals for these sites?	<p><u>To reduce fire risk:</u></p> <p>The County is subject to the regulations of 9 separate fire districts. The following are the districts and the links to their regulations (if available):</p> <ul style="list-style-type: none">• Contra Costa Fire Protection District (ConFire) http://www.cccfpd.org/pdfs/WA-2-minimum-standards-17.pdf• Crocket-Carquinez Fire Protection District (regulations not apparent on website)• East Contra Costa Fire Protection District (same regs as ConFire)• Kensington Fire Department (same regs as Richmond)• Knightsen Fire District (no website)• Moraga-Orinda Fire District http://www.mofd.org/literature_196457/Exterior_Hazard_Abatement_Standards• Pinole Fire Department (regulations not apparent on website)• Richmond Fire Department http://www.ci.richmond.ca.us/DocumentCenter/View/38822• San Ramon Valley Fire Protection District -- http://www.firedepartment.org/civica/filebank/blobdload.asp?BlobID=4207 <p>The County manages to the most restrictive regulations of the 9 fire districts, which are described in the County's fire protection ordinance:</p> <p>Title 7, Division 722, Section 320.4.1 says, "No person who has any ownership or possessory interest in or control of parcel of land shall allow to exist thereon any hazardous rubbish, weeds, trees, or other vegetation that constitutes a fire hazard."</p> <p>Title 7 Division 722, Section 320.4.2.1 says, "The Fire Code Official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of streets which are improved, designed, or ordinarily used for vehicular traffic to be cleared of flammable vegetation and other combustible growth."</p> <p>The Public Works Department tries to maintain an 8 foot strip, where practical, of vegetation-free ground (not including trees, shrubs, or landscaping) along each side of a road. Fire district regulations stipulate that vegetation management must typically be completed by May 1, and at the very latest by July 1, in order to avoid abatement notices from the local fire district. The May 1</p>
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	<p>deadline is a recent change and makes it more difficult for the crew to perform all the needed work between the time that weather conditions permit work and May 1.</p> <p><u>To maintain road safety:</u> The County maintains road safety in accordance with the County's best management practices. The following are some of the management practices:</p> <ul style="list-style-type: none"> • Prevent sight line obstruction of signs, pullouts, ditches on sides of road, obstacles on sides of the road (California Streets and Highways Code, Sections 1480-1485) • Prevent a perceived narrowing of the roadway from large plants growing close to the side of the road that can force drivers to move to the center of the road • Maintain adequate road drainage (vegetation can clog ditches and drains) • Keep pavement intact as long as possible <ul style="list-style-type: none"> ○ Plants next to pavement or growing into cracks in pavement can allow water to move down under the asphalt causing it to buckle and crack more. ○ Weeds growing along the shoulder can hasten the deterioration of the shoulder which can lead to hazardous roadside conditions, especially for bicycles, but also for cars if the drop from the road surface becomes large. <p><u>To reduce liability for the County:</u> Fires, accidents, and law suits against the County are a regular and costly occurrence.</p> <p><u>To prevent the movement of invasive plants along roadway corridors:</u> Invasive plant seeds and parts can be carried far and wide by animals, wind, and water moving along roadsides. Even vehicle tires and undercarriages, bicycle tires, and people's footwear can move weeds from one place to another.</p>
Who has jurisdiction over the areas in question?	<p>The County owns the roads and rights-of-way and is responsible for their maintenance. The local fire districts are responsible for insuring that property owners and managers follow their regulations.</p> <p>Note: In general in unincorporated areas where there are curbs, gutters, and sidewalks, the homeowner is responsible for vegetation management.</p>
Number of road miles under management	<p>The total number of road miles is 660 (a road mile includes both sides of the road).</p> <p>Approximately 325 to 375 road miles are under active vegetation management (the number changes with the weather and other factors from year to year). Not all of the 660 road miles are rural roads, many are in unincorporated residential areas where the Public Works Department does not manage roadside vegetation).</p>
Number of staff available for vegetation management activities	<p>Currently the Division has 3 trained vegetation management techs.</p> <p>Full staffing would be 1 supervisor and 6 vegetation management personnel.</p> <p>The maintenance division would be fully staffed at 86, however, currently there are only 57 positions filled. These 57 employees perform all of the road maintenance tasks, such as paving, crack sealing, pavement marking, ditch and drainage maintenance, signage, tree trimming and removal, storm damage emergency response and repair, guard rail maintenance and flood control maintenance. The small vegetation management crew is part of the 57 employees and is responsible not only for roadsides, but also for flood control channels and unimproved County properties.</p>
Source of funding	<p>Road maintenance, including vegetation management, is funded solely from the gasoline tax. The County does not contribute any money from the General Fund except for a small amount going to specific drainage projects.</p> <p>The funds coming from the gas tax had been declining for years because the tax had not been increased, while at the same time cars have become much more fuel efficient. In addition there are many electric vehicles on the road that pay no gas tax for maintenance of the roads on which they drive.</p> <p>With the passage of California Senate Bill 1 in December 2016, the County will see a much needed increase in funds for road maintenance; however, the extra funds must first go to bring the average Pavement Condition Index up to 80 or better. At present, CCC's arterial Pavement Condition Index</p>

	<p>is in the 60s.</p> <p>The following are the main provisions of SB 1:</p> <ul style="list-style-type: none"> • \$0.12 increase in gasoline tax/gallon, with inflation adjustment • Increase to the Vehicle License Fee of between \$25 and \$175, with inflation adjustment, depending on the cost of the vehicle • \$0.20 increase in the tax/gallon on diesel • An increase in vehicle registration fee for 2020 and later model zero-emission vehicles of \$100 with inflation adjustment f • The bill would impose various requirements on the department and agencies receiving these funds. The bill would authorize a city or county to spend its apportionment of funds under the program on transportation priorities other than those allowable pursuant to the program if the city's or county's average Pavement Condition Index meets or exceeds 80. 	
How often is the site monitored?	<p>All sites in the county are monitored every few days. The Vegetation Manager spends part of every day inspecting roadways on a rotating basis. The road crews, the road crew supervisors, and the vegetation management crew are all trained to recognize vegetation issues on roadsides and road rights-of-way and to report them to the Vegetation Manager. Monitoring information is recorded on the Vegetation Manager's Daily Report.</p> <p>If a new weed species is found, the Vegetation Manager identifies and researches the weed. If he/she cannot identify the specimen, he/she consults the County Department of Agriculture. If a weed on the California Department of Food and Agriculture A-rated list is found, the County Agriculture Department is also consulted.</p>	
Weeds have been identified as the following:	<p>Any species that can pose a fire danger or sight obstruction, including volunteer trees and otherwise desirable species, will be managed to maintain the integrity of the road and road shoulder.</p> <p>Key weeds are listed below. The list is continually updated as vegetation changes.</p> <p>Invasive species:</p> <ul style="list-style-type: none"> • Yellow starthistle (<i>Centaurea solstitialis</i>) • Purple starthistle (<i>Centaurea calcitrapa</i>) • Russian thistle, or tumbleweed (<i>Salsola tragus</i>) • Kochia (<i>Kochia scoparia</i>) • Stinkwort (<i>Dittrichia graveolens</i>) • French broom (<i>Genista monspessulana</i>) • Pepperweed (<i>Lepidium latifolium</i>) • Tree of heaven (<i>Ailanthus altissima</i>) • Algerian ivy (<i>Hedera algeriensis</i>) • Himalayan blackberry (<i>Rubus armeniacus</i>) <p>Other species:</p> <ul style="list-style-type: none"> • Poison oak (<i>Toxicodendron diversilobum</i>) • Poison hemlock (<i>Conium maculatum</i>) • Mare's tail (<i>Conyza canadensis</i>) • Mustard (<i>Brassica</i> spp.) • Mallow or cheeseweed (<i>Malva</i> spp.) • Various grasses <p>The Department does not have a specific invasive weed management program; however, the vegetation management crew is trained to look for invasives when they are out working.</p>	
Are populations high enough to require control?	<p>The Vegetation Management crew manages vegetation as necessary to meet the management goals above.</p> <p>At times vegetation re-growth may be sparse enough and the fire risk low enough that a decision might be made to leave the re-growth alone.</p>	
Are these sensitive sites?	Are any areas "highly sensitive sites" as defined by PWD Environmental staff?	No

	Are any areas under the Routine Maintenance Agreement with Fish and Game?	It's possible if a road shoulder is under the riparian canopy.
	Are any areas part of any of the court-ordered injunction? (see: https://www.epa.gov/endangered-species/interim-use-limitations-eleven-threatened-or-endangered-species-san-francisco-bay) Some areas are included in the red legged frog injunction. The Department has a map of areas included in the red legged frog injunction.	Yes
	Are any areas known or potential habitat for any endangered or threatened species? Some areas border habitat or potential habitat for species, but the actual gravel road shoulder is not suitable habitat for most vertebrates.	No
	Are these areas places where people walk or children play? Most of the roads and rights-of-way covered by this document are not suitable for pedestrian traffic or for children to play. Areas where people walk are the following: <ul style="list-style-type: none"> • Iron Horse Trail • Clyde Pedestrian Path • Delta De Anza Trail (county only maintains a small portion) 	Occasionally
	Are they near a drinking water reservoir?	Yes, some
	Are they near crops?	Yes, in some cases.
	Are they near desirable trees or landscaping?	Yes, occasionally
	Is the soil highly permeable, sandy, or gravelly? Yes, in some areas. Hoffman Road is one.	Yes
	Is the ground water near the surface?	Unknown, other than Hoffman Road
What factors are taken into account when determining the management technique(s) for vegetation?	<ul style="list-style-type: none"> • Species of plant • Stage of growth • Plant density • Plant location • Road condition—if a road is in very poor condition, vegetation growing close to the edge can cause more damage than if a road is in good condition. Every 7 to 10 years, the road is scheduled for resurfacing and there must be a clear corridor for the work. 	
Are special permits required for work?	If the Department were to use Vanquish (dicamba), which is restricted because of volatility, it would need to file with the County Department of Agriculture a Notice of Intent (NOI) to apply the material.	
Which cultural controls were considered?	Mulching <ul style="list-style-type: none"> • It is difficult to contain mulch on the side of the road. There is a danger that it could clog drainage ditches and drains, run off into waterways, present road hazards to bicyclists. • Wood chip mulch is combustible and would only add to the fire danger. • The cost of buying and/or spreading mulch along roadsides would be prohibitive and very dangerous for the crew. Weed Barriers <ul style="list-style-type: none"> • Rubber mats can be used around guard rails, but are very expensive. Weeds can grow up 	

	<p>through the joints in the mats and on top of the mats in accumulated soil and organic matter. Rubber mats are combustible, and the resulting fire releases noxious fumes.</p> <ul style="list-style-type: none"> • Fabric barriers are expensive and very costly to install, hard to anchor to the ground, and vehicles can tear them, rendering them ineffective. • Weed seeds can germinate in the organic matter that accumulates on the weed barrier or is intentionally placed there. <p>Planting Desirable Species</p> <ul style="list-style-type: none"> • This has been used in some limited circumstances in Yolo County, but the plants must still be mowed. • Establishment takes time, money, water, and attention. • The plants must conform to very limiting specifications so as not to be sight hazards, fire hazards, etc. They could not be planted adjacent to the road. <p>CONCLUIONS:</p> <p>Mulching and weed barriers are problematic on roadsides. The Department has not found any areas where these would be appropriate.</p> <p>Planting desirable species is not used at this time because the Department must maintain a vegetation-free zone next to the road.</p>
Which physical controls were considered?	<p>Pruning: This is used on large vegetation where needed to meet management goals.</p> <p>Mowing by machine: Mowing is used on French broom to reduce the amount of vegetation before herbicide applications. Mowing is also used for blackberries and for willows in place of, or before, herbicide treatment. Mowing on the Iron Horse Trail is contracted out.</p> <p>Machine mowing is not used more extensively because of the following:</p> <ul style="list-style-type: none"> • Terrain is a limiting factor. Many of the County's rural roads have unimproved shoulders that are very uneven and have trees growing on them. This makes mowing very difficult. • Mowing may not meet fire regulations in many areas. • Mowing usually requires more than one pass per treatment which increases cost. Depending on the terrain, it may take several passes per treatment to mow down the vegetation. • With mowing there is always the risk of starting a fire when mower blades create sparks from striking rocks or other obstacles. This is a regular occurrence with both machine and hand mowing. • Recent changes in safety regulations for mowing have increased costs and the number of staff needed for each mower. This may have the effect of further limiting the work window. • Mowing can also transport invasive plant seeds and parts from one area to another. • There is a narrow window of time when mowing is most effective for meeting fire regulation deadlines. This is the same window of time in which flood control channels must be mowed. If mowing is done too early, the vegetation can grow back and require mowing a second or even third time to meet fire regulations. The Department does not have enough crew and equipment to complete all work by mowing in that space of time • It is more costly than herbicide treatment. See Table 1 below. • The County's Climate Action Plan requires a reduction in greenhouse gas emissions, and increasing mowing would substantially increase those emissions. <p>Mowing by hand: This has limited use on roadsides, but it can be useful around guard rails.</p> <ul style="list-style-type: none"> • Mowing by hand (weed whacking) can be particularly dangerous for employees: <ul style="list-style-type: none"> ◦ Traffic presents serious hazards. ◦ Workers can sustain injuries from slipping on steep or rocky terrain. ◦ Workers can sustain injuries from debris being thrown up and onto workers: rocks, glass, barbed wire, pieces of metal and pieces of mower blades. • Hand mowing is even more costly than machine mowing. • There is always a risk of starting a fire. <p>Grazing</p> <ul style="list-style-type: none"> • Logistics and safety on the side of a narrow country road are very difficult. The liability to the County is high.

	<ul style="list-style-type: none"> • Grazing animals can distract motorists, which can be a danger to both the animals and motorists. The animals temporarily remove the emergency parking available on the shoulder. • Grazing is costly for this application, especially because grazing a narrow strip necessitates moving the animals frequently, which is expensive. (See Table 1.) <p>Burning: Besides being dangerous, this technique could not be used on roadsides because the Bay Area Air Quality Control Board would not allow it.</p> <p>Concrete under guard rails or cement treated base for road shoulders: These treatments are long lasting, but very expensive. (Need cost range) Currently the County is not installing any new guard rails or shoulders.</p> <p>It is quite difficult to make repairs to concrete slabs if they crack or erode. Once cracks form, weed seeds can sprout in the cracks. Repairing concrete or cement-treated base used on the road shoulder is also very difficult, especially if damage occurs at the edge from erosion. Everything must be torn out and replaced.</p> <p>CONCLUSIONS: Pruning and machine mowing are used by the Department where they are appropriate. At this time, the other techniques are too dangerous, too costly, or not practical.</p>
Which biological controls were considered?	Biological controls are not applicable in this situation unless a particular invasive weed is the target, and it has an available biological control.
Which chemical controls were considered?	<p>During many years of research, experience, and experimentation, including consulting the literature, researchers, and colleagues about materials that are labeled for, and effective on, weeds in rights-of-way, the Division has chosen the herbicide options listed below. The Department continues to consult researchers and colleagues, as well as new literature, to identify new choices that may be more effective, more environmentally friendly, and of lesser human toxicity.</p> <p>Note that the Weed Science Society of America (WSSA) and the Herbicide Resistance Action Committee (HRAC) both create resistance group designations to help weed managers reduce the likelihood of creating resistant weeds. Every 2 to 3 seasons, the Division rotates herbicide active ingredients according to the resistance group designations from WSSA to limit the buildup of herbicide resistant weeds along the roadsides.</p> <p>Possible herbicide choices (These product names are subject to change.)</p> <p>When the IPM process calls for the use of herbicides, the products below are used where most suitable considering cost, efficacy, the environment, human communities, and resistance management.</p> <p><u>Pre-emergent Herbicides</u></p> <p>Esplanade, Gallery, and Resolute are pre-emergent herbicides that are used in the buffer zone next to the road to maintain bare ground. They each belong to a different resistance management group and are used in rotation to prevent herbicide resistance. The Division uses pre-emergent herbicides to reduce the amount of post-emergent herbicides that are needed.</p> <p>Indaziflam (Esplanade®): This pre-emergent herbicide controls a broad spectrum of weeds if applied before germination. It does not generally control weeds after they have emerged. For maximum weed control, the herbicide needs to reach the soil surface and be activated by rainfall or adequate soil moisture. It is applied in the fall to control winter germinating weeds and in the spring to control spring germinating weeds.</p> <p>Signal Word: CAUTION Rate: 3 to 5 oz/acre Timing: Before weeds sprout in either fall or spring near the time rain is expected. Cost to apply (includes material cost): \$125/acre</p>

Herbicide Resistance Management Group: 29

Isoxaben (Gallery® S.C.): This pre-emergent controls certain broadleaf weeds.

Signal Word: CAUTION

Rate: 20 to 30 oz/acre

Timing: Before weeds sprout in either fall or spring near the time rain is expected.

Cost to apply (includes material cost): \$210/acre

Herbicide Resistance Management Group: 21

Prodiamine (Resolute® 65 WDG): This pre-emergent herbicide controls grass and broadleaf weeds by preventing the growth and development of newly germinated weed seeds. Weed control is most effective when the product is activated by at least ½" of rainfall or irrigation, or shallow (1" to 2") incorporation before weed seeds germinate and within 14 days following application.

Signal Word: CAUTION

Rate: 1 to 2 lbs/acre

Timing: Before fall weeds or spring weeds germinate, and close to the time rain is expected.

Cost to apply (includes material cost): \$97/acre

Herbicide Resistance Management Group: 3

Post emergent (contact) herbicides

Glyphosate (Roundup® Pro Concentrate): Glyphosate is a systemic herbicide (is absorbed into the plant and circulates to kill the entire plant) that will kill most types of vegetation—grass, broadleaf, vines, brush, etc. **Roundup is used as a contact herbicide for emerged grasses on road shoulders.**

Signal Word: CAUTION

Rate for spot spraying on roadsides using a boom mounted on a truck: 2 pts in 20 gal of water/acre

Rate for spot spraying by pulling hose with a handgun attached: 6 pts in 100 gal of water/acre

This method is used mostly for parcels where a crew must walk rather than drive.

Timing: Varies depending on the location, the weather, the weed growth, the work load

Cost to apply (includes material cost):

- \$135/acre for Roundup application from a boom mounted on a truck
- \$673/acre for Roundup application from a hose with a handgun

Herbicide Resistance Management Group: 9

**Enjoined for red legged frog

Triclopyr TEA (Garlon® 3A): Garlon 3A is specific for woody plants and broadleaf weeds (but not grasses) and is used for spot treatments. It is usually tank mixed with Roundup.

Signal Word: DANGER (for eye damage to mixer/loader and applicator)

Rate for spot spraying on roadsides using a boom mounted on a truck: 2 to 4 pts in 20 gal of water/acre

Rate for spot spraying by pulling hose with a handgun attached: 4 to 6 pts in 100 gal of water/acre

This method is used mostly for parcels where a crew must walk rather than drive.

Timing: Varies depending on the location, the weather, the weed growth, the work load

Cost to apply (includes material cost):

- \$146/acre for Garlon 3A application from a boom mounted on a truck
- \$714/acre for Garlon 3A application from a hose with a handgun

Herbicide Resistance Management Group: 4

**Enjoined for red legged frog

Herbicides with both Pre- and Post-Emergent Activity

Chlorsulfuron (Telar® XP): Telar XP is both a pre-emergent and post-emergent herbicide for the control of many invasive and noxious broadleaf weeds. Warm, moist conditions following application enhance the effectiveness of Telar XP since moisture carries the herbicide into weed roots and prevents them from developing. Weeds hardened off by drought stress are less susceptible to this

	<p>herbicide. Telar is used primarily for control of difficult broadleaf weeds such as pepperweed.</p> <p>Signal Word: CAUTION Rate: 1.6 oz/acre Timing: Before fall weeds or spring weeds germinate and close to the time rain is expected. Cost to apply (includes material cost): \$113/acre Herbicide Resistance Management Group: 2</p> <p>Dicamba diglycolamine salt (Vanquish®): Vanquish is registered for selective broadleaf and brush control and has both pre- and post-emergent qualities. Dicamba is a systemic herbicide that acts as a plant growth regulator. Dicamba is a federally restricted material due to the potential for harm to non-target plants. It can volatilize when temperatures are high. A special permit must be obtained from County Ag, and the applicator must notify County Ag in advance of the application. If the application is cancelled, County Ag must be notified. Vanquish is used selectively as a spot treatment for difficult to control broadleaf weeds.</p> <p>Signal Word: CAUTION Rate: 1 to 2 pts/acre Timing: Best when weeds are small Cost to apply (includes material cost): \$95/acre Herbicide Resistance Management Group: 4 Not on any injunction list</p> <p>Aminopyralid (Milestone®): Milestone is a systemic herbicide with both pre- and post-emergent properties that controls broadleaf weeds without affecting grasses. Milestone is used for the more woody and thick-stemmed weeds on road shoulders.</p> <p>Signal Word: CAUTION Rate: 5 to 7 oz/acre Timing: Between fall and spring before seeds germinate, but it is a more flexible chemical because it also has contact properties Cost to apply (includes material cost): \$96/acre Herbicide Resistance Management Group: 4 Not on any injunction list</p> <p>Sulfometuron methyl (Oust XP®): This pre-emergent and early post-emergent herbicide controls many annual and perennial grasses and broadleaf weeds. The Department rarely uses this on roadsides.</p> <p>Signal Word: CAUTION Rate: 3.6 to 4.8 oz/acre Timing: Before or just after weeds germinate in the fall or spring. Cost to apply (includes material cost): \$95/acre Herbicide Resistance Management Group: 2</p>
Which herbicide application methods are available for these chemicals?	<p>The Department's current equipment allows for 3 methods of application:</p> <ul style="list-style-type: none"> • broadcast application or spot treatment from a boom attached to a truck • spot treatment from a handgun attached to a hose connected to a truck-mounted tank • and spot treatment with a backpack. <p>CONCLUSIONS: The terrain, proximity to water, potential human or non-target exposure, kind of weed species, and goal of the treatment dictate the application method.</p>
What weather concerns must be checked prior to application?	<p>The Vegetation Manager takes into consideration the pesticide label and all site specific factors. Each day, the Vegetation Manager checks the weather when he/she arrives at work at 6:00 AM. Rain can prevent application of some herbicides because of the danger of runoff. For most pre-emergent herbicides, rain is needed after application in order for the herbicide to be effective. The Vegetation Manager must also consider wind speed (generally it should be <7 mph) and possible temperature inversions to avoid herbicide drift. Crews measure and record weather factors prior to and during application. Excessive heat or cold makes plants shut down, and herbicide applications</p>

	at that time could be ineffective. The Vegetation Manager uses these factors to write Pest Control recommendations for the crew to follow on the days that spraying takes place.
Cost Comparisons for various mgmt methods on both roadsides and flood control channels	See Table 1, below.
Recommendations from the IPM Advisory Committee	<ul style="list-style-type: none"> Continue to review all vegetation management methods available for flood control channels and access roads considering efficacy, cost, impacts to the environment, and to the human community. Encourage investigation into, and experimentation with, new methods. Review this document every 3 years.

Table 1. Methods, Acres Treated, and Cost* for Vegetation Management along Contra Costa Roadsides and Flood Control Channels, Averaged over Two Years (2014-2016)[§]

Vegetation Management Method	Acres Treated	% of Total Acres Treated	Total Cost for all acres treated	Cost/ Acre	% of Total Cost for all acres treated	% Change in Total Acres Treated from FY 12-13
Chemical Treatment - Roads	1157	55%	\$180,145	\$156	22%	-36%
Right of Way Mowing (mainly flood control channels)	280	13%	\$278,133	\$993	34%	+8%
Chemical Treatment - Creek Access Roads	152	7%	\$46,728	\$307	6%	+33%
Chemical Treatment - Creek Banks	70	3%	\$28,657	\$409	4%	-59%
Grazing (flood control facilities)	375	18%	\$191,301	\$510	24%	+74%
Chemical Treatment - Aquatic Applications	66	3%	\$46,125	\$699	6%	+11%
Mulching (flood control fence-lines and access road shoulders)	10	0.5%	\$36,923	\$3692	4%	+43%
Totals	2110		\$808,012			-20%

*Table lists the most accurate costs available and is not necessarily specific to roadsides.

[§]Table is updated each year in the IPM Annual Report. See cchealth.org/ipm.

Contra Costa County

DRAFT DECISION DOCUMENTATION for VEGETATION MANAGEMENT

on Flood Control Channels

Date: October 2, 2017

Department: Public Works Roadside and Flood Control Channel Vegetation Management Div.

Location: Flood Control Channels

Situation: Vegetation management along 76 miles of flood control channels and creek banks; this includes areas ranging from unimproved natural creeks to concrete-lined channels, along with levies that are certified by the Army Corps of Engineers

Note that management decisions are site specific for flood control channels. Not every management technique will work equally well at all sites and the costs of each technique will vary depending on the site.

<p>What are the management goals for the site?</p>	<p>To maintain vegetation along flood control channels and creek banks so that</p> <ul style="list-style-type: none"> • erosion of the banks does not occur • vegetation does not impede the flow of water in a flood • vegetation does not collect silt and debris that could obstruct the passage of water • vegetation does not hide problems on banks such as ground squirrel burrows, erosion, beaver activity, etc. • vegetation does not pose a fire hazard • vegetation remains a mix of small herbaceous plants and grasses • homeless encampments cannot flourish unnoticed • waterways do not become a conduit for the spread of noxious weeds throughout the county • waterways provide habitat for wildlife • maintenance is performed in accordance with the Routine Maintenance Agreement (RMA) with the state Department of Fish and Wildlife • maintenance is performed in accordance with the regulations from the Army Corps of Engineers and the Regional Water Quality Control Boards (San Francisco and San Joaquin) <p>Vegetation is also managed along flood control access roads to maintain the integrity of the roads and ease of access for equipment.</p>
<p>How often is the site monitored?</p>	<p>All sites in the county are monitored every few days to every few weeks. The Vegetation Manager spends part of every day inspecting waterways on a rotating basis. The road crews, the flood control supervisors, and the vegetation management crew are all trained to recognize vegetation issues on flood control channels and creeks and to report them to the Vegetation Manager. Monitoring information is recorded on the Vegetation Manager's Daily Report.</p> <p>If a new weed species is found, the Vegetation Manager identifies and researches the weed. If he/she cannot identify the specimen, he/she consults the County Department of Agriculture. If a weed on the California Department of Food and Agriculture A-rated list is found, the County Agriculture Department is also consulted.</p>
<p>Weeds have been identified as the</p>	<p>Various grasses, including</p> <ul style="list-style-type: none"> • Harding grass (<i>Phalaris aquatica</i>)

<p>following:</p> <p>Note that this is not a comprehensive list, but a list of the main problem plants.</p>	<ul style="list-style-type: none"> • Johnsongrass (<i>Sorghum halepense</i>) • Reed canarygrass (<i>Phalaris arundinacea</i>) • Wild oats (<i>Avena fatua</i>) • Quack grass (<i>Elymus repens</i>) <p>Various broadleaf weeds including</p> <ul style="list-style-type: none"> • Mustard (<i>Brassica</i> spp.) • Cocklebur (<i>Xanthium</i> sp.) • Poison hemlock (<i>Conium maculatum</i>) • Wild carrot (<i>Daucus carota</i>) • Stinging nettle (<i>Urtica</i> sp.) • Himalayan blackberry (<i>Rubus armeniacus</i>) <p>Invasive weeds such as</p> <ul style="list-style-type: none"> • Perennial pepperweed (<i>Lepidium latifolium</i>) • Purple loosestrife (<i>Lythrum salicaria</i>) • Red sesbania (<i>Sesbania punicea</i>) <p>On some engineered channels, cattails (<i>Typha</i> sp.) and trees (willow—<i>Salix</i>, walnut—<i>Juglans</i>, ash—<i>Fraxinus</i>) are considered weeds.</p> <p>The Maintenance Division's vegetation management crew is trained to look for invasives when they are out working and report them to the Vegetation Manager who consults with the Agriculture Department about what action to take.</p>	
<p>Are populations high enough to require control?</p>	<p>The Vegetation Management crew manages vegetation as necessary to meet the goals above.</p>	
<p>Is this a sensitive site?</p>	<p>Is this a “highly sensitive site” as defined by PWD Environmental staff? A highly sensitive site contains a known habitat for, or is close to sightings of, endangered or threatened species. Refer to the attached flow chart for how sensitive sites are determined and handled.</p> <p>Some sites fit in this category.</p>	<p>Yes</p>
	<p>Is this under the Routine Maintenance Agreement with Fish and Game?</p> <p>All creeks are covered under the Routine Maintenance Agreement.</p>	<p>Yes</p>
	<p>Is this part of any of the court-ordered injunction? (see: https://www.epa.gov/endangered-species/interim-use-limitations-eleven-threatened-or-endangered-species-san-francisco-bay)</p> <p>Some areas are included in one or more injunctions.</p>	<p>Yes</p>
	<p>Is this a known or potential habitat for any endangered or threatened species?</p> <p>Yes, some sites contain habitat for various sensitive species including salmonids, red legged frog, various nesting birds, dusky footed woodrat, salt marsh harvest mouse. Each site is reviewed by a biological monitor (a trained Public Works staff member) or a Certified Biologist.</p>	<p>Yes</p>
	<p>Is it on or near an area where people walk or children play?</p> <p>The Division does not manage pests on established (paved) trails. These trails are mainly under the management of East Bay Regional Park District. In cases where established trails exist along flood control</p>	<p>No</p>

	channels (areas of Walnut Creek, Marsh Creek, and Wildcat Creek) they are situated above the creek slopes. Access roads along flood control channels are County property and are posted "No Trespassing." The public should not be on the access roads and enter at their own risk. In general, the public is not allowed access to the slopes or waterway within these environments.	
	Is it near a drinking water reservoir? None of the flood control channels that the Division maintains is near a reservoir.	No
	Is it near crops? There are areas of Marsh Creek, Sand Creek, and Dry Creek that are near crops.	Yes
	Is it near desirable trees or landscaping? There are some flood control access roads that are near residences.	Yes
	Is the soil highly permeable, sandy, or gravelly? Yes, in some areas.	Yes
Which cultural controls were considered?	<p>Mulching: Woodchips are used on flood control access roads where appropriate to prevent and suppress weeds. Creek banks cannot be mulched.</p> <p>Weed Barrier/Sheet Mulching: This cannot be used on the creek banks, and for the access roads, it would be an added and unnecessary expense since a deep cover of woodchips serves the same purpose.</p> <p>Planting Desirable Species: The County Flood Control District is partnering with The Restoration Trust, an Oakland-based non-profit organization promoting habitat restoration and stewardship, in a native planting experiment along Clayton Valley Drain (near Hwy 4 adjacent to Walnut Creek). The study is examining the survival of several California natives: Santa Barbara sedge, (<i>Carex barbarae</i>), common rush (<i>Juncus effusus</i>), Baltic rush (<i>Juncus balticus</i>), field sedge (<i>Carex praegracilis</i>), and creeping wild rye (<i>Leymus triticoides</i>).</p> <p>The original planting occurred in December 2013, and in December 2014 volunteers focused on supplemental planting in the same location to replace drought damaged plants. Santa Barbara sedge, common rush, Baltic rush, and field sedge were planted on the lower terrace near the creek and the creeping wild rye was planted on the slopes of the channel.</p> <p>These species spread from underground rhizomes and will anchor the soil to provide erosion control. They are all perennial species that stay green year around and are resistant to fire. The plants are compatible with flood control objectives since they do not have woody stems, and during flood events, they lie down on the slope, thereby reducing flow impedance. They are not sensitive to broadleaf-specific herbicides, and unlike non-native annuals, they provide carbon sequestration and remove as much as ½ ton of carbon per acre per year. Native grasses and sedges can potentially out-compete non-native broadleaf weeds and annual grasses, but they do require maintenance assistance from herbicides.</p> <p>The Division, at the request of The Restoration Trust, spot treats the area with broadleaf herbicides to reduce competition and provide the native plants with an advantage. The Division also provides hand and mechanical mowing, as requested.</p> <p>The Restoration Trust will monitor these plots until 2018 to assess native plant survival, the degree to which they compete with the non-native annual species, and the relative success of seeding</p>	

	<p>versus planting plugs.</p> <p>CONCLUSIONS: Mulching can be and is used along flood control access roads where the mulch will not drift into the creek. The Public Works Department is experimenting with planting desirable species to out-compete weedy species. This is an IPM technique the Public Works Department is interested in exploring further. However, establishment of desired species takes time, money, water, and attention and may require continued use of herbicide to prevent invasion of undesirable species.</p>
Which physical controls were considered?	<p>Pruning: Trees are pruned for equipment clearance and for line of sight along access roads. Trees that sprout in engineered channels on the slopes or in creek channels are cut down in order to comply with Army Corps of Engineers regulations. The top of the stump is generally painted with an herbicide to ensure control.</p> <p>Mowing by machine: Many creek slopes are mowed by tractor for fire prevention, as required by the Fire District. The channels are mowed along the top of the slope and a minimum of 6 ft. down the side of the slope. Mowing works best on open spaces without a lot of trees.</p> <p>Mowing by hand: Areas that are not mowed by machine or grazed by animals are usually mowed by a crew with weed whackers.</p> <p>Grazing: Grazing is used where the presence of endangered species, such as the red legged frog, make it difficult to mow, for example, on Pine Creek Dam. Grazing is also used in areas such as Pine Creek and Ygnacio Valley Drain where the creek sides are steep and dangerous for human workers. Goats are more expensive than hand mowing but their use can help avoid incurring indirect costs such as staff injuries. See Table 1 for more information on costs.</p> <p>For detailed information on how grazing is used in the County, see the decision document for weed management entitled Using Grazing Animals for Weed Abatement.</p> <p>Burning: This technique was used in the past but is no longer because the Bay Area Air Quality Control Board allows burning only in very limited circumstances.</p> <p>Electrothermal weeding (Ubiquetek): This method uses a probe carrying electricity at a high voltage (3, 000 to 5,000 to volts) and low amperage (0.5 to 2 amps) to heat plant tissue and kill both roots and above ground plant material. The probe must contact each individual weed. This method is more efficient than steaming or flaming weeds, but would be very slow compared to mowing by machine or hand. Such high voltage is lethal, so the device is potentially extremely dangerous to the operator. This method also poses a fire risk because of the intense heat at the point of contact with the plant that can produce sparks and small flames. Currently there have been no independent evaluations of this method. For these reasons the Department does not consider this a viable tactic at this time.</p> <p>Steam weeding (Weedtechnics): This method works by sending water under pressure through a diesel boiler and then out through hoses to an application head. The water comes out at 205 to 218 degrees Fahrenheit. This method is also extremely slow. The applicator must drive around 2 mph to treat effectively. Because of the speed of application and the small water tank, an applicator could only treat 5 to 7 miles before having to refill the tank. This method only penetrates the soil about ¼" so it does not kill underground portions of plants and therefore must be repeated every 3 to 4 weeks. For these reasons the Department does not consider this a viable tactic at this time.</p> <p>CONCLUSIONS: Each of these techniques, except burning and electrothermal and steam weeding, is used by the Department where appropriate.</p>
Which biological controls were considered?	<p>Biological controls are not applicable in this situation unless a particular invasive weed is the target, and it has a biological control available.</p>

<p>Which chemical controls were considered?</p>	<p>During many years of research, experience, and experimentation, including consulting the literature, researchers, and colleagues about materials that are labeled for, and effective on, weeds in rights-of-way, the Division has chosen the herbicide options listed below. The Department continues to consult researchers and colleagues, as well as new literature, to identify new choices that may be more effective or more environmentally friendly.</p>
<p>Attach PCA recommendation</p>	<p>Note that the Weed Science Society of America (WSSA) and the Herbicide Resistance Action Committee (HRAC) both create resistance group designations to help weed managers reduce the likelihood of creating resistant weeds. The designations below are from WSSA. Herbicide resistance groups are rotated every 2 to 3 seasons to limit the buildup of herbicide resistant weeds along the roadsides.</p> <p>Possible herbicide choices:</p> <p>Pre-emergent Herbicides</p> <p>Esplanade, Oust XP, and Resolute 65 WDG are pre-emergent herbicides that are used only on flood control access roads to prevent weed emergence. They each belong to a different resistance management group and are used in rotation to prevent creating herbicide-resistant weeds. The Department uses pre-emergent herbicides to reduce the amount of post-emergent herbicides that are needed. In some areas, it is very difficult to mow either by hand or by machine, and grazing would be too costly. Those areas are treated with herbicide.</p> <p>Indaziflam (Esplanade®): This pre-emergent herbicide controls a broad spectrum of weeds if applied before germination. It does not generally control weeds after they have emerged. For maximum weed control, the herbicide needs to reach the soil surface and be activated by rainfall or adequate soil moisture. It is applied in the fall to control winter germinating weeds and in the spring to control spring germinating weeds.</p> <p>Signal Word: CAUTION Rate: 3 to 5 oz/acre Timing: Before weeds sprout in either fall or spring near the time rain is expected. Cost to apply (includes material cost): \$125/acre Herbicide Resistance Management Group: 29</p> <p>Sulfometuron methyl (Oust XP®): This pre-emergent and early post-emergent herbicide controls many annual and perennial grasses and broadleaf weeds. The Department uses it to control grasses on flood control access roads.</p> <p>Signal Word: CAUTION Rate: 3.6 to 4.8 oz/acre Timing: Before or just after weeds germinate in the fall or spring. Cost to apply: Need current figures Herbicide Resistance Management Group: 2</p> <p>Prodiamine (Resolute® 65 WDG): This pre-emergent herbicide controls grass and broadleaf weeds by preventing the growth and development of newly germinated weed seeds. Weed control is most effective when the product is activated by at least ½" of rainfall or irrigation, or shallow (1" to 2") incorporation before weed seeds germinate and within 14 days following application.</p> <p>Signal Word: CAUTION Rate: 1 to 2 lbs/acre Timing: Before fall weeds or spring weeds germinate, and close to the time rain is expected. Cost to apply (includes material cost): \$97/acre Herbicide Resistance Management Group: 3</p> <p>Post emergent (contact) herbicides</p> <p>Glyphosate, which is not a selective herbicide, is used at a regular rate in areas where it is not necessary to maintain a cover of grasses. Glyphosate, at a much reduced rate, is used to</p>

chemically “mow”, or stunt, vegetation on creek banks where feasible.

Garlon 3A and Renovate3 are specific for broadleaf weeds and are used where the Department wants to keep a grassy cover on the creek slopes. Renovate is used to control cattail growth in areas not subject to the injunctions. Either might be used as a cut stump treatment.

Clearcast is used for spot treating cattails in flood control channels.

Glyphosate (Roundup® Pro Concentrate & Roundup Custom®): Glyphosate is a systemic herbicide (is absorbed into the plant and circulates to kill the entire plant) that will kill almost any type of vegetation—grass, broadleaf, vines, brush, etc. Roundup is used on creek slopes for many different weeds. Roundup Custom is used at a much reduced rate for chemical “mowing” on creek slopes to stunt vegetation but not kill it. Roundup Custom is registered for use in water so the Department uses that formulation if applications are going to be very near water.

Signal Word: CAUTION

Rate for spot spraying on access roads using a boom mounted on a truck: 2 pts in 20 gal of water/acre

Rate for spot spraying by pulling hose with a handgun attached: 6 pts in 100 gal of water/acre

This method is used mostly where a crew must walk rather than drive.

Rate for chemical mowing: 1/5 pt in 10 gal of water/acre

Timing: Varies depending on the location, the weather, the weed growth, the work load

Costs to apply (includes material cost):

- \$135/acre for Roundup application from a boom mounted on a truck
- \$673/acre for Roundup application from a hose with a handgun
- Need current cost/acre for Roundup Custom used for chemical mowing

Herbicide Resistance Management Group: 9

**Enjoined for red legged frog

Triclopyr TEA (Garlon® 3A and Renovate® 3): Triclopyr controls woody plants and broadleaf weeds, but not grasses. Renovate is registered for use within or adjacent to aquatic sites.

Signal Word: DANGER (for eye damage to mixer/loader and applicator)

Garlon 3A or Renovate on access roads using a boom mounted on a truck: 2 pts in 20 gal of water/acre

Rate for use of Garlon 3A or Renovate pulling hose with a handgun attached: 4 pts in 100 gal of water/acre

Rate for cut stump treatment: Undiluted material

Timing: Varies depending on the location, the weather, the weed growth, the work load

Cost to apply (includes material cost):

- \$146/acre for Garlon 3A application from a boom mounted on a truck
- \$714/acre for Garlon 3A application from a hose with a handgun
- Need current cost/acre for Renovate application from a boom mounted on a truck
- Need current cost/acre for Renovate application from a hose with a handgun

Herbicide Resistance Management Group: 4

**Enjoined for red legged frog

Imazamox (Clearcast®): Imazamox is a post-emergent, slow acting, systemic herbicide for use in and around aquatic and non-cropland sites. **Currently, it is only used for treating cattails with a hose and handgun.**

Signal Word: CAUTION

Rate for spot spraying cattails with a hose and handgun:

Timing:

Cost to apply (includes material cost):

Herbicide Resistance Group: 2

Herbicides with both Pre- and Post-Emergent Activity

Chlorsulfuron (Telar® XP): Telar XP is both a pre-emergent and post-emergent herbicide for the

	<p>control of many invasive and noxious broadleaf weeds. Warm, moist conditions following application enhance the effectiveness of Telar XP since moisture carries the herbicide into weed roots and prevents them from developing. Weeds hardened off by drought stress are less susceptible to this herbicide. This herbicide is used by the Department mainly for control of perennial pepperweed.</p> <p>Signal Word: CAUTION Rate: 1.6 oz./acre Timing: Before fall weeds or spring weeds germinate and close to the time rain is expected. Cost to apply (includes material cost): \$113/acre Herbicide Resistance Management Group: 2</p> <p>Imazapyr (Habitat®): Habitat is registered for the control of undesirable vegetation in and around standing or flowing water, and can be used for wetland, riparian, and terrestrial vegetation growing in or around surface water when treatment might inadvertently result in application to surface water. Habitat has both pre- and post-emergent activity and is a systemic herbicide (is absorbed into the plant and circulates to kill the entire plant) that controls grass and broadleaf weeds, brush, vines, etc. It will not control vegetation submerged in water.</p> <p>Habitat is used only as a spot treatment for <i>Arundo</i>, pampas grass, ivy growing on fences and in creeks, and as a cut stump treatment for feral trees (the tree is cut down and the herbicide is immediately applied to the cut stump).</p> <p>Signal Word: CAUTION Rate: 8 oz./3 gal of water in a backpack for spot treatments and for cut stumps Timing: Timing: Varies depending on the location, the weather, the weed growth, the work load Cost to apply (includes material cost): Need current cost/acre Herbicide Resistance Management Group: 2 **Enjoined for red legged frog</p> <p>CONCLUSIONS: All of the above herbicides are used where most suitable and are rotated among the different resistance management groups in order to prevent creating herbicide-resistant weeds.</p>
Which herbicide application methods are available for this chemical?	<p>Methods available: Current equipment allows for 4 methods of application: a boom attached to a truck, a handgun attached to a hose connected to a truck-mounted tank, spot treatment with a backpack, and spot treatment with a squirt bottle.</p> <p>The truck with a boom is used wherever possible since it is most efficient. A handgun attached to a hose is used where access is difficult for a truck, the backpack sprayer is used for small spot treatments, and the squirt bottle is used for cut stump treatments.</p> <p>CONCLUSIONS: The terrain, the proximity to the water, the kind of weed, and the goal of the treatment dictate the application method.</p>
What weather concerns must be checked prior to application?	<p>The Vegetation Manager takes into consideration the pesticide label and all site specific factors. Each day, the Vegetation Manager checks the weather when he/she arrives at work at 6:00 AM. Rain can prevent application of some herbicides because of the danger of runoff. For most pre-emergent herbicides, rain is needed after application for the herbicide to be effective. The Vegetation Manager must also consider wind speed (generally it should be <7 mph) to avoid herbicide drift. Crews carry wind meters in their trucks. Excessive heat or cold makes plants shut down, and herbicide applications then would be ineffective. The Vegetation Manager uses these factors to write Pest Control recommendations for the crew to follow when spraying takes place.</p>
Cost Comparisons for various management	<p>See Table 1, below.</p>

methods	
Changes in management methods since the previous iteration of this document	<p>Since FY 12-13, changes are as follows:</p> <ul style="list-style-type: none"> • Increased acres mowed on flood control channels by 8% • Reduced acres treated with chemicals on flood control channels by 59% • Increased acres grazed by goats by 74% • Increased acres of aquatic chemical treatments by 11% • Increased acres of access road shoulder and fenceline treatments by 33%
Recommendations from the IPM Advisory Committee	<ul style="list-style-type: none"> • Continue to review all vegetation management methods available for flood control channels and access roads considering efficacy, cost, impacts to the environment, and to the human community. • Encourage investigation into, and experimentation with, new methods. • Review this document every 3 years.

Table 1. Methods, Acres Treated, and Cost* for Vegetation Management along Contra Costa Roadside and Flood Control Channels, Averaged over Two Years (2014-2016)[§]

Vegetation Management Method	Acres Treated	% of Total Acres Treated	Total Cost for all acres treated	Cost/ Acre	% of Total Cost for all acres treated	% Change in Total Acres Treated from FY 12-13
Chemical Treatment - Roads	1157	55%	\$180,145	\$156	22%	-36%
Right of Way Mowing (mainly flood control channels)	280	13%	\$278,133	\$993	34%	+8%
Chemical Treatment – Flood Control Access Roads	152	7%	\$46,728	\$307	6%	+33%
Chemical Treatment – Flood Control Banks	70	3%	\$28,657	\$409	4%	-59%
Grazing (flood control facilities)	375	18%	\$191,301	\$510	24%	+74%
Chemical Treatment - Aquatic Applications	66	3%	\$46,125	\$699	6%	+11%
Mulching (flood control fence-lines and access road shoulders)	10	0.5%	\$36,923	\$3692	4%	+43%
Totals	2110		\$808,012			-20%

*Table lists the most accurate costs available.

[§]Table is updated each year in the IPM Annual Report. See cchealth.org/ipm.

Attachment B.

- Report from the IPM Outreach Subcommittee to the Contra Costa County IPM Advisory Committee
- Pests and Rental Housing in California: *Know your rights and responsibilities!*
- Script for Pest Management Awareness for In-home Visitors PowerPoint Presentation

Report from the IPM Outreach Subcommittee to the Contra Costa County IPM Advisory Committee

Prepared by Tanya Drlik, IPM Coordinator, November, 2017

Members

Jim Cartan

Susan Heckly

Michael Kent – Chair

Andrew Sutherland

To date, the IPM Outreach subcommittee has met five times in 2017: February 14, April 25, May 30, July 6, August 17, and October 11.

At their first meeting, after electing Michael Kent as chair, the subcommittee decided to work with the County's most vulnerable populations through outreach to in-home visitors with the goals of

- Informing County staff of the public health risks of having pests in the home.
- Helping staff to recognize pest problems in their clients' homes.
- Making staff aware of the resources available for their clients.

The subcommittee invited various County programs to a meeting to explain the subcommittee's ideas about the outreach program and to obtain feedback from the program representatives. The following programs either attended the meeting or were contacted by the Chair:

- Senior Nutrition Program (Meals on Wheels)
- Adult Protective Services
- WIC
- In Home Support Services
- Head Start
- Behavioral Health in-home nurses
- Public Health nurses

The response from program representatives was positive, and the subcommittee began work on a PowerPoint presentation with the aim of giving presentations to County staff starting in fall 2017.

The subcommittee gathered pest management resources and created a fact sheet to clarify tenant and landlord responsibilities regarding pest management. (See attached.)

The subcommittee reviewed and revised the presentation and gave a sample presentation to the entire IPM Advisory Committee at its September 2017 meeting to gain additional feedback. The subcommittee has encouraged all members of the Outreach subcommittee to consider giving the presentation to one of the target organizations.

The final script for the presentation is attached.

The Chair and the IPM Coordinator will devise a schedule of presentations for the fall and winter.

Pests and Rental Housing in California

Know your rights and responsibilities!

Pests such as rodents, cockroaches, bed bugs, and ants can cause serious problems in your home and may threaten your health and well-being. Make sure you know your rights and responsibilities as a tenant of rental housing in California. Remember that you must work together with your landlord to solve problems and improve conditions in your community.

- **You have a right to safe and healthy housing.** Your landlord must make sure your unit is fit to live in ('habitable') when you move in (CA Civil Code Section 1941). They must also repair any problems that make your unit unfit to live in while you are there (CA Civil Code Section 1941). This includes pest and mold (CA Senate Bill 655) problems! Landlords must also fix problems that are contributing to pest problems (CA Senate Bill 1167), such as water leaks, gaps around doors and windows that provide pest access, and holes and crevices that provide places for pests to hide.
 - **You must notify your landlord when you have pest problems.** Your landlord needs to know when you have issues with pests. Let them know as soon as possible when you observe rodents, cockroaches, or other pests in your unit. For bed bugs, this notification is your legal responsibility, especially if your building includes five or more units (CA Assembly Bill 551).
 - **You are responsible for pest prevention in your unit.** You must take reasonable care of your unit (CA Civil Code Sections 1941 and 1942). This means that you must keep things clean and tidy in your home. Proper sanitation will prevent pests like cockroaches and ants from becoming problems.
 - **You have a right to know about pest management in your unit.** Your landlord must inform you in advance when they plan to enter your unit for pest management (CA Civil Code Section 1954). They must also inform you of pesticide applications that will take place in your unit (CA Civil Code Section 1940). These notices should be written, providing at least 24 hours' notice. If mailed to your home, these notices may require up to six days' notice.
 - **You have the right to seek help if your landlord will not manage pests in your home.**
 - Contact Code Enforcement in the jurisdiction of your residence.
- Help for tenants regarding legal aspects can be found by going to:
- Contra Costa Bar Association (<http://www.cccba.org/>)
 - www.lawhelpcalifornia.org
 - Tenants Together (<http://www.tenantsaltogether.org/>) or other tenants' rights organizations
 - Echo Housing provides help to some residents of CCC (<http://www.echofairhousing.org/tenantlandlord-services.html>)

(Note for subcomm: add an East CCC resource)

To learn more about your rights as a tenant in California, please review the Department of Consumer Affairs guide *California Tenants*: <http://www.dca.ca.gov/publications/landlordbook/catenant.pdf>

Script for Pest Management Awareness for In-home Visitors PowerPoint Presentation

Slide 1

Hi, I'm _____ from the County's Integrated Pest Management Committee. The County is dedicated to using a least hazardous approach to managing pests. I'm here because we think home visitors can learn about this approach to help your clients.

Ideas for props: Climbups, snap traps-Victor and T-Rex, cockroach bait stations, roach motels, mattress encasement, food storage container-plastic and glass

Slide 2: What we'll cover today

READ text on slide out loud:

What we'll cover today:

- Common pest problems and some solutions
- Opportunities for you to help your clients
- Resources for helping your clients)

You can decide how you want to use the resources and what you are comfortable with in helping your clients.

Slide 3: Why care about pests in the home?

So, why should we care about pests in the home?

Pests can damage our health, our buildings, and our food. Insects, rodents, molds, and microbes can all be considered pests.

Slide 4: Asthma triggers

Asthma is the health problem most commonly impacted by the home environment.

When we think about asthma triggers we usually think of pet dander, pollen, cigarette smoke and mold, but did you know that pests can be asthma triggers too?

Slide 5: Asthma triggers from pests

Dust mite skins, feces, and secretions are the most common allergenic component in house dust. Cockroach droppings and scales, as well as mouse urine, have been shown to contain potent allergens. If we can reduce these asthma triggers, we can have healthier living spaces.

Slide 6: Pests create other hazards in the home

Pests create other hazards in the home.

Rodents can carry *Salmonella* in their gut, and when they contaminate food in the home, there is a risk of food poisoning.

There are mites that ride around on rats and are capable of biting people, especially if the rat makes a nest in the home and then abandons it.

Rats can and do bite people, and of course bed bugs bite people.

A serious problem with rodents is that they often gnaw on electrical wires and cause fires or electrical shorts.

Slide 7: Other problems with pests

There are still other problems with pests in the home.

Rodents eat our food but they contaminate much more food than they eat.

Rodents do a lot of gnawing which damages personal belongings and structures.

This is a couch we found in a Richmond motel where mice had chewed holes under the cushions to make a home.

This is a picture of a hole that rats gnawed in the wall to get from their nest in the wall out into the home to get food.

Slide 8: Other problems with pests

You may have had grain moths or beetles in your kitchen and had to throw away the food.

And maybe you've had carpet beetles or clothes moths ruin belongings.

Slide 9: Bed bugs can cause:

There has been a resurgence of bed bugs throughout the U.S. You will be encountering them more and more often.

Having bed bugs can make it very hard for people to sleep.

Bed bugs can make people really anxious and may cause depression and other psychological problems.

We have seen people spraying pesticides on their baby's crib mattress and on their children's clothes.

We've seen people setting off numerous bug bombs at once in their homes. These pesticides don't help and are hazardous to everyone's health.

Slide 10: What happens when there is a lack of pest control services?

What we have seen is that poor or nonexistent pest control services can drive residents to take matters into their own hands by applying store-bought pesticides.

Many people think that since a little pesticide is good, a lot must be better! This can be hazardous to peoples' health.

Slide 11: What can you do to help?

Perhaps the best way for you to detect pest problems is to listen to your clients.

Sometimes your clients may not be aware that they have pest problems.

You can share resources and information about pests and pest management from CC County and the Univ. of CA.

Your clients will learn that you have information and connections and will share pest info with you.

In this way you can help create a healthier environment for them.

Slide 12: Signs of rats & mice

Pests often leave distinctive evidence that says they've been around.

You may see some of these signs and be able to help your client even though they don't know they need help.

Here you can see mice and rat droppings compared to rice grains.

Slide 13: Signs of bed bugs

With bed bugs, you might see blood stains, live bugs, or fecal spots.

If you see bites, it could warrant further investigation.

But understand that no one can tell what caused a bite.

It is not possible to tell a mosquito or flea bite from a bed bug bite, no matter what a doctor might tell you.

Slide 14: Signs of cockroaches

With cockroaches, you might see live bugs or their droppings in places they hang out, like in cupboards or under the sink.

Slide 15: Pest Prevention

Preventing pests is the most effective way to control them. It's more work, but prevention is a long-lasting solution.

Prevention has many benefits.
READ text on slide out loud.

Slide 16: Prevention—Understand what all pests need

To prevent pests, we need to understand what they need. Pests need access to a dwelling to cause problems, and their other needs are the same as for humans: food, water, & shelter.

Pests get in through holes and cracks, they come in on food from the grocery store, and we may bring them in on our personal belongings.

Visitors can bring in pests, and pests can move from one apartment to another through the walls and under doors.

Once inside, pests need the same things we do: food, water and shelter.

If we can reduce the access or curtail the availability of food, water, or shelter, we can make a big difference.

Slide 17: Deny access to the structure

Pests can get in through small holes, gaps, or cracks. We can reduce pest access by filling holes, putting doorsweeps at the bottom of doors, and putting screens on windows.

A door sweep is fastened to the bottom of a door to close the gap between the door and the floor.

Inspect items you bring into the house for pests like cockroaches or bed bugs.

Slide 18: Store food properly

Food should be stored properly: in the refrigerator, in plastic containers with tight-fitting lids, in glass jars.

Slide 19: Keep things clean

It's important to keep things clean. Spilled food or drinks and crumbs provide plenty of food for pests.

Slide 20: Wash sheets at least every 2 weeks

Sheets should be washed at least every 2 weeks and dried on "high".

READ bullet text on slide.

Slide 21: Remove food garbage

If cockroaches or ants are the problem, seal up food garbage overnight.

Night time is when cockroaches come out to feed, and night is when ants can discover leftover food when you're not around to clean up.

Be sure to remove garbage frequently and put in the outside trash can.

Slide 22: Remove food garbage

Mice and rats can chew through a garbage bag, so if they are the problem, remove food garbage every day before you go to bed.

Don't leave garbage outside of your trash cans, and make sure to close the lid.

You don't want to be feeding rodents at your garbage cans.

Slide 23: Water

Excess water in the home increases the humidity. This is an ideal environment for cockroaches, dust mites, and mold. Wet, decaying wood is very attractive to termites.

- Fix leaking pipes
- Open the window or turn on the fan when showering.

If the fan isn't working, it should be fixed.

Slide 24: Shelter

READ text on slide.

Then:

It also collects mouse urine & dust.

Slide 25: A team approach is necessary to solve pest problems.

A team is necessary to solve pest problems.

Pests like rodents, bed bugs, and cockroaches can make their way through the walls of an apartment building, so controlling them requires cooperation among tenants, landlords and pest management professionals.

Slide 26: Cooperative Roles in Pest Management

Everybody has a role in pest management.

These are the tenant's responsibilities.

READ bullet text on slide.

Slide 27: Cooperative Roles--Landlords

Landlords have responsibilities too. Some of them are written into law.

READ bullet text on slide.

Slide 28: Cooperative Roles—Landlords, cont.

(READ text on slide.)

Slide 29: Cooperative Roles—Pest Mgmt Professionals

READ 1st bullet.

Conducive conditions are things like holes around pipes, excessive moisture, or poor sanitation that encourage pests to take up residence.

READ remaining text on slide.

Slide 30: Benefits of Using Pest Management Professionals

And there are benefits to using professional.

READ bullet text on slide.

We recommend using professionals, but we do have tips for your clients that can help them if they own their home or if their landlord won't do anything to help them.

Slide 31: Special Tips for Bed Bugs

A clothes dryer will kill all stages of bed bugs: items that are dry should be tumbled for 15 minutes on high; wet items should be dried first and then tumbled an extra 15 minutes on high to make sure bugs are dead.

The Climbup Interceptor is a plastic dish that is rough on the outside, but very smooth and slippery on the inside. Bed bugs wander in to Climbup Interceptors -- there is no attractant or pesticide needed. Once they are in, they can't climb out.

You can place 3 or 4 in each room and check them after about 2 weeks to see if the apartment has bed bugs.

You can place them under the legs of a bed that has been thoroughly cleaned to protect the bed.

Climbup Interceptors are available from Amazon or can be ordered from Home Depot.

(Show audience examples of Climbups.)

Slide 32: Special Tips for Cockroaches

READ text on slide.

Slide 33: Special Tips for Rodents

READ text on slide.

Slide 34: Special Tips for Ants

READ text on slide.

So, are you noticing a pattern here? Don't leave food out, clean up, and take out the garbage!

Slide 35: Questions?

I'm going to pass out our resource sheet.

I'm happy to answer any questions, and you're welcome to come up and look at the products.

Attachment C.

- **Pesticide Use Reporting**

(See separate PDF for Contra Costa Operations Pesticide Use Data Spreadsheet)

Pesticide Use Reporting

(See separate PDF for Contra Costa County Operations Pesticide Use Data Spreadsheet)

History of Pesticide Use Reporting

Since the 1950s, the State of California has required at least some kind of pesticide use reporting, but in 1990, the comprehensive reporting program we have now went into effect.

California was the first state in the nation to require full reporting of all agricultural and governmental agency pesticide use. The current reporting system exempts home use pesticides and sanitizers, such as bleach, from reporting requirements. (Sanitizers are considered pesticides.)

What does “pesticide” mean?

The California Department of Pesticide Regulation (DPR) defines pesticide as “any substance or mixture of substances intended for preventing, destroying, repelling or mitigating insects, rodents, nematodes, fungi, weeds, or other pests. In California plant growth regulators, defoliants, and desiccants, as well as adjuvants, are also regulated as pesticides.”

“Adjuvants” increase pesticide efficacy and include emulsifiers, spreaders, foam suppressants, wetting agents, and other efficacy enhancers. In FY 16-17, Contra Costa County operations used a total of 4,709 lbs. of pesticide active ingredients, which included 2,322 lbs. of spray adjuvant active ingredients that were used to prevent foaming, to reduce pesticide drift, and change the pH of local water used in spraying.

How Pesticide Use is Reported to the State

Pesticide use data is reported monthly to the County Agriculture Commissioner. The data is checked and sent on to DPR, which maintains a database of pesticide use for the entire state. Although pesticide use is reported to DPR as pounds, ounces, or gallons of pesticide product, DPR reports pesticide use in its database as pounds of active ingredient.

DPR defines active ingredient as “[a]n agent in a product primarily responsible for the intended pesticidal effects and which is shown as an active ingredient on a pesticide label.” (Since adjuvants are regulated as pesticides in California, the active ingredients of adjuvants are also included in DPR’s database.)

How Pesticide Use is Reported by Contra Costa County Operations

The attached spreadsheet records pesticide use data only for County operations and not for any other agency, entity, company, or individual in the County.

Since DPR reports California pesticide use in pounds of active ingredient, Contra Costa County does the same. The County uses the same formula for converting gallons of pesticide product into pounds of active ingredient that the state uses:

Pounds of Active Ingredient =

gallons of product used X 8.33 lbs/gallon of water X the specific gravity of the product X the % of active ingredient in the product

PESTICIDES OF CONCERN ARE SHADED (Pesticide Action Network defined "Bad Actors")

Contra Costa County Public Works

	Name of Product Applied	EPA or Calif. Registration #	Amt Used FY 00-01	Specific Gravity	% A. I.	Total Lbs A.I. Used FY 00-01	Amt Used FY 12-13	Total Lbs A.I. Used 12-13	Amt Used FY 13-14	Total Lbs A.I. Used 13-14	Amt Used FY 14-15	Total Lbs A.I. Used 14-15	Amt Used FY 15-16	Total Lbs A.I. Used 15-16	Amt Used FY 16-17	Total Lbs A.I. Used 16-17
	Liquid Materials		(gallons)				(gallons)		(gallons)		(gallons)		(gallons)		(gallons)	
Adjuvant	Activator 90	36208-50014	613.88	1.040	90.000	4786.31										
Adjuvant	Agri-Dex	5905-50094-AA		0.879	99.000								84.75	614.34	49.5	358.82
Glyphosate, isopropylamine salt	AquaMaster	524-343	0.00	1.205	53.800		55.75	301.06	47.25	255.16	26.38	142.46				
	Chemtrol	36208-50015	14.00	0.995	1.000	1.16			8.50	0.70						
Penoxulam	Cleantraxx	62719-702-AA		1.177	0.850										1.5	0.13
Oxyfluorfen				1.177	40.310										1.5	5.93
Sodium salt of Imazxamox	Clearcast	241-437-AA-67690		1.049	12.100				5.00	5.29	3.50	3.70	3.31	3.50		
Copper ethanolamine complexes, mixed	Citrine Plus	8959-10-AA	65.00	1.206	9.000	58.78	7.50	6.78	5.00	4.52						
Dithiopyr	Dimension 2EW	62719-542-AA		1.001	24.000								0.31	0.62		
Indaziflam	Esplanade 200 SC	432-1516-AA		1.050	19.050		2.50	4.17	25.00	41.66	25.14	41.89	28.44	47.39	24.96	41.59
Prodiamine	Evade 4FL	34704-915-AA		1.184	40.500										21.25	84.88
Adjuvant	Foam Fighter F	36208-50015	1.25	0.995	5.000	0.52										
Dimethyl silicone fluid emulsion	Foam Fighter F	36208-50003, 72-50005-AA	0.00	1.000	10.000		0.88	0.73	0.63	0.52						
Triclopyr triethylamine salt	Garlon 3A	62719-37-ZA	64.00	1.135	44.400	268.66	240.13	1008.02	119.69	502.44	166.75	699.99	153.13	642.81	186.38	782.39
Triclopyr BEE	Garlon 4	62719-40	51.25	1.060	61.600	278.76	2.00	10.88	3.50	19.04						
Oxyfluorfen	Goal	707-174	2.00	0.990	19.400	3.20										0.00
Oxyfluorfen	Goal Tender	62719-447-ZA	0.00	1.170	41.000		0.50	2.00					13.38	53.47		
Imazapyr, isopropylamine salt	Habitat	241-426-AA	0.00	1.068	28.700		2.25	5.75	0.88	2.25	2.19	5.59	3.55	9.07	0.39	1.00
Heavy-range paraffin based petroleum oil+nonionic emulsifiers	Helena Agri-Dex	5905-50017-AA		0.879	99.000						2.00	14.50				
Aminopyralid, tri isopropanolamine salt	Milestone	62719-519-AA		1.140	40.600								4.75	18.31	14.06	54.21
Aminopyralid, tri isopropanolamine salt	Milestone VM	62719-537-AA	0.00	1.140	40.600		31.15	120.12	14.88	57.36	13.09	50.48	8.72	33.63		
Adjuvant	M.O.C. Methylated Oil Concentrate	5905-50095-AA		0.891	100.000								2.75	20.41	2.38	17.66
Adjuvant	MSO Conc w/Leci-Tech	34704-50053-AA		0.900	100.000						0.38	2.85				
Adjuvant	No Foam A	11656-50086-ZA & AA	0.00	1.050	90.000		291.00	2290.71	230.85	1817.22	209.00	1645.22	121.75	958.40		
Adjuvant	No Foam A	1050775-50015-AA		1.060	90.000								0.5	3.97	131.88	1048.03
Pendimethalin	Pendulum Aquacap	241-416-AA	0.00	1.175	38.700								5.00	18.94		
Imazapyr, isopropylamine salt	Polaris	228-534-AA		1.057	27.700		11.00	26.83	12.02	29.32			0.33	0.80		
Triclopyr TEA	Renovate 3	62719-37-67690	0.00	1.140	44.400		34.50	145.49	87.00	366.88	35.13	148.15	27.63	116.52	27.5	115.97
Glyphosate,	Rodeo	524-343	221.00	1.205	53.800	1193.46										
Glyphosate, isopropylamine salt	Roundup Custom	524-343-ZC & ZG		1.206	53.800						29.94	161.82	49.19	265.86	42.5	229.70
	Roundup Pro	524-475-ZA & ZB	510.75	1.170	41.000	2041.43					12.00	47.96	36.63	146.41		

	Contra Costa County Public Works (continued)															
	Name of Product Applied	EPA or Calif. Registration #	Amt Used FY 00-01	Specific Gravity	% A. I.	Total Lbs A.I. Used FY 00-01	Amt Used FY 12-13	Total Lbs A.I. Used 12-13	Amt Used FY 13-14	Total Lbs A.I. Used 13-14	Amt Used FY 14-15	Total Lbs A.I. Used 14-15	Amt Used FY 15-16	Total Lbs A.I. Used 15-16	Amt Used FY 16-17	Total Lbs A.I. Used 16-17
	Liquid Materials		(gallons)				(gallons)		(gallons)		(gallons)		(gallons)		(gallons)	
Glyphosate, isopropylamine salt	Roundup Pro Conc.	524-529	0.00	1.199	50.200		298.50	1496.00	273.16	1369.00	240.75	1206.57	238.63	1195.95	280.13	1403.93
Glyphosate, isopropylamine salt	Roundup Tough Weed Formula	239-2636		1.070	18.000		61.13	98.07								
Maleic hydrazide	Royal Slo Gro	400-94-AA		1.135	21.700		20.00	41.03								
Imazapyr, isopropylamine salt	Stalker	241-398	5.63	1.050	27.600	13.58										
Adjuvant	Silicone Super Wetter	17545-50029-AA		0.994	100.000				0.19	1.57						
Adjuvant	Silwet L-77	36208-50025	1.70	1.007	100.000	14.26	1.88	15.77								
Adjuvant	Smoke	5905-50104-AA		1.160	56.400										3.25	17.71
Oryzalin	Surflan A.S.	62719-113	14.25	1.188	40.400	56.97										
Oryzalin	Surflan A.S.	70506-44	0.00	1.236	40.400						12.00	49.92				
Adjuvant/Surfactant	Surphtac	68891-50001-AA	39.63	1.118	53.400	197.06										
Adjuvant/Surfactant	Surphtac	11656-50093	0.00	1.180	53.400		33.13	173.90	29.00	152.22	20.81	109.23	11.56	60.68		
Adjuvant/Surfactant	Surphtac	34704-50086		1.096	33.000								9.56	28.80	23.19	69.87
Clopyralid	Transline	62719-259	22.50	1.161	40.900	89.00										
Adjuvant	Unfoamer	34704-50062-AA		1.000	12.500						0.5	0.52	0.13	0.14		
	Vanquish	55947-46	230.00	1.250	56.800	1360.29										
Dicamba, diglycolamine salt	Vanquish	228-397	0.00	1.250	56.800		56.38	333.45	0.75	4.44	24.56	145.26	7.5	44.36		
	Weedar 64	71368-1-264	526.75	1.160	38.900	1979.96										
	Dry Materials	For dry materials: Ar	(pounds)						(pounds)		(pounds)		(pounds)		(pounds)	
Dithiopyr	Dimension Ultra 40 WP	62719-445	0.00	N/A	40.000								3.75	1.50		
	Direx 80DF	352-508-1812	2875.00	N/A	80.000	2300.00										
	Endurance	55947-43	1513.00	N/A	65.000	983.45										
Isoxaben	Gallery 75DF	62719-145	54.00	N/A	75.000	40.50	21.00	15.75	15.00	11.25	48.50	36.38				
	Gallery SC	62719-658 AA		N/A	45.450						13.00	5.91	452.50	205.66	60.00	27.27
Sulfometuron methyl	Oust	352-401	27.38	N/A	75.000	20.53										
	Oust XP	352-601		N/A	75.000		19.00	14.25	12.74	9.56						
	Predict	55947-78	495.00	N/A	78.600	389.07										
Prodiamine	ProClipse 65 WDG	228-434		N/A	65.000		690.00	448.50	48.00	31.20	383.00	248.95				
Prodiamine	Resolute 65WG	100-834-ZE		N/A	65.000								148.00	96.20	95.00	61.75
	Ronstar 50WSP	264-538	120.00	N/A	50.000	60.00										
	Simtrol 90DF	35915-12-60063	430.00	N/A	90.000	387.00										
Tebuthiuron	Spike 80DF	62719-107	60.00	N/A	80.000	48.00							24.00	19.20		
Chlorsulfuron	Telar DF	352-522-ZA		N/A	75.000						1.00	0.75				
Chlorsulfuron	Telar XP	352-654-AA		N/A	75.000		8.00	6.00	9.01	6.76	16.00	12.00	0.63	0.47		
Chlorsulfuron	Telar	352-404	25.38	N/A	75.000	19.031										
TOTAL:						16590.97		6565.25		4688.34		4780.08		4607.39		4320.83
"Bad Actors" w/May 2013 changes						5764.53		1340.19		1032.82		1020.03		779.00		898.36

Contra Costa County Public Works, Special Districts

Name of Product Applied		EPA or Calif. Reg #	Amt Used FY 07-08 & before	Specific Gravity	% A.I.	Total Lbs A.I. Used FY 07-08 & before			Amt Used FY 13-14	Total Lbs A.I. Used 13-14	Amt Used FY 14-15	Total Lbs A.I. Used 14-15	Amt Used FY 15-16	Total Lbs A.I. Used 15-16	Amt Used FY 16-17	Total Lbs A.I. Used 16-17
Dry Materials			(pounds)	t. used x % AI				(pounds)		(pounds)		(pounds)		(pounds)		
Diphacinone	Diphacinone Treated Grain Rodent Bait	10965-50001-ZA	no data	N/A	0.005	no data			45.00	0.00225	29.00	0.00145	1.00	0.00005	10.00	0.00050
Diphacinone	Eaton's Answer	56-57	no data	N/A	0.005	no data			39.00	0.00195	16.00	0.00080	17.00	0.00085	5.00	0.00025
Diphacinone	Eaton's Bait Blocks	56-42	no data	N/A	0.005	no data			4.00	0.00020	8.50	0.00043	9.50	0.00048	3.00	0.00015
Diphacinone	Gopher Getter Type 2 AG Bait	36029-23	no data	N/A	0.005	no data										
Diphacinone	Gopher Getter Type 2 AG Bait	36029-24	no data	N/A	0.005	no data										
Diphacinone	P.C.Q. Pelleted Rodent Bait	12455-50003-AA	no data	N/A	0.010	no data										
Aluminum phosphide	Weevil-cide	70506-13	no data	N/A	60.000	no data			2.65	1.59000						
TOTAL									1.594400			0.00268		0.00138		0.00090
TOTAL Oz.												0.04 oz		0.02		0.01
"Bad Actors" w/May 2013 changes									1.59			0.00		0.00		0.00

Contra Costa County Department of Agriculture

Gal. used x 8.33 lbs/gal H2O x sp. Grav. x %AI																
	Name of Product Applied	EPA or Calif. Registration #	Amt Used FY 00-01	Specific Gravity	% A. I.	Total Lbs A.I Used FY 00-01	Amt Used FY 12-13	Total Lbs A.I Used 12-13	Amt Used FY 13-14	Total Lbs A.I Used 13-14	Amt Used FY 14-15	Total Lbs A.I Used 14-15	Amt Used FY 15-16	Total Lbs A.I Used 15-16	Amt Used FY 16-17	Total Lbs A.I. Used 16-17
	Liquid Materials (gallons)						(gallons)		(gallons)		(gallons)		(gallons)		(gallons)	
glyphosate	Aquamaster	524-343		1.205	53.80		0.98	5.29	3.12	16.85						
Dicamba & 2.4 D	Barvel	55947-1	14.91	1.211	48.20	72.51										
	2,4-D	34704-5	5.50	1.163	46.50	24.78										
	Bivert	2935-50157-AA	0.93	0.790	100.00	6.12										
	Carbaryl ("7")	54705-4	7.95	1.100	41.20	30.01										
dicamba, diglycolamine salt	Clarity	7969-137	0.00	1.250	58.10		38.12	230.61	25.20	152.45	14.76	89.29	2.55	15.43	1.38	8.35
Triclopyr, butoxyethyl ester	Garlon 4 Ultra	62719-527		1.110	60.45								8.85	49.47	8.44	47.17
Triclopyr, butoxyethyl ester	Garlon 4	464-554	2.50	1.082	61.60	13.88										
imazapyr isopropylamine salt	Habitat	241-426	0.00	1.068	28.70	0.00	0.36	0.92	0.09	0.23						
surfactant	Hasten	2935-50160		0.900	100.00											
Drift retardant--oils	In Place	2935-50169		0.880	100.00		8.11	59.45	6.25	45.82	0.41	2.98				
Aminopyralid, trisopropanolammonium salt	Milestone	62719-519	0.00	1.140	40.60		5.58	21.52	6.27	24.18	3.13	12.07	0.98	3.78	0.62	2.39
surfactant	Pro-Tron	71058-50008-AA		0.984	95.00		17.69	137.75	21.30	165.86	4.93	38.39	0.11	0.86	1.11	8.64
Adjuvant	R-11	2935-50142-AA	51.00	1.020	90.00	389.99										
Glyphosate, isopropylamine salt	Rodeo	524-343	2.50	1.205	53.80	13.50										
Glyphosate, isopropylamine salt	Roundup Pro	524-475	69.14	1.170	41.00	276.35										
Glyphosate, isopropylamine salt	Roundup Pro Conc.	524-529		1.199	50.20		12.74	63.88	17.12	85.84	1.69	8.47	1.09	5.47		
imazapyr isopropylamine salt	Stalker	241-398		1.060	27.60		0.29	0.71			0.0004	0.001				
Picloram potassium salt	Tordon 22K	464-323	1.53	1.140	24.40	3.55										
Clopyralid, monoethanolamine salt	Transline	62719-259	70.28	1.161	40.90	277.99									0.01	0.04
dicamba, diglycolamine salt	Vanquish	55947-46	50.59	1.250	56.80	299.20										
	Dry Materials		(pounds)			Amt . Used x %A	(pounds)		(pounds)		(pounds)		(pounds)		(pounds)	
Diphacinone	Diphacinone .005%	10965-50001-ZA	725.00	N/A	0.005	0.04	1835.00	0.09	1335.00	0.07	260	0.013	731.00	0.03655	236.00	0.0118
Diphacinone	Diphacinone .01%	10965-50003-ZA	15667.30	N/A	0.01	1.57	27487.50	2.75	13055.50	1.31	27109	2.71	11888.50	1.18885	11389.00	1.1389
Sodium nitrate, charcoal	Gas Cartridge	56228-2	0.00	N/A	81.00		6.75	5.47								
Imidacloprid	Merit 75WSP	3125-439	13.58	N/A	75.00	10.19										
Chlorsulfuron	Telar	352-522	0.00	N/A	75.00		7.78	5.84	10.79	8.09	1.05	0.79				
Picloram potassium salt	Tordon 10K	464-320	8.56	N/A	11.60	0.99										
Aluminum phosphide	Weevil-cide	70506-13	0.00	N/A	60.00				0.50	0.30					0.66	0.396
					TOTAL:	1420.66		534.27		500.98		154.72		76.22		68.14
	"Bad Actors" w/May 2013 changes					131.84		5.84		8.39		0.79		0.00		0.40

Contra Costa County Public Works - Grounds

Gal. used x 8.33 lbs/gal H2O x sp. Grav. x %AI																
	Name of Product Applied	EPA or Calif. Registration #	Amt Used FY 00-01	Specific Gravity	% A. I.	Total Lbs A.I. Used FY 00-01	Amt Used FY 12-13	Total Lbs A.I. Used 12-13	Amt Used FY 13-14	Total Lbs A.I. Used 13-14	Amt Used FY 14-15	Total Lbs A.I. Used 14-15	Amt Used FY 15-16	Total Lbs A.I. Used 15-16	Amt Used FY 16-17	Total Lbs A.I. Used 16-17
	Liquid Materials (gallons)						(gallons)		(gallons)		(gallons)		(gallons)		(gallons)	
Clethodim	Arrow 2EC	66222-60		0.970	26.40								0.06	0.13	0.03	0.06
Adjuvant	Crop Oil (Monterey Herbicide Helper)	54705-50001-AA		0.900	100.00				0.08	0.60						
Fluazifop-P-butyl	Fusilade II	100-1084		0.980	24.50				0.05	0.10						
	Goal	707-174	12.09	0.990	19.40	19.34										
Adjuvant	Magnify	17545-50018		1.220	51.50		0.09	0.47			0.01	0.05				
	Maintain A	400-396-AA	0.00	1.000	0.30											
Adjuvant	No Foam A (Monterey)	54705-50004-AA		1.050	90.00				0.15	1.18	0.22	1.73	0.003	0.02	0.03	0.24
Adjuvant	No Foam A	1050775-50015-AA		1.050	90.00								0.0155	0.12		
	NuFarm Polaris	228-534-AA		1.057	27.70						0.04	0.10			0.08	0.20
Glyphosate isopropylamine salt	RangerPro	524-517-ZB		1.169	41.00								14.62	58.37		
	Roundup Pro	524-445-ZB	44.78	1.020	41.00	156.00										
Glyphosate isopropylamine salt	Roundup Pro Conc.	524-529	0.00	1.199	50.20		70.15	351.72	36.41	182.55					39.13	196.19
Glyphosate potassium salt	Roundup Promax	524-579		1.356	48.70				52.72	290.01	56.51	310.86	55.28	304.09	16.13	88.73
	Triclopyr 4EC	81927-11-AA		1.100	61.60		0.25	1.41			0.25	1.41				
Triclopyr BEE	Turflon	62719-258	0.36	1.060	61.60	1.96										
	Turflon Ester	17545-8-AA		1.08	60.45						0.003	0.02				
	Dry Materials															
			(pounds)		%AI		(pounds)		(pounds)		(pounds)		(pounds)		(pounds)	
Isoxaben	Gallery 75 DF	62719-145-AA	129.44	N/A	75.00	97.08	11.00	8.25	3.00	2.25	18.38	13.79	80.00	60.00	11.78	8.84
Dithiopyr	Dithiopyr 40 WSB	73220-13		N/A	0.125 lbs ai/5 oz		108.75 oz.	2.72			30 oz (6 bags)	0.75	5 oz (1 bag)	0.125		
Flumioxazin	Payload	59639-120-ZA		N/A	51.00				9.31	4.75	3.06	1.56	1.92	0.98	3.33	1.70
	Orthene	59639-88	0.69	N/A	75.00	0.52										
Sulfometuron methyl	Oust	352-401	5.13	N/A	75.00	3.85										
	Quali-Pro Dithiopyr	66222-213-AA		N/A	40.00										0.63	0.25
Oxadiazon	Ronstar WP	264-538	1297.25	N/A	50.00	648.63										
Halosulfuron methyl	Sedgehammer	81880-1-10163		N/A	75.00								0.007	0.005		
Halosulfuron methyl	Sedgehammer	81880-24-10163		N/A	5.00				2.00	0.10	0.03	0.0015	0.04	0.002		
Flumioxazin	SureGuard	59639-120		N/A	51.00		23.93	12.20	21.16	10.79	15.69	8.00	17.33	8.84	13.76	7.02
					TOTAL	927.37		376.77		492.33		338.26		432.68		303.22
	"Bad Actors" w/May 2013 changes					649.14		0.00		0.10		0.00		0.00		0.00

CCC Public Works - Facilities

	Name of Product Applied	EPA or Calif. Registration #	Amt Used FY 07-08	Specific Gravity	% A. I.	Total oz. A.I Used FY 07-08			Amt Used FY 13-14	Total OZ. A.I. Used 13-14	Amt Used FY 14-15	Total OZ. A.I. Used 14-15	Amt Used FY 15-16	Total OZ. A.I. Used 15-16	Amt Used FY 16-17	Total OZ. A.I. Used 16-17
	Liquid Materials		(fl. ounces)						(fl. oz.)	Oz. by Wt.	(fl. oz.)	Oz. by Wt.	(fl. Oz.)	Oz. by Wt.	(fl. Oz.)	Oz. by Wt.
Indoxacarb	Advion Ant Bait Arena	100-1485		1.09	0.10								252 ea (Net wt of Arena is 0.07 oz)	0.02	112 ea (Net wt of Arena is 0.07 oz)	0.00889
Indoxacarb	Advion Ant Gel	100-1498		1.2	0.05								143.67	0.08965	202.70	0.12648
Indoxacarb	Advion Cockroach Bait Arena	100-1486		1.09	0.50								41 ea (Net wt of Arena is 0.07 oz)	0.01627	10 ea (Net wt of Arena is 0.07 oz)	0.00397
Indoxacarb	Advion Cockroach Gel Bait	100-1484		1.123	0.60								14.61	0.10238	60.10	0.42115
Chlorantraniliprole	Altriset	100-1503		1.094	18.4						2.00	0.419				
Chlorantraniliprole	Altriset (DuPont)	352-829		1.094	18.4										7.00	1.46543
Abamectin	Avert Cockroach Bait Station	499-467		1.065	0.05										2 ea (Net wt of Station is 0.52 oz)	0.00058
Cedar oil	Best Yet Insect Control Solution	Exempt 25b material		1.00	10.00						128.00	12.800	16.00	1.66400	76.00	7.90400
Cedar oil	Cedarcide PCO Choice Concentrate	Exempt 25b material		1.00	85.00								10.00	8.84000	5.08	4.49072
White pepper, mineral oil	DeTour for Rodents	Exempt		0.864	3.00						166.00	4.475			8	0.21565
Sodium Tetraborate decahydrate	Doninant Liquid Ant Bait	64405-24		1	1.00										20.00	0.20800
Oil of black pepper	Havahart Critter Ridder	50932-10			0.48			804.00	3.8592	624	2.9952	458	2.1984	1371		6.5808
Sodium Tetraborate Decahydrate (Borax	Intice Thiquid Ant Bait	73079-7		1.33	1.00			3128.00	43.26650	3554.00	49.159				1952.3	27.00421
Fipronil	Maxforce Ant KillerBait Gel	64248-21		1.05	0.00										1.12	0.00001
Fipronil	Maxforce FC Magnum			1.14	0.05										1.05	0.00062
Imidacloprid	Maxforce Quantum Ant Bait	432-1506		1.43	0.03						27.90	0.012	31.71	0.01415	20.2	0.00901
Methyl Ethoxy Pyridine	Nyguard IGR Concentrate	1021-1603		0.939	10.00										0.6	0.05859
Methyl Ethoxy Pyridine	Nylar (Archer)	100-1111		0.847	1.30										3	0.03435
sodium lauryl sulfate	Oh Yeah	Exempt		1	7.00			1072.00	78.04160	2222	161.762	78	5.67840	865.5	63.00840	
coyote & fox urine	Shake Away: Fox/Coyote	80917-5		2.70	5.00										5.00	0.70200
Imidacloprid	Temprid Ready Spray Insecticide	432-1527		1.00	0.05										10.00	0.00520
Cyfluthrin				1.00	0.03										10.00	0.00260
Fipronil	Termidor SC (termites)	7969-210		1.06	9.10										3.20	0.32102
Sodium Tetraborate Decahydrate (Borax	Terro PCO Bait stations	149-8-64405		1.00	5.40					135-0.36 oz stations		2.6244	170-0.36 oz stations	3.43699	149-0.36 oz stations	3.01242
Sodium Tetraborate Decahydrate (Borax	Terro PCO Liquid Ant Bait	149-8-64405		1.00	5.40										19.44	1.09175

CCC Public Works - Facilities, cont.

	Name of Product Applied	EPA or Calif. Registration #	Amt Used FY 07-08	Specific Gravity	% A. I.	Total oz. A.I Used FY 07-08			Amt Used FY 13-14	Tot. oz. A.I. by wt. Used 13-14	Amt Used FY 14-15	Tot. oz. A.I. by wt. Used 14-15	Amt Used FY 15-16	Tot. oz. A.I. by wt. Used 15-16	Amt Used FY 16-17	Tot. oz. A.I. by wt. Used 16-17
	<i>Dry Materials</i>		(ounces)						OZ. by Wt.		OZ. by Wt.		OZ. by Wt.		OZ. by Wt.	
Dinotefuran	Alpine Dust	499-527			0.25										0.11	0.0003
Diatomaceous earth					95.00										0.11	0.1045
Incoxacarb	Advion Insect Granule	352-651			0.22										9.64	0.0212
Amorphous silica gel	Cimexa	73079-12			100.00										5.12	5.1200
Amorphous silicon dioxide	Concern Diatomaceous Earth	73729-1-50932			85.00						0.23	0.1955	0.79	0.6715	1.29	1.0965
Orthoboric acid	Niban FG/Mother Earth Granules	64405-2 499-515	3813.7600		5.00	190.69			375.00	18.75	3144.5	157.225	6038.5	301.925	2886.5	144.3250
OZ of A.I						335.55			159.638		393.414		485.859		267.343	
LBs of A.I.						20.97			9.98		24.59		30.37		16.71	
OZ of BA						0.41			0.00		0.00		0.0582		0.0006	

**Contra Costa County Staff Responses to Issues Raised by the Public
Regarding the County Integrated Pest Management Program**

November 29January 27, 2017

Date(s) Issue Raised to: TWIC = Transportation, Water & Infrastructure Committee IPM = IPM Committee or subcommittees IO=Internal Operations Committee	Issues Raised by the Public	Steps taken by the IPM Advisory Committee and County Staff from January 2009 to the present
	Using glue boards for rodents in County buildings	
11/16/16-IPM <u>3/16/17-IPM</u>	<i>From Parents for a Safer Environment (PfSE)</i> "The rodent control method that is horrible in particular is the use of glue boards in the county buildings. I hope to see this deplorable practice stop before the beginning of the NewYear. (11/16/16)	Pestec, the County's structural IPM contractor, used a small number of glue boards in 2016. In the past, glue boards have been used from time to time in detention facilities at the request of the Sheriff who is concerned that snap traps, the alternative, could be used by inmates as weapons. Pestec now has access to the interior space between the walls of cells where mice can roam, so technicians are able to set snap traps in those areas. Glue boards are not currently used at any other facilities in the County. The County will keep glue boards as a tool for rodent control that will be used when there is no effective alternative.
	Chairing the IPM Committee should be rotated; a scribe not associated with the Committee should be used to take notes	
2/17/16-IPM	<i>From Parents for a Safer Environment (PfSE)</i> "Chairing the IPM Advisory Committee should be rotated among members who wish to chair. A Scribe should be independent of Committee members and staff involved with the IPM Program."	<ul style="list-style-type: none"> • Every 2 years the Committee holds an election for officers. Anyone who wishes to chair the committee can nominate themselves. • The Committee elects a secretary to help take notes for the Committee's minutes which are written by staff. There is no outside person who could be a scribe.
	Staff has found no unique or innovative pesticide alternatives in the Bay Area or Nation	
11/4/15-IPM 2/17/16-IPM	<i>From Parents for a Safer Environment (PfSE)</i> "In the staff document provided titled 2015 IPM Program Accomplishments, I was very surprised to read that staff believes after reviewing programs throughout the 'Bay Area and the nation', that 'there is nothing unique or innovative in the Bay Area or the nation.'"	<ul style="list-style-type: none"> • PfSE appears to be concerned that staff has found no unique or innovative approaches to pest management. This concern seems to stem from a mis- reading of the 2015 IPM Program Accomplishments document in the section on the work history of the IPM Program Data Management subcommittee. The phrase actually reads: "Looked for data other than pesticide use to measure implementation of IPM in CCC; found nothing unique or innovative in the Bay Area or the nation"
	The IPM Coordinator does not allow the IPM Committee members and the public adequate time to review documents	
9/2/15-IPM	<i>From Parents for a Safer Environment (PfSE)</i>	<ul style="list-style-type: none"> • The IPM Coordinator sends out agenda materials in accordance with the Brown Act and County policy, which is 96 hours prior to the time of the public meeting.

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	<p>"People are often reluctant to admit that they have not had time to review documents before voting on minutes and other items. Committee members are likely to just go along with the majority and vote to accept documents as Staff submits them...It is more reasonable to provide at least four to six weeks of time for volunteers to fit in the review amongst a busy schedule." (9/2/15)</p> <p>"...I find it appalling that Staff would propose to totally eliminate the By-Laws language that requires a timely distribution of the meeting minutes to the IPM Advisory Committee. It has been difficult to read all the documents required for review within 5 days [from when] they are provided, which is a recent improvement to providing it 3 days prior to meetings that was practiced before my letter earlier this year...The By-Laws currently states that minutes be distributed 1 week after the meeting...I believe it's reasonable to amend [the by-laws] to distributing the materials within 2 weeks after the meeting to give staff time to prepare the meeting minutes, but eliminating this important timeline is not acceptable to the community." (9/2/15)</p>	<ul style="list-style-type: none"> • At the end of each meeting, the next meeting's agenda is planned so that members are aware of and can plan time for review of long or numerous documents. • Since the inception of the IPM Advisory Committee, the practice has been to distribute the minutes with the agenda materials. Because the by-laws were being updated to reflect the current designations for IPM Committee seats and to change public member terms, the IPM Coordinator proposed changing the by-laws to reflect the current practice regarding distribution of the minutes. On 9/2/15 the IPM Committee members discussed these by-laws changes and heard comment from the public on the issue. The Committee voted to unanimously approve all the by-laws changes. The changes were approved by the full Board of Supervisors.
	IPM subcommittees should focus on pesticide use and not on bed bugs or removing turf	
2/16/15-IPM 2/17/15-IPM 2/20/15-IPM 3/2/15-TWIC 3/4/15-IPM 5/6/15-IPM 8/6/15-IPM 9/2/15-IPM 11/4/15-IPM	<p><i>From Parents for a Safer Environment (PfSE)</i></p> <p>Issue of the subcommittees working on bed bugs, a community problem, rather than County-only pesticide issues and working on turf removal around buildings rather than on pesticide use in rights-of-way</p>	<ul style="list-style-type: none"> • Bed bugs affect 1000s of Contra Costa residents, both in municipalities and the unincorporated areas of the County. In order to get relief, desperate citizens are using many different kinds of pesticides in the home, throughout the bedroom, and often on the bedding itself. Reports indicate that frequently pesticides are used to excess and in a manner contrary to the labeled directions. This intimate contact with, and misuse of, pesticides is very troubling. This is a serious issue of pesticide exposure and contamination as well as an issue of the well-being of Contra Costa residents that the County has an obligation to address. • There are also bed bug issues that need to be addressed in County buildings. Staff and buildings are vulnerable where the public goes in and out of offices frequently and in large numbers. Staff and supervisors need training in identifying risks, actual infestations, and opportunities for prevention. • Converting turf to drought-tolerant landscaping accomplishes several things: <ul style="list-style-type: none"> ◦ Saves millions of gallons of water in this time of serious drought.

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		<ul style="list-style-type: none"> o Reduces the need for weed control and thus for herbicides. The limited irrigation and wood chip mulch between the drought-tolerant plants is not conducive to weed growth. Few weeds sprout in the dry soil under the mulch, and those that do sprout can often be hand-pulled. o Addresses herbicide use near buildings, which is where people have the greatest chance of being exposed to these pesticides. o Reduces maintenance hours because turf is a high maintenance plant. o Frees Grounds maintenance staff to better manage other landscapes and continue to reduce their use of pesticide. o Reduces the amount of electricity used to pump water, the amount of gas used in lawn mowers and trimmers and in trucks to travel to and from sites for maintenance, and reduces the amount of pesticide and fertilizer used in maintaining the turf. This reduces greenhouse gas emissions. o Demonstrates that the County is a leader in landscaping more wisely for the arid climate in which we live.
	County not tracking pesticide use separately for Public Works rights-of-way/roadsides, flood control channels, and County-owned parcels	
3/2/15-IPM 8/26/15-Email 3/16/16-IPM	<i>From Parents for a Safer Environment (PfSE):</i> "We do not see any good reason why pesticide usage is not being provided to the community for each roadside and flood control program." (3/2/15)	<ul style="list-style-type: none"> • The County has always tracked pesticide use separately for roadsides, flood control channels, and County-owned parcels, but because of a recent change in the way the Department reported pesticide use to the State of California, the state Pesticide Use Reports for FY 12-13 and FY 13-14 were not separated. The database that Public Works uses to track pesticide use cannot produce reports for PfSE that are user friendly since the database was never intended to be a pesticide use reporting tool. As a courtesy to PfSE, the Department has resumed separating pesticide use for the 3 programs when it reports to the state. These Pesticide Use Reports have been provided to PfSE for FY 14-15.
	Report the total amount of pesticide used not just the active ingredients	
8/26/15-Email 11/4/15-IPM	<i>From Parents for a Safer Environment (PfSE):</i> "Report total amount, not just the active ingredients of pesticides used in usage spreadsheet"	<ul style="list-style-type: none"> • In the spread sheet prepared by the IPM Coordinator every year for pesticide use by County operations, the total amount of pesticide product used is recorded as well as the total amount of pesticide active ingredient used for each product. • The California Department of Pesticide Regulation reports pesticide use for the state in pounds of active ingredient. The County has adopted this system so that pesticide use reporting is aligned with the state. But as noted above, the County spreadsheet also records total pounds or gallons of pesticide product used. • The spreadsheet is posted on the IPM website and attached to the annual report.
	Corrections to the minutes of the IPM Advisory Committee or its subcommittees requested by PfSE	
5/6/15-IPM 6/9/15-IPM 8/6/15-IPM 7/20/16-IPM	<i>From Parents for a Safer Environment (PfSE)</i> Issue of PfSE requesting changes to the minutes and then changes are not made	<ul style="list-style-type: none"> • The IPM Committee members vote on whether or not to make corrections to the minutes. The members do not always vote to make PfSE's corrections, additions, and changes. The IPM Coordinator includes written changes from PfSE (as well as other public comment) as attachments to the official record of the meeting. The official agenda, minutes, public comment, and other attachments are posted on the IPM website.

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	The herbicide Roundup (active ingredient glyphosate) has been designated as a probable human carcinogen by the World Health Organization's International Agency for Research on Cancer (IARC)	
6/9/15-IPM 7/8/15-IPM 8/6/15-IPM 9/2/15-IPM <u>7/20/17-IPM</u> <u>11/16/17-IPM</u>	<i>From Parents for a Safer Environment (PfSE):</i> "Considering that RoundUp products with the active ingredient, glyphosate, is [sic] being applied at the rate of nearly 1,000 lbs annually in the Grounds Program alone, and that glyphosate has been listed as a Probable Human Carcinogen by the World Health Organization earlier this year, are there any plans by the county to eliminate this risky chemical to reduce exposure to the community and wildlife?"	<ul style="list-style-type: none"> • <u>In 2015, The IPM Coordinator has been attending</u> meetings in San Francisco with IPM coordinators and city and county staff from around the Bay to discuss the Roundup issue. At this point we do not have a less hazardous product with equivalent efficacy to replace Roundup, but we continue to look for one. The Grounds Division uses Roundup as a spot treatment and uses a little as necessary. In FY 14-15 the Grounds Division used 311 lbs. of glyphosate, the active ingredient in Roundup. • The most serious risk of exposure to Roundup is to the applicator because that person is in close contact with the material, sometimes daily. The law and the County require applicators to wear personal protective equipment and to be trained annually to prevent exposure. In light of the new probable carcinogen designation, the County is looking at whether there are additional precautions that should be taken to protect workers. • IARC identifies the potential for a chemical to cause cancer but does not quantify any increased risk to people from a chemical so designated nor does it recommend a safe level of exposure. Those designations are left up to regulatory agencies around the world. The County is waiting for the USEPA to complete its review of glyphosate. • <u>On 11/12/15, the European Food Safety Authority ruled that glyphosate probably does not cause cancer in humans despite IARC's findings.</u> • <u>In March 2017, the Australian government's Pesticides and Veterinary Medicines Authority (APVMA) produced its Final Regulatory Position on whether to conduct a formal reconsideration of the chemical glyphosate. They stated that "[b]ased on this nomination assessment, the APVMA concludes that the scientific weight-of-evidence indicates that: exposure to glyphosate does not pose a carcinogenic or genotoxic risk to humans."</u> • <u>In April 2017, Health Canada released the following statement, "Following a rigorous science-based assessment, Health Canada has determined that when used according to the label, products containing glyphosate are not a concern to human health and the environment."</u> • <u>The County is still waiting for the final risk assessment from the USEPA.</u> • <u>In November 2017, researchers updated the Agricultural Health Study, which is a 20-year study of the effects of glyphosate on over 54,000 licensed pesticide applicators from North Carolina and Iowa. They found no statistically significant associations with glyphosate use and cancer in any part of the body. However, among applicators in the highest exposure quartile, there was an increased risk of acute myeloid leukemia compared with those who had never used glyphosate, though this association was not statistically significant. The researchers noted that this association requires confirmation.</u>
	Questions posed during public comment for items not on the agenda are not answered by the IPM Committee	
8/6/15-IPM 7/20/16-IPM 9/21/16-IPM	<i>From Parents for a Safer Environment (PfSE):</i> "...please allow ample time for answering and discussing these 6	<ul style="list-style-type: none"> • The IPM Committee does not take up and discuss issues that are not on the published agenda for the meeting as this would be a violation of the Brown Act. • Members of the Committee can request to have public concerns put on the

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3/16/17-IPM	questions as listed in order of priority at the next meeting agenda. Community members have been waiting patiently since last year for most of these questions to be addressed."	agenda for a future meeting.
IPM Committee members should RSVP for each meeting		
6/9/15-IPM 7/8/15-IPM 8/6/15-IPM 11/16/17-IPM	<i>From Parents for a Safer Environment (PfSE):</i> "I attended the April 14, 2015 meeting when we waited for over 30 minutes for staff and community members on the [Weed sub] Committee to arrive to no avail. Staff had to regretfully cancel the meeting due to lack of a quorum. ...consider asking for a heads-up from committee members if they cannot attend a future IPM meeting." (6/9/15 and 7/8/15) "Would the county request Committee members to provide in writing, anticipation of absenteeism so that those who arrive at meetings are not waiting for an hour only for the meeting to be cancelled due to lack of a quorum." (8/6/15)	<ul style="list-style-type: none"> • IPM Committee members alert the IPM Coordinator when they know they will be late or will be missing a meeting of either the full committee or a subcommittee. Unfortunately, unexpected circumstances do arise from time to time. • The Weed subcommittee meeting on April 14, 2015 was the first meeting of the full IPM Committee or any of its subcommittees that had to be cancelled for lack of a quorum since the IPM Advisory Committee was formed in 2010.
Quorums have been disregarded in previous subcommittee meetings		
6/9/15-IPM 7/8/15-IPM	<i>From Parents for a Safer Environment (PfSE):</i> "According to Shirley Shelangoski who had attended all subcommittees between 2012-2014, quorums were <i>not</i> considered in subcommittees until the recent year. Before, subcommittee meetings were held regardless of a lack of quorum."	<ul style="list-style-type: none"> • All subcommittees consider whether or not there is a quorum before proceeding with a meeting. Attendance is tracked in each set of minutes.
Absences on the IPM Committee		
8/6/15-IPM 8/26/15 Email	<i>From Parents for a Safer Environment (PfSE):</i> "Will the county track absenteeism and provide the data annually so	<ul style="list-style-type: none"> • Absences are tracked in the minutes of every meeting of the full IPM Committee and each of its subcommittees. Attendance at meetings is reported annually to the Board of Supervisors.

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	<p>that those who missed more than two in a given year be considered for removal from membership as stated in the By-Laws?"</p>	
Pesticide Use around the Hazardous Materials Office and Co. Admin Bldg in Martinez		
<p>2/20/15-IPM 8/615-IPM 2/17/16-IPM 11/16/16-IPM</p>	<p><i>From Parents for a Safer Environment (PfSE)</i> Issue of members of PfSE observing pesticide use around the Hazardous Materials Office at 4585 Pacheco Blvd. in Martinez without posting "Currently, pesticides are used outside the auspices of the County IPM program in many buildings, including the Hazardous Materials building and the County Administration building." (2/17/16)</p>	<ul style="list-style-type: none"> • The Hazardous Materials Program rents space from ERRG, a company that occupies the top floor of the building. They and not the County are responsible for maintaining the building and the property. • The County's posting policy does not require private owners of buildings to post their pesticide use. • On 8/6/15, PfSE videoed a Clark Pest Control technician spraying around the building at 4585 Pacheco Blvd. Clark, the contractor for ERRG, was using a pesticide called indoxacarb for ants that had been invading the building, particularly the top floor. Indoxacarb is listed as a "reduced risk" pesticide by the USEPA and is used by Pestec, the County contractor, in baits for cockroaches and ants. Hazardous Materials staff who experienced ant problems were educated by the IPM Coordinator, all food debris was removed, and boric acid baits were used in the two Hazardous Materials offices with ants trailing through. • No pesticides are being used in or around the County Administration building at 651 Pine Street that are not applied by Pestec, the County contractor, as part of the County IPM program. We are not aware of any pesticides being used at other County buildings that are not applied by Pestec. If PfSE has specific evidence of this happening, we would gladly investigate.
IPM Contract Language and reviewing contracts		
<p>11/6/13-IPM 12/5/13-TWIC 2/26/14-IPM 3/5/14-IPM 3/6/14-TWIC 8/26/15-Email 2/17/16-IPM 9/15/16-IPM</p>	<p><i>From Parents for a Safer Environment (PfSE):</i> "the county still does not have IPM language in its contracts with pest control contractors" "Contractors conducting pest control should be evaluated annually by the IPM Advisory Committee and contracts bid upon and assessed for a strong IPM track record." (2/17/16) "The Public Works Dept's Special District currently has on its payroll, a contractor who did not have to bid with IPM experience as a criteria and uses only rodenticides, including 2nd generation [sic] in public parks." (2/17/16)</p>	<ul style="list-style-type: none"> • 2009: the IPM Coordinator and County staff added IPM language to the contract for pest management in & around Co. buildings. The contractor emphasizes education, sanitation, and pest proofing as primary solutions. Insecticides, mainly in the form of baits, are used as a last resort. For the control of rats and mice in and around County buildings, the County only uses sanitation, education, and trapping. • Special Districts currently hires only 1 contractor for pest control. He is employed by means of a purchase order, which is not an appropriate vehicle for IPM contract language; however, <ul style="list-style-type: none"> ○ as a condition of his employment, he is required to abide by the Public Works "Landscape Design, Construction, and Maintenance Standards and Guidelines"¹ which contain language outlining the IPM approach. This also applies to any other contractor hired by Special Districts. ○ this has been explained to PfSE several times. • Spring 2012: to reinforce the IPM standards, the Special Districts Manager sent a letter to each Special Districts' contractor detailing the IPM approach expected of them. This is an on-going practice and any new contractors will receive the same

¹ <http://www.co.contra-costa.ca.us/index.aspx?nid=2147>

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	<p>Concerns about the letter from Special Districts to its contractors explaining the IPM approach expected of them. (9/15/16)</p>	<p>letter to emphasize the County's IPM principles.</p> <ul style="list-style-type: none"> On 11/28/12, Susan JunFish asked for Special Districts contracts and purchase orders; on 11/29/12 the IPM Coordinator sent her the contracts, purchase orders, and letters mentioned above that were sent out by Special Districts. On 2/14/13, Susan JunFish asked again for copies of the letters and was sent them on 2/15/13. The Grounds Division occasionally hires a contractor to apply pesticides that the Division does not have staff or equipment to apply itself. The IPM Coordinator considers that these contracts or purchase orders do not require IPM language because the contractor is hired for a specific pesticide application and not to perform IPM services or make any IPM decisions. In these cases the Grounds Division has already gone through the IPM decision making process and has decided the specific work ordered is appropriate. Reviewing contracts has not been in the purview of the IPM Advisory Committee. The 1 contractor hired by Special Districts for pest control (see also the 2nd bullet, above) uses mostly trapping for vertebrate pests. In FY 15-16, he used 0.02ounces of the rodenticide active ingredient diphacinone (a 1st generation anticoagulant). He does not use any 2nd generation anticoagulants. Since the IPM Program began reporting data on pesticide use in Special Districts in FY 08-09, no 2nd generation anticoagulants have been used. The concerns expressed by Susan JunFish on 9/15/16 about the clarity and detail of the letter to contractors are valid and the Decision-Making subcommittee will take up these concerns.
Unprofessional Behavior by County Staff		
<p>11/6/13-IPM 11/13/13-IO 12/5/13-TWIC 2/26/14-IPM 3/5/14-IPM 3/6/14-TWIC</p>	<p><i>From Parents for a Safer Environment (PfSE):</i> "serious pattern of hostile and unprofessional treatment to the community by County staff" "continued name-calling, shouting, and put-downs by county staff and Committee members at IPM meetings" "require staff to take training in order to learn how to work productively in public meetings"</p>	<ul style="list-style-type: none"> Staff disagree with the assertions that staff have been hostile or unprofessional toward members of PfSE or that staff have engaged in name-calling, shouting, or put-downs in any committee meetings. However, without reference to specific incidents on specific dates, it is impossible for staff to respond in detail. Members of the public have always had ample opportunity (within defined limits) to participate in all aspects of IPM Committee meetings. Starting in 2014, IPM full committee and subcommittee meetings will strictly adhere to the Ground Rules adopted unanimously by the IPM Committee on May 5, 2010. The IPM Coordinator will distribute Committee Ground Rules with each agenda packet. This will make public participation more fair and prevent one or a few individuals from dominating public comment. This course of action should limit the potential opportunities for improper discourse.
Make Audio and/or Video Recordings of IPM Committee Meetings		
<p>3/6/14-TWIC 3/2/15-TWIC 2/17/16-IPM</p>	<p><i>From Parents for a Safer Environment (PfSE):</i> "record meetings with a camcorder" "The Community requested to have IPM related meetings recorded to achieve accurate meeting minutes"</p>	<ul style="list-style-type: none"> Vince Guise, Agricultural Commissioner in 2013, suggested that meetings be audio recorded (no video). The issue may be taken up at a future IPM Committee meeting. No other advisory bodies video or audio record their meetings. If the public wishes to record meetings, they may do so and should announce their intention at the beginning of the meeting. It appears that PfSE is recording all IPM Committee meetings on a laptop, so they

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	that reflect what actually happened at the meetings and to encourage professional behavior."	will be able to reference those recordings if need be.
Intimidation of a member of Parents for a Safer Environment by the IPM Coordinator		
2/12/14-TWIC 3/5/14-IPM 3/6/14-TWIC 2/17/16-IPM	<i>From Parents for a Safer Environment (PfSE):</i> "we ask that in the future, [County] staff not contact the community and pressure them to retract their public comments"	On November 13, 2013, Margaret Lynwood submitted a written public comment to the Internal Operations Committee. In the comment, she stated that she had "been attending pesticide related meetings and [had] discovered a serious pattern of hostile and unprofessional treatment to the community by county staff." Since Ms. Lynwood did not provide specific details, and the IPM coordinator had no record of her attending and did not remember seeing her in the last 4 years at any IPM Committee or subcommittee meetings, but only at TWIC and IO meetings, she contacted Ms. Lynwood by phone to understand her concerns and ask her if she felt that County Supervisors or other staff in TWIC or IO meetings had exhibited unprofessional behavior. She said, "No," and was unable to cite a specific instance when she had witnessed such behavior. The IPM Coordinator did not ask her to retract her public comment.
Use of Pre-Emergent Herbicides		
11/6/13-IPM 12/5/13-TWIC	<i>From Parents for a Safer Environment (PfSE):</i> "The Community wants to be assured that the Public Works Dept does not use pesticides along the Flood Control District that has [sic] residual activity before a forecasted rainstorm."	This is an issue about pre-emergent herbicides and was discussed in a subcommittee meeting on 10/29/13 and again in the Advisory Committee meeting on 11/6/13. Both meetings were attended by both Susan JunFish and Shirley Shelangoski of PfSE. The following points were made: <ul style="list-style-type: none"> • Pre-emergent herbicides have residual activity by design because they are meant to prevent the germination of weeds over an extended period of time, sometimes a number of weeks. • Pre-emergent herbicides are used by Public Works as part of their herbicide rotation program to prevent the development of herbicide-resistant weeds. Herbicide rotation is one of a number of best practices strongly recommended by the University of California and many other researchers to prevent herbicide resistance². Creating herbicide-resistant weeds is considered an extremely serious problem by weed scientists throughout the world. • Pre-emergent herbicides are not applied on flood control channel banks; they are used on flood control access roads above the banks. • Pre-emergent herbicides need irrigation or rainfall shortly after their application, typically within a few days to several weeks, to carry them shallowly into the soil where they become active. Because there is no irrigation on flood control access roads, pre-emergent herbicides must be applied prior to a rain event. • The Department follows all label requirements for the application of pre-emergent herbicides (and all other herbicides). Note that a pesticide label is <u>law</u> and must be strictly followed.

² 2012. Norsworthy, Jason K., et al. Reducing the Risks of Herbicide Resistance: Best Management Practices and Recommendations. *Weed Science* 2012 Special Issue:31-62.

2000. Prather, Timothy S., J.M. DiTomaso, and J.S. Holt. Herbicide Resistance: Definition and Management Strategies. University of California, Division of Agriculture and Natural Resources Publication #8012. 14 pp.

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		<ul style="list-style-type: none"> The use of pre-emergent herbicides can reduce the total amount of herbicide needed to control weeds in the County because it takes a smaller amount of pre-emergent herbicide to control weeds in an area than it would using a post-emergent herbicide.
	Use of Garlon 3A® (triclopyr) herbicide on flood control channel slopes without considering its half-life	
3/5/14-IPM 3/6/14-TWIC 8/26/15-Email	<i>From Parents for a Safer Environment (PfSE):</i> “We want the Public works Department to consider the residual activity (or half-life) of pesticides prior to application. Particularly along the Flood Control District before a forecasted rain that can wash pesticides into the channels and contaminate the water that flows to the Bays”	<ul style="list-style-type: none"> Staff has reviewed EPA documents for triclopyr reregistration; information on triclopyr in the Nature Conservancy’s <i>Weed Control Methods Handbook</i>; information on triclopyr in the Weed Science Society of America’s <i>Herbicide Handbook</i>; and the CA Department of Pesticide Regulation’s “Environmental Fate of Triclopyr” (January 1997); and has found that triclopyr: <ul style="list-style-type: none"> Is practically non-toxic to birds, fish, and crustaceans Is of very low toxicity to mammals and is rapidly absorbed and then rapidly excreted by the kidneys, primarily in unmetabolized form Has an average half-life in soil of 30 days (considered short persistence) Would have little toxicological hazard to fish and wildlife as currently used in forestry (CCC’s use is similar, although the County uses less product per acre than studies cited) Has a low K_{oc}, which indicates mobility in soil; however, studies show that triclopyr is only somewhat prone to lateral movement and is practically not prone to vertical movement. In addition, triclopyr is fairly immobile in the sub-surface flow. Could be used without harm to nearby streams in forestry applications if buffer zones are used around streams and ephemeral drainage routes. CCC Public Works Vegetation Management uses Garlon 3A as follows: <ul style="list-style-type: none"> Garlon 3A is a broadleaf contact herbicide with no pre-emergent qualities. It does not kill grasses, so it is often used with Roundup (glyphosate), which does kill grasses. Generally Garlon 3A is not used during the rainy season. It is used on roadsides, flood control channel slopes, and flood control channel access roads. On flood control channel slopes, Garlon 3A is sprayed down the slope no further than the toe of the slope. Flood control channels are trapezoidal in cross section, and the toe of the slope is where the slope meets the flat part of the channel. Depending on the site, the water in the channel is from 10-50 ft. from the toe. If there is a chance of the herbicide getting into the water, Public Works uses Renovate 3, which has the same active ingredient (triclopyr), but is labeled for aquatic use.
	Posting for pesticide use	
11/6/13-IPM 12/5/13-TWIC 2/20/14-IPM 2/24/14-IPM	<i>From Parents for a Safer Environment (PfSE):</i> “The county staff are still not posting when applying pesticide in parks, along hiking trails, major	<ul style="list-style-type: none"> In 2009 the Departments developed a pesticide use posting policy. The policy does not require posting in “rights-of-way or other areas that the general public does not use for recreation or pedestrian purposes”. The CCC posting policy, including the provision mentioned above, is consistent with, and very similar to the posting policies of Santa Clara and Marin Counties

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2/26/14-IPM 3/5/14-IPM 3/6/14-TWIC 4/2/14-IPM 12/4/14-TWIC 2/17/15-IPM 3/2/15-TWIC 8/26/15-Email 11/4/15-IPM 2/17/16-IPM 11/16/16-IPM <u>11/16/17-IPM</u>	<p>intersections of rights of ways, along flood control districts where many people, children and their pets frequent.”</p> <p>“Posting online of pesticide applications”</p> <p>“Posting online of pesticide use reports from <i>each</i> program as they are generated on a monthly basis [for fulfilling reporting requirements with the state Department of Pesticide Regulation]”</p> <p>Provide a list of where pesticide applications were posted for each IPM program and how many signs were used in 2013. (4/2/14)</p> <p>“The County’s Posting Policy states that posting is required where there is foot access by the public or where the area is used for recreation...PfSE has shown you photos of children walking along these access trails...These access roads look just like walking trails along often idyllic looking creeks that the community use on a daily basis.” (12/4/14)</p> <p>Concerns about pesticide posting (2/17/15)</p> <p>“Posting is still not done in most treated areas where people have foot access and where they recreate per the CC County’s Posting Policy.” (3/2/15)</p> <p>“I’d also like to see that posting is being done per policy.” (11/16/16)</p>	<p>and with the City of San Francisco.</p> <ul style="list-style-type: none"> • The policy was reviewed and discussed by the IPM Committee when it was first developed, and in 2012 was revised to allow web posting and allow permanent signs in certain areas. • County Departments have verified that they abide by the posting policy. • The County’s website for online posting of pesticide applications (for the areas required by the CCC posting policy) was up and running as of 3/10/15. • Pesticide use reports that are generated for the California Department of Pesticide Regulation are provided yearly to Parents for a Safer Environment. Monthly reports are available if the public wishes to view them. • In the 5/27/14 IPM Transparency subcommittee meeting, the IPM Coordinator presented a chart with a list of pesticide application postings and the number of posting signs used during the 2013 calendar year. • Note that the County Posting Policy states that posting is “Not required in locations that the public does not use for recreation or pedestrian purposes” Recreation is defined as “any activity where significant physical contact with the treated area is likely to occur”. • On Pinole Creek, in the photo submitted by PfSE, the Public Works Department does not treat the paved path next to the school that the children are shown walking on. • Most of the County’s Flood Control access roads are within locked gates with signs saying “Property of Contra Costa. No Trespassing”. No one should be jogging or walking along these roads. • If PfSE can provide the County with information on specific access roads and specific times when people have been exposed to pesticide spraying, the County will investigate immediately. • Without information on specific locations, the County is unable to investigate this concern about not posting “in most treated areas where people have foot access and where they recreate...”. • <u>The IPM Committee has formed a Task Force to review the County’s posting policy and compliance with that policy. (11/16/17)</u>
	Adopting an IPM ordinance	
9/4/13-IPM 11/6/13-IPM 2/26/14-IPM 3/5/14-IPM 3/6/14-TWIC 3/2/15-TWIC 2/17/16-IPM 1/19/17 IPM	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>Issue of adopting an IPM ordinance for the County</p>	<ul style="list-style-type: none"> • In 2009, Susan JunFish proposed the need for an IPM Ordinance to the BOS. The Board directed the Committee to investigate the issue. • In 2009, County Counsel wrote an opinion recommending the use of an administrative bulletin to supplement the County’s IPM Policy. • County Counsel continues to stand by their 2009 opinion. • At several meetings in 2010 and 2011, the IPM Committee studied the issue and heard presentations from PfSE and from other counties. In 2011 the Committee concluded unanimously that the County should adopt an IPM Administrative Bulletin to supplement the IPM Policy that the County adopted in 2002. In CCC an administrative bulletin serves to direct staff and carries consequences for non-

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		<p>compliance.</p> <ul style="list-style-type: none"> • The IPM Committee found no advantage to adopting an IPM ordinance. • In April of 2013, the IPM Administrative Bulletin was adopted. • In the fall of 2013, the IPM Committee again reviewed the issue of adopting an IPM Ordinance. For the second time, the Committee saw no advantage to developing an ordinance and once again voted unanimously to recommend the continued use of the IPM Policy supplemented by the IPM Administrative Bulletin.
Reporting “Bad Actor” pesticides		
11/6/13-IPM 12/5/13-TWIC 2/12/14-TWIC 3/5/14-IPM 3/6/14-TWIC 2/17/15-IPM 3/2/15-TWIC 8/26/15-Email 9/2/15-IPM	<i>From Parents for a Safer Environment (PfSE):</i> Disagreement on how the County should report “Bad Actor” ³ pesticides in the IPM Annual Report	<ul style="list-style-type: none"> • Since FY 00-01, the County has been publishing pesticide use figures that include use figures for “Bad Actors”. • Note that <u>all</u> pesticides used by County operations are reported in the IPM Annual Report, regardless of the toxicity or hazards of the pesticide. At issue is the categorization of pesticides in the report, not whether all use is reported. • Susan JunFish, of Parents for a Safer Environment (PfSE), has been asking that additional pesticides be reported as “Bad Actors”. To resolve this issue, the IPM Committee heard presentations from Susan JunFish and held a special meeting of the Data Management subcommittee on March 25, 2013 devoted exclusively to this issue. Dr. Susan Kegley⁴ was invited to speak, as requested by Ms. JunFish. • After hearing Dr. Kegley’s presentation and discussing the issue with her and with representatives of PfSE, the subcommittee members concluded that the County should report as “Bad Actors” only those that are designated as such in the Pesticide Action Network database. • June 26, 2013: The IPM Committee voted unanimously to make changes to the 2012 IPM Annual to reflect the recommendation from the Data Management subcommittee, as noted above. The IPM Coordinator continues to report pesticides as “Bad Actors” only if they are designated as such in the PAN database.
Use of Paraquat and Other Bad Actors for Aquatic Weed Control by the Department of Agriculture		
2/17/15-IPM	<i>From Parents for a Safer Environment (PfSE):</i> “Use of paraquat for Aquatic Weed Control and other broad applied Bad Actor Pesticides by the Department of Agriculture.” (Particular mention of South American sponge plant in the Delta was made.)	<ul style="list-style-type: none"> • The Agriculture Department has not used paraquat in any aquatic weed applications and does not apply herbicides to the Delta for aquatic weeds. In the past, the Department has treated purple loosestrife in County waterways that feed into the Delta, but from this point forward they will not be treating any aquatic weeds. • The State Department of Boating and Waterways (DBW) has treated various areas in the Delta for invasive aquatic weeds over the years, and in September 2012, Governor Brown signed legislation authorizing DBW to add South American sponge plant to the list of weeds they treat. • State weed science experts judged that South American sponge plant posed a

³ “Bad Actor” is a term coined by 2 advocacy groups, Pesticide Action Network (PAN) and Californians for Pesticide Reform, to identify a “most toxic” set of pesticides. These pesticides are at least one of the following: known or probable carcinogens, reproductive or developmental toxicants, cholinesterase inhibitors, known groundwater contaminants, or pesticides with high acute toxicity. The pesticides designated as “Bad Actors” can be found in the PAN database on line: <http://www.pesticideinfo.org/>

⁴ Ph.D. Organic/Inorganic Chemistry; Principal and CEO, Pesticide Research Institute; former Senior Staff Scientist for Pesticide Action Network (PAN); instrumental in the development of the PAN database.

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		<p>serious threat to the ecosystems in California waterways. This was based on research, the biology of the plant, and the rapid rate of its spread in California.</p> <ul style="list-style-type: none"> Judicious use of herbicide to eliminate small infestations before they take over and completely clog Delta waterways is an excellent use of herbicide and will prevent huge expenditures of labor and herbicide in the future. This kind of preventive use of a pesticide to reduce the necessity to use large amounts of pesticide when the pest has built to great numbers is a recognized and legitimate IPM tactic.
Providing comments on the kestrel study, and rodenticides use concerns		
<p>11/6/13-IPM 12/5/13-TWIC 2/20/14-IPM 2/24/14-IPM 3/5/14-IPM 3/6/14-TWIC 8/26/15-Email 7/20/16-IPM</p>	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>"We have asked the Dept of Ag and the IPM Advisory Committee to provide comments on the Kestrel study and PfSE's Draft LD50 document in the past two years."</p> <p>In conjunction with this research paper, PfSE has brought up its concern about the rodenticides used by County operations.</p> <p>"Contractors [in Special Districts] use pesticides [rodenticides] before demonstrating alternatives first." (8/26/15)</p> <p>"I would like to first point out that the Special District program of Public Works is still using rodenticides in the county parks...It would be helpful to see the decision making tree on the way rodenticides are chosen instead of traps or asphyxiation methods using safer gases like carbon dioxide." (3/16/16)</p> <p>"The Public Works Special District program is using about 50 lbs. of rodenticides in parks." (7/20/16)</p>	<ul style="list-style-type: none"> On 9/18/12 Susan JunFish circulated to members of the IPM Committee the abstract from the kestrel study mentioned at left. On 2/4/13, the IPM Coordinator circulated the actual research paper to all the members of the IPM Committee. On November 22, 2013, Vince Guise, Agricultural Commissioner, sent a formal response to Susan JunFish regarding the kestrel study. (TWIC and the IPM Committee Chair and IPM Coordinator were cc'ed on this communication.) On January 7, 2014, Vince Guise re-sent the formal response to Susan JunFish and Shirley Shelangoski. On January 16, 2014, Shirley Shelangoski confirmed having received the document. Susan JunFish asked the Committee to comment on the study, and the formal response was provided by the Agriculture Dept. Regarding "PfSE's Draft LD50 document", neither the Committee nor County staff can comment on data calculated by Susan JunFish that have no references or clear calculation methods. This was conveyed to PfSE in the Department of Agriculture's Kestrel response letter. Note that as part of the Department of Agriculture's ground squirrel program, the Department surveys ground squirrel treated areas for ground squirrel carcasses (or any other carcasses). Staff rarely find dead ground squirrels above ground, which is consistent with U.C. research in the state and the experience of other agencies. Staff has never found secondary kill, such as raptors or predatory mammals, in areas the Department treats. This does not mean, nor does the County claim, that no secondary kill ever occurs in the course of the County's treatment program. The IPM Committee did not discuss the research paper specifically; however, the Committee and County staff took the following steps regarding the rodenticide issue: <ul style="list-style-type: none"> In 2012, the Agriculture Dept. conducted an in-house trial of live-trapping of ground squirrels as a possible alternative to rodenticides treatment. See below for more detail. At their January 2013 meeting, the Committee heard a presentation from the Agriculture Dept on the trapping study and heard a presentation from the State Department of Fish and Wildlife on secondary poisoning of raptors and other predators and the state's efforts to restrict use of the more toxic 2nd generation anticoagulant rodenticides (CCC does not use 2nd generation anticoagulants because of their toxicity and their hazards to non-target animals that consume poisoned rodents). At their March 2013 meeting, the Committee heard a presentation from Dr. Jim Hale on wildlife issues in CCC that included discussion of the impacts of

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		<p>rodenticides.</p> <ul style="list-style-type: none"> ○ At their May 2013 meeting, the Committee heard a presentation from Mt. Diablo Audubon on their campaign to curb the use of 2nd generation rodenticides. ○ The Agriculture and Public Works Departments jointly prepared a map of the County marking where rodenticides are used by the Agriculture Dept. This map was presented in separate meetings to Supervisors Gioia, Mitchoff, and Andersen, and to Susan JunFish & Shirley Shelangoski of PfSE. In these meetings the Agricultural Commissioner explained the Department's ground squirrel program and the live trapping study. ○ The Agriculture Dept. prepared a very detailed decision making document for ground squirrel management in the County to record their decision making process and explain the complexities involved in their decisions, including biology, safety, efficacy, cost and the goals of the program. This document was discussed extensively in a subcommittee meeting and again in a regular Committee meeting. PfSE members were present and participated in the discussion. ○ In 2013, the Agriculture Dept revised its ground squirrel baiting methodology to make it safer for staff, to make applications more precisely targeted, and to reduce the amount of bait used each season. The amount of bait used by the Department has been reduced by over 50% since 2011. Use has gone from 35,915 lbs in 2011 and 14,271 lbs in 2013. 14,271 lbs of bait is 1.4 lbs. of actual diphacinone. ○ In February and again in August of 2013, the IPM Coordinator investigated rodenticides use by contractors to Special Districts. She presented her findings to the Committee at the 9/4/13 meeting. ○ The Special Districts' contractor has reduced his use of anticoagulant bait from 188 lbs in FY 12-13 to 88 lbs in FY 13-14 and to 53.5 lbs in FY 14-15. The amount of actual anticoagulant active ingredient in 53.5 lbs is 0.0027 lbs (0.04 oz). The contractor has increased trapping and is not using any of the more toxic and dangerous 2nd generation anticoagulants. ○ As of May 2016, Special Districts is no longer baiting with diphacinone for rats in Livorna Park. The shrubs that were being damaged by rat gnawing have recovered and are thriving. The contractor will continue to monitor at Livorna for rat damage. ○ In FY 15-16 the Special Districts vertebrate pest manager used 27.5 lbs. of rodent bait, which is 0.0013 lbs. (0.02 oz.) of diphacinone. 9.5 lbs. of that rodent bait was used in a park (Livorna Park). This is 0.0076 oz of diphacinone. As noted above, the County is no longer using rodenticides in Livorna or any other park. ○ In the spring of 2016, the IPM Decision-Making subcommittee asked the IPM Coordinator to create a decision-making document for gopher management in the County. The document was finished in June 2016. In the Grounds Division, the gopher manager uses only carbon dioxide asphyxiation and traps to control gophers in County landscaping. The Special Districts' contractor uses trapping and diphacinone, a 1st generation anticoagulant rodenticide, for gophers in Livorna Park. He uses trapping in Livorna wherever it is safe to do so, i.e., where children are unlikely to find and play with the traps. He uses diphacinone in the Hidden Pond and Driftwood landscaping zones because the budgets in these two Special

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		<p>Districts will not cover trapping, which is more labor intensive. Both those landscaping zones are frontage property. The only other location where the Special Districts' contractor manages vertebrate pests is the Alamo School field, where he is using traps.</p> <ul style="list-style-type: none"> ○ On 3/5/14, the IPM Committee heard an update from the California Department of Fish and Wildlife on the regulations concerning 2nd generation anticoagulant rodenticides and on secondary poisoning of raptors and mammalian predators by anticoagulant rodenticides.
<p>Trapping for ground squirrels</p>		
<p>12/5/13-TWIC 2/20/14-IPM 2/24/14-IPM 3/5/14-IPM 3/6/14-TWIC 10/9/14-TWIC 1/14/15-IPM 8/26/15-Email 2/17/16-IPM 7/20/16-IPM</p>	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>"[PfSE] asked TWIC to instruct the Department of Agriculture and Public Works Dept to use trapping methods [for ground squirrels]"</p> <p>"Santa Clara spends only \$25/ground squirrel trapping & removal"</p> <p>"Isn't it worth the effort to learn how the other counties are doing using only trapping for ground squirrel control?" (10/9/14)</p> <p>"One cannot compare efficiency of our [County] staff applying rodenticides and compare that to them trapping and stacking up overtime costs during the learning curve...A good-faith comparison would have been to utilize expert trappers vs our staff applying rodenticides, and then comparing costs." (10/9/14)</p> <p>"[The IPM Coordinator] states that the county would incur a charge of \$16,720 per linear mile for ground squirrel control if we paid a contractor who charges \$25/squirrel trapped. This is very speculative and we would like to see the county take bids from trappers and share the proposals with the Committee." (1/14/15)</p> <p>"Pilot Trial of rodenticides vs tapping done in 2012, biased & scientifically indefensible." (8/26/15)</p> <p>"Cost of trapping inflated."</p>	<ul style="list-style-type: none"> • In 2012, the Agriculture Department ran an extensive, in-house ground squirrel live trapping trial to determine the feasibility of using live traps to protect critical County infrastructure from ground squirrel burrowing. <ul style="list-style-type: none"> ○ The trapping was successful in that staff were easily able to capture 152 ground squirrels in the 1,200 linear foot trial area along a County road over the 5 day trial period. ○ The squirrels were euthanized on site by the California Department of Fish and Wildlife. ○ Unfortunately, squirrels from the surrounding area quickly moved into the vacant burrows. <u>This makes trapping ineffective in areas with surrounding pressure from ground squirrels.</u> ○ When the Department uses rodenticide bait, the squirrels do not move back into the vacant burrows for an extended period of time. The Department surmises that because baited squirrels die mostly in their burrows, the carcasses repel any newcomers. ○ The Department found that live trapping would be prohibitive. It would cost \$5,074/linear mile compared to \$220/linear mile using bait. The Department treats around 925 linear miles of roadway each year. ○ Note that along roadsides, the Department spreads bait in a 12 to 15 ft wide swath at a rate of 2 to 3 oat kernels per square foot only in areas where ground squirrels are active. This treatment method takes advantage of the natural foraging habit of the ground squirrel, an animal that is highly adapted to finding individual seed kernels on the ground. ○ The Department verified the expense by contacting 2 pest control contractors. Using their fees per hour or per squirrel trapped, the Department estimated that the cost to use a contractor to trap ground squirrels would be between \$12,524 and \$16,700 per linear mile. This does not compare favorably to the Department estimate of \$5,074/linear if work were done by Department staff. ○ <u>Note that at the \$25/squirrel rate quoted by PfSE, it would cost the County \$16,720/linear mile if the ground squirrel catch rate were similar to the 152 squirrels/1,200 linear feet.</u> This is 3 times more than it cost for Agriculture Department personnel to trap over a linear mile, so using a contractor would not save money, even if this method were effective. ○ We are assuming that Susan JunFish's 7/20/16 comment on the cost of trapping ground squirrels comes from the IPM plan for Rodent Control for Flood Control Facility Protection approved by the Ventura Board of Supervisors in December 2006. PfSE provided a copy of this IPM plan to the

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	<p>(8/26/15)</p> <p>"Trapping [for ground squirrels] costs about 50% more according to a Ventura County Ag Dept report, or approximately \$80,000 more for CCC." (7/20/16)</p>	<p>IPM Committee a number of years ago. In a table in that IPM plan, the county summarizes the costs for various treatments for grounds squirrels. The table makes it clear that the costs are "estimates [for] one treatment event for a typical [flood control] facility." The Ventura IPM plan estimates the cost of trapping to be almost 100% more than the cost of broadcasting diphacinone bait (\$1700 for baiting vs. \$2900 for trapping). Note that the report does not define the "typical facility", so it is not possible to compare their estimates to the actual costs experienced in Contra Costa County. Note also that Ventura did not run a trial prior to adopting their IPM plan to determine the real costs of trapping or whether that strategy could be effective within the 3 "treatment events" the IPM plan recommends. It is not clear how Ms. JunFish calculated the \$80,000 extra needed to trap ground squirrels in Contra Costa County.</p> <ul style="list-style-type: none"> ○ One of the pest control contractors who was contacted for an estimate said he had also observed the ineffectiveness of trapping in areas with surrounding ground squirrel pressure. ○ The Department also observed some other unexpected outcomes: <ul style="list-style-type: none"> ▪ Traps were checked daily, but staff found squirrels bloodied and wounded from fighting with each other or trying to chew their way out of the traps. ▪ Traps were vandalized by the public even though large signs warned people to leave the traps alone. This exposed the public to health risks from bites and scratches and from transmissible diseases carried by ground squirrels. ○ In certain small areas that have a limited number of ground squirrel colonies, live trapping may be a viable alternative. • Santa Clara County Regional Parks find live trapping effective for their limited use of the method. They trap squirrels around Regional Park buildings to prevent undermining of foundations. This is a very small area compared to the hundreds of miles of roads involved in CCC. Park rangers are close by to educate the public and to observe the traps continually. This reduces vandalism and allows park personnel to have squirrels dispatched soon after they are trapped, which prevents harm to the squirrels from fighting or gnawing the cage. • In March 2006, the Ventura County Board of Supervisors directed county staff to avoid the use of anticoagulant rodenticides within county-owned properties and facilities. To address these concerns, the county hired a consultant and formed an ad hoc committee. The County developed an IPM program and as a result of a subsequent study, the ad hoc committee <i>and</i> the Board recommended broadcast baiting with diphacinone as the primary control method for ground squirrels. The Board approved this program in December 2006. • The CCC Agriculture Department has also evaluated kill traps but has chosen not to use that method for many reasons, including the increased risk of taking non-target animals, the risk of injury to curious children, and the expense.
	<p>Burrowing rodent control</p>	
<p>1/20/17-IPM <u>11/16/17-IPM</u></p>	<p><i>From Parents for a Safer Environment (PfSE):</i> The IPM Committee should</p>	<p>In 2017, the IPM Committee heard<u>will hear</u> a presentation on the use of carbon monoxide and carbon dioxide for burrowing rodents. <u>Dr. Roger Baldwin, from UC Cooperative Extension, gave the presentation on</u></p>

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	<p>investigate the use of carbon monoxide for controlling burrowing rodents.</p>	<p><u>carbon monoxide (CO) and made the following points:</u></p> <ul style="list-style-type: none"> • <u>His research was done in alfalfa fields, but it probably relates fairly well to rights-of-way. (In CCC, the greatest amount of rodenticide is used on rights-of-way to reduce damage from ground squirrels. A tiny amount of rodenticide is used in Special Districts for gophers, and no rodenticides are used in County grounds.)</u> • <u>Using CO in rights-of-way will cost more than it did in his alfalfa fields. Efficacy still varies tremendously from site to site. It works best when soil is moist and not sandy.</u> • <u>It takes 3-4 minutes to treat each burrow, and other openings must be covered with soil, so the gas does not escape. It would be difficult to try to dig up hard packed clay in the summer to cover burrow openings. Sand bags might work, but they are heavy and time-consuming to load, unload, and carry to and from the truck to each hole.</u> <p><u>The Grounds Division Vertebrate Pest Manager already uses carbon dioxide to kill gophers and moles in County landscaping, in addition to trapping. In the summer of 2017, the Grounds Division hosted a demonstration of the carbon monoxide machine, which they are considering purchasing.</u></p> <p><u>Using either CO or CO₂ along County roads would likely be very costly due to the many miles of road and the many ground squirrel burrows along some sections of road. It would be most effective in the winter or spring when the soil is wet and prevents gasses from leaking out. The Agriculture Department, the entity that manages ground squirrels for the Public Works Department, is engaged in invasive weed control and other duties during that time of year and could not attend to ground squirrels as well. In August when the Department has traditionally handled ground squirrels, the soil is dry and hard. Gasses leak out in dry soil, and as mentioned above, covering holes would be challenging.</u></p>
	<p>CCC is the only Bay Area county using rodenticides for ground squirrels</p>	
<p>12/5/13-TWIC 10/9/14--TWIC 7/20/16-IPM</p>	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>"[Contra Costa is] currently the only Bay Area county to continue to use the archaic and non-specific to target pest method of rodenticides to kill grounds squirrels"</p> <p>"It's great that the Agriculture Department has decreased usage of rodenticides from 36,615 pounds [of treated grain] applied two years ago to 14,391 pounds [of treated grain] applied in the most recent fiscal year. However it is still 14,301 pound [sic] more of bait applied than all Marin, San Francisco, and Santa Clara counties combined that do not use any rodenticides at all in open space." (10/9/14)</p>	<p>Note that CCC uses diphacinone-treated bait to protect critical infrastructure in the County from damage caused by ground squirrel burrowing. Diphacinone is a 1st generation anticoagulant that is less toxic and less persistent in animal tissues than 2nd generation anticoagulants. The Agriculture Department endeavors to maintain a relatively ground squirrel-free 100 ft buffer along various County roads (mainly in East County), along levees and railroad embankments, and around earthen dams and bridge abutments. To maintain this buffer, the Department treats a 12 to 15 ft. swath.</p> <ul style="list-style-type: none"> ○ Alameda County engages in a ground squirrel treatment program using diphacinone bait that is very similar to CCC. They treat roadsides and levees and Zone 7 Water District sites and use a similar amount of diphacinone-treated bait. • The City and County of San Francisco does not have ground squirrel problems to contend with; however, as of February of 2016, their IPM program allows the use of bromadiolone bait (a 2nd generation anticoagulant rodenticide) for rats at the SF Airport and by commercial lessees on city properties that are not adjacent to natural areas. Second generation anticoagulants are more toxic and more persistent in the tissues of poisoned animals than 1st generation anticoagulants, such as the diphacinone that CCC Department of Agriculture uses. Bromadiolone persists in liver tissues for 248 days compared to 90 days for diphacinone which makes sub-lethally poisoned animals walking hazards for predators much longer. • Note that as of February 2016, San Francisco allows the use of diphacinone for

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		<p>baiting rats in areas with high public health concerns and where trapping is infeasible. CCC uses only trapping to control rats and mice in and around County buildings. But note also that CCC is far less urbanized than San Francisco, and therefore does not have the same kind of severe pest pressure from rats.</p> <ul style="list-style-type: none"> Marin and Napa County Public Works Departments reported that they have nowhere near the kind of ground squirrel populations that East Contra Costa County has, and consequently, they don't do anything about the few ground squirrels along their roads.
The County should use volunteers and free labor		
12/5/13-TWIC 3/6/14-TWIC 2/17/16-IPM <u>11/16/17-IPM</u>	<i>From Parents for a Safer Environment (PfSE):</i> The County should use free labor programs	<ul style="list-style-type: none"> This could be particularly helpful around County buildings. The Grounds Manager would welcome Parents for a Safer Environment (PfSE) volunteers to pull weeds at particular sites, but PfSE would first need to negotiate with the County to determine if PfSE volunteers would be permitted work on County landscaping. If the work were approved, PfSE would need to organize and supervise the volunteers. Note that County unions have protested the use of inmate labor for jobs that could be filled by union members. The union recently won a grievance against the Sheriff's Department regarding the use of inmate labor for grounds maintenance work. The union has filed a grievance against the fire department regarding the use of inmate labor to clear brush. The Grounds Manager does not anticipate that PfSE volunteers pulling weeds would precipitate these kinds of union actions. In the County's other IPM programs, using volunteers is more difficult. <ul style="list-style-type: none"> "Free" labor involves considerable County resources including outreach to solicit volunteers, planning and organizing work sessions, staff time for training volunteers, transportation of volunteers, equipment for volunteers and staff time for supervision. Almost all of the Agriculture Department's noxious weed program involves activity on private land or on lands that are not owned or managed by the County. Use of volunteer help in these areas would involve liability for those land owners or managers. Much of the Public Works Department's creek and roadside vegetation management involves work in dangerous areas such as roadsides or steep and rocky slopes and requires the use of hazardous equipment such as chain saws and brush cutters. County liability for volunteers performing this kind of work would be extremely high. The County's structural IPM program is not suited to the use of volunteer labor. Note that the County does use volunteers, most notably in creek restoration and clean up, for creek water quality monitoring and for outreach to the public about creek water quality and the value of healthy creeks and watersheds.
Grazing has no significant impact on water quality		
12/4/14-TWIC 8/26/15-Email	<i>From Parents for a Safer Environment (PfSE):</i> "...[I]n each of the four case studies, grazing had NO significant impact on water quality. It is my hope that this research can provide	<ul style="list-style-type: none"> The County is aware that grazing does not have a significant impact on water quality. Economics and not water quality is the limiting factor in the vegetation management situations in the County. Public Works continues to expand its grazing program where it is most appropriate and/or cost-effective, and grazing has become a permanent tool in the County's IPM Toolbox.

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	<p>decision makers with confidence that managed grazing is an effective, economical and safe vegetation management tool along watercourses."</p> <p>"Small PfSE Pilot Trial in 2009 showed no contaminants downstream of grazing." (8/26/15)</p>	
<p>The County should expand goat grazing and competitive planting</p>		
<p>12/5/13-TWIC 3/5/14-TWIC 2/17/15-IPM 8/26/15-Email 7/20/16-IPM <u>5/11/17-IPM</u> <u>11/16/17- IPM</u></p>	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>"The County should expand the competitive planting and goat grazing programs"</p> <p>"[One decision-making document] asserts that goat grazing costs much more than herbicide spraying; however it appears the cost of grazing during the in-season are [sic] being compared with herbicide usage. Other case studies we are evaluating show that grazing is cost effective and even cheaper than herbicide usage." (2/17/15)</p> <p>Grazing costs are inflated and cost of herbicide use is deflated. (8/26/15)</p> <p>"With evidence that grazing causes no more damage and can be less expensive in the short term and also less risk to public health and the environment, we need to expedite moving away from herbicide usage and utilize more grazing." (7/20/16)</p>	<ul style="list-style-type: none"> • The County Flood Control District is partnering with Restoration Trust, an Oakland-based non-profit, in a native planting experiment along Clayton Valley Drain (near Hwy 4 adjacent to Walnut Creek). The study involves planting 2 species of native sedge and 1 species of native grass. These are perennial species that stay green year round and are resistant to fire. The plants are compatible with flood control objectives because they do not have woody stems, and during flood events, they would lie down on the slope, thus reducing flow impedance. They are not sensitive to broadleaf herbicides that will be needed to control weeds at least until the plants have spread enough to outcompete weeds. County volunteers installed the first plantings on December 7, 2013 • Note that it is conceivable that herbicides may always have to be used on these plantings to prevent the area from being overrun with weeds because the surrounding weed pressure is very high. • Restoration Trust will be monitoring the test plots through 2018 to assess the survival of the native plants and their degree of successful competition with non-native annual species. The County will gather information over the same time period to determine whether, how, and where to expand this kind of planting. The County cannot expand this project without data on its costs and viability. • Over the last 3 years, the Public Works Department has expanded its use of goat grazing considerably. In FY 12-13 they grazed 74 acres, in FY 13-14 they grazed 183 acres, and in FY 14-15 they grazed 367 acres. It is now a regular management tool for the Department. Every site the County manages differs in the ease with which goats can be used and their suitability for managing vegetation. The Department uses goats where they are appropriate and cost effective, and continues to gather data on costs and long-term effectiveness at individual sites. Cost is affected by many factors: <ul style="list-style-type: none"> ○ The size of the site—loading and unloading the animals is a fixed cost, so small sites cost more per acre than large sites ○ The ease of access to the site—the harder it is to get the goats into an area, the more expensive it is ○ The availability of water—if water must be trucked in, the cost is greater ○ The security of the site—the more fencing that is required and the more the fences must be taken down and erected within the site both increase the cost ○ The time of year—because of the law of supply and demand, cost is greater during the peak grazing season ○ The presence of endangered species—sites with endangered species and other restrictions from the State Dept. of Fish and Wildlife are good candidates for grazing regardless of the cost • Although the cost of off-season grazing is less expensive than during the peak

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		<p>grazing season, Public Works cannot effectively manage all the weeds that grow in the Flood Control District only with off-season grazing.</p> <ul style="list-style-type: none"> • In 2016 Public Works continued to use grazing wherever possible and to allow the grazer to stage goats on various channels and in detention basins in exchange for free vegetation management from the goats. • In FY 15-16 the County used goats to graze a total of 315 acres which included 158 free acres. Without the staging arrangement with the grazer, the County would have paid around \$950/acre for grazing. With the free acres, the cost came down to \$470/acre. This is twice what it costs to treat creek banks with herbicide (\$222/acre).
Considering least-toxic alternatives before choosing pesticides		
<p>12/5/13-TWIC 2/26/14-IPM 2/17/15-IPM 8/6/15-IPM 8/26/15-Email 11/4/15-IPM 2/17/16-IPM <u>11/16/17-IPM</u></p>	<p><i>From Parents for a Safer Environment (PfSE):</i> "Staff has still not demonstrated that for <i>each</i> pest control problem, least toxic alternatives were evaluated prior to choosing pesticides." Estimates for costs of herbicide applications need to include cost of permits, tracking requirements, storage of chemicals, licensing, training, etc. "The IPM Advisory Committee has not yet reviewed several key data in the [decision-making documents] that justify using broadcast herbicide spraying along Right of Ways and rodenticide usage in open space." (2/17/15) "Also, has the county investigated least toxic methods in accordance with the IPM Policy?" (8/6/15)</p>	<ul style="list-style-type: none"> • In 2012, the IPM Committee developed a form for recording IPM decisions made by the Departments. In 2013, each IPM program in the County produced at least 1 decision-making document for a specific pest or pest management situation (the Agriculture Department produced 2 documents that year). • These documents show which least-toxic alternatives are considered and tested, which are being regularly employed, which are not, and why. • In 2013, <u>2014, 2015, 2016 & 2017</u>, each <u>new</u> decision-making document was extensively reviewed by the Decision-Making subcommittee with PfSE members in attendance. • Recording the thought processes and decision-making path for each pest or pest management situation takes considerable time (approximately 40 hours of work per document). • In 2014, the Decision-Making subcommittee reviewed and, after numerous revisions, accepted 4 more decision-making documents. These discussions were conducted in public with members of PfSE in attendance. • In 2015, the Weed subcommittee reviewed and revised 1 more decision-making document which covered how the County decides to use grazing as a management tool. • In 2014, the Cost Accounting subcommittee chose to research the costs associated with altering landscapes around County buildings to require less maintenance, less water, and less herbicide. The subcommittee concluded that this is a very worthy goal, but more complicated to achieve than expected. Sites must be considered individually because one plan will not fit all, and in the midst of severe drought, it is not the time to begin replanting. The subcommittee also explored the idea of replacing lawns with artificial turf, but decided that it is not the answer except in very specific, limited situations. Artificial turf has high up-front costs, still requires maintenance, can become infested with weeds growing in soil that accumulates on top of the mat, and has environmental consequences at the end of its life, • Herbicide treatment costs reported in <u>the 2013-IPM Annual Reports from 2013 onward</u> included all associated costs mentioned by PfSE. When costs are compared in future documents, every effort will be made to include all related costs for both pesticides and alternatives.
Excessive pesticide use in CCC		
<p>12/5/13-TWIC</p>	<p><i>From Parents for a Safer</i></p>	<ul style="list-style-type: none"> • The assertion that CCC uses more pesticide than any other Bay Area County, or

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<p>2/26/14-IPM 12/4/14-TWIC 3/10/15-IPM 2/17/16-IPM 3/16/16-IPM 7/20/16-IPM <u>11/16/17-IPM</u></p>	<p><i>Environment (PfSE):</i></p> <p>Contra Costa County uses more pesticide than any other Bay Area County (or, than several Bay Area Counties combined)</p> <p>"lack of progress is evident in that the county has not significantly altered their use of pesticide since 2009"</p> <p>"The single most underlying problem I see in the IPM Program is that there is little to no leadership in guiding the County to reduce pesticides. (12/4/14)</p> <p>"Compare the quantity and the type of pesticides being used by neighboring counties of Marin, S.F., and Santa Clara Counties [sic] for the same pest problems." (2/17/16)</p> <p>"...I am concerned about the exponential increase of herbicides being applied by the Grounds program in the last fiscal year [FY 14-15]." (3/16/16)</p> <p>"The Right of Ways program of Public Works alone used over 10,200 lbs of pesticides last fiscal year, using 20 herbicides...These [sic] program needs review of why so much pesticides are required and at such high rates." (3/16/16)</p> <p>"...CCC Ag Dept's usage of the active ingredient diphacinone rodenticides in the last 5 years increased by 15% in open space, with a 90% increase between the last 2 years." (7/20/16)</p> <p>"The Public Works Department's Grounds Program in the last 5 years increased their herbicide usage by 73%. CCC Grounds program used 700% more herbicides than the counties of Santa Clara and Marin combined last year [presumably 2015] (600 lbs vs 100 lbs) even when Santa Clara county has at least 50% more grounds requiring management." (7/20/16)</p>	<p>other counties combined, is hard to evaluate since staff have not seen current pesticide use figures for County operations in other Bay Area Counties.</p> <ul style="list-style-type: none"> • This could be researched, but would take time. It is difficult to compare counties, all of which vary greatly in their size, their budgets, their staff, their pests, their weather, and the kinds of responsibilities they choose to undertake. Staff feel that comparing pesticide use in various counties is not particularly relevant to how well Contra Costa County operations are implementing IPM. • In 2012 and 2013, the IPM Data Management subcommittee undertook to find additional metrics to evaluate the County's IPM programs. This proved to be a difficult task, and the committee's research did not discover any unique or innovative measures for evaluating IPM programs in other Bay Area counties, or across the U.S. • The subcommittee agreed that pesticide use data do not reveal whether the County is implementing IPM, and so in 2012, the subcommittee developed the IPM Priority Assessment Tool. This is a compilation of IPM best management practices (BMPs). The subcommittee asked the Departments to fill out the form in 2012 and 2013 and report the percentage of implementation of each of the BMPs. • It is important to understand that pesticide use can increase and decrease from year to year depending on the pest population, the weather, the invasion of new and perhaps difficult to control pests, the use of new products that contain small percentages of active ingredient, the use of chemicals that are less hazardous but not as effective, the addition or subtraction of new pest management projects to a department's workload, and cuts or increases to budgets or staff that change priorities or workload. • From FY 00-01 through FY <u>16-17-15-16</u>, the County has reduced its pesticide use by <u>75% 73%</u>—from 18,931 lbs of active ingredient in FY 00-01 to <u>5146-4709</u> lbs of active ingredient in FY <u>16-17-15-16</u>. • Since FY 00-01, each Department has been evaluating its pesticide use and researching options for eliminating or reducing pesticide use. By 2015 County operations had eliminated the use of 24 of the 31 "Bad Actor" pesticides that they had been using and had reduced the lbs of "Bad Actor" active ingredients by 84%. • The County's pesticide use trend follows a trend typical of other pollution reduction programs. Early reductions are dramatic during the period when changes that are easy to make are accomplished. Once this "low-hanging fruit" has been plucked, it takes more time and effort to investigate and analyze where additional changes can be made. The County is entering this period, and if further reductions in pesticide use are to be made, it will require time for focused study and additional funding for implementation. • Note that County operations use about 2% of all the pesticide (active ingredients) that is required to be reported in the County. The total reported to the state does not include homeowner use, which researchers suspect is a considerable amount. • In FY 14-15, the Grounds Division used only 1/3 of the pesticide it used in FY 00-01. The amount used in FY 14-15 was 154 lbs. of active ingredient less than in FY 13-14. • In FY 14-15 the Public Works Roadside and Flood Control Channel Maintenance Division (the "Right of Ways program" that PfSE refers to) used 4,780 lbs. of

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	<p>The Public Works Department's Facilities program manages pests in buildings and has been doing great until last year when insecticide usage inside building(s) [sic] went up past 8 lbs." (7/20/16)</p>	<p>pesticide active ingredients. This is a little more than ¼ of the pesticide they used in FY 00-01.</p> <ul style="list-style-type: none"> • In FY 14-15 the Agriculture Department used 346 lbs. less of the anticoagulant diphacinone than the previous year. In FY 15-16, the Department reduced its use even further. In FY 14-15 the Department used 154.7 lbs of diphacinone and in FY 15-16 it used 76 lbs. Over the last 5 years, this is a dramatic decrease of 86% and a decrease of 95% from the 1420.7 lbs. used by the Department in FY 00-01. • The Grounds Division use of herbicide has indeed increased over the last 8 years. The Recession and its attendant budget cuts, along with decisions by the former Grounds manager to stop almost all herbicide use, contributed to several years of minimal use. Weeds and their seeds were not managed effectively for several years resulting in large weed and weed seed loads at many County properties. Over the last 6 years, the current Grounds Manager and his crew have been working very hard to reduce the weed pressure and improve the aesthetics of County landscaping. This has included the application of prodigious amounts of woodchip mulch and reducing irrigation to prevent weeds, but it has also meant the use of more herbicide. Inadequate budgets and staffing problems have made the recovery of County properties slow. Currently (2016) the Division is in much better shape and has enough money and almost enough staff to properly maintain County landscaping. As the crew reduces the weed load, they can more easily maintain relatively weed-free landscapes with physical methods such as handpulling and mulching. • Pestec, the County's structural pest management contractor that manages pests in and around buildings, has been battling very large ant populations the last 2 years, and this has increased the amount of insecticide used. Insecticides for ants are all in the form of baits and pose very little exposure for County staff and wildlife.
<p>CCC should do more IPM training and outreach to County staff and the public</p>		
<p>12/5/13-TWIC 2/17/16-IPM 3/16/16-IPM 11/16/16-IPM <u>3/16/17-IPM</u></p>	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>"the County IPM Coordinator and the IPM Advisory Committee [should] provide annual IPM training and outreach programs to both county staff and the public"</p> <p>The County should "provide training and conferences such as those conducted by Santa Clara and San Francisco counties which train hundreds of interested participants."</p> <p>"I would like to see Contra Costa County, with more resources than [Parents for a Safer Environment], facilitate some training for municipalities in our county for some of the toughest problems that trigger pesticide usage..."</p>	<ul style="list-style-type: none"> • The IPM Committee is an advisory body to the Board of Supervisors and does not have a budget, nor does it have the staff or the mandate to provide outreach and training. • There is no need to duplicate San Francisco and Santa Clara's regional IPM conferences, and it would be impossible for the IPM Coordinator to do so without staff and budget. • In 2012, the IPM Coordinator partnered with cities in CCC to provide a half-day landscape IPM training to City and County staff and will probably do so again in the future. • The IPM Coordinator provides extensive education in person and over the phone to County staff and Contra Costa citizens on bed bug awareness and an IPM approach to managing bed bugs. The IPM Coordinator produces educational materials on bed bugs for professionals and lay people. Materials are housed on the Health Services bed bug website (cchealth.org/bedbugs). • The Departments provide annual training to County staff that includes IPM. • County staff attend numerous trainings and conferences that include IPM training in order to stay current on pest management research and to maintain their various licenses. • The Department of Agriculture has a biologist on-call from 8 AM to 5 PM each

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	<p>(11/16/16)</p>	<p>weekday to answer questions from the public about pests and pest management. Biologists base their responses on IPM principles and on materials and resources from the U.C. Statewide IPM Program.</p> <ul style="list-style-type: none"> • Every day in the course of their work, County staff from Public Works, Health Services and the Department of Agriculture engage citizens in dialog about the pest management work the County does and the IPM principles the County employs. • The Department of Agriculture provides many training sessions each year on pesticide safety (including IPM issues) to growers, farm workers, agencies, and the pest control industry. • The Department of Agriculture is a member of the <i>Egeria densa</i> Integrated Pest Management Committee and developed the Contra Costa Delta/Discovery Bay Region Brazilian Waterweed (<i>Egeria densa</i>) Integrated Pest Management Plan. • The County Clean Water Program sponsors an annual Bay Friendly Landscaping training for County staff and professional landscapers throughout the county. This training includes information about IPM and about reducing inputs into and outputs from landscaping activities to prevent pollution in creeks and the Bay. • The County Clean Water Program provides support for watershed coordinators and friends of creeks groups that coordinate volunteers to conduct general outreach to the community about water quality in creeks and the value and importance of wildlife habitat, watersheds, and creek restoration. • The County Clean Water Program provides support to the Bringing Back the Natives Garden Tour which educates the public about the many benefits of gardening with California native plants. • The County Clean Water Program supports the Our Water, Our World Program in Contra Costa County (a program originally developed by CC Central Sanitary District). This program provides in-store IPM education directly to consumers who are purchasing pesticides. IPM training is also provided for nursery and hardware store employees. • In 2014 the County Clean Water Program launched 3 other IPM and pesticide public education programs. • The Contra Costa Master Gardener Program trains volunteers with a curriculum that includes IPM. Master Gardener volunteers are available Monday through Thursday from 9 to Noon to answer gardening and pest management questions from the public. Advice is based on materials and resources from the U.C. Statewide IPM Program. Master Gardeners also provide presentations on gardening and IPM to a broad cross section of Contra Costa citizens. • The IPM Coordinator accepts many speaking engagements throughout the County and the region to provide training on IPM and especially on bed bug issues. • The IPM Coordinator and other County staff have been working closely with cities to provide guidance on the bed bug infestations they are experiencing. • The IPM Coordinator is working with Code Enforcement in the City of Richmond to develop bed bug training for Code Enforcement officers throughout the state. • Every month the IPM Coordinator spends a significant number of hours talking with citizens about least-hazardous bed bug control. • The Agricultural Department represents the California Agricultural Commissioner's and Sealer's Association as the sitting member of the California

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		<p>Invasive Species Advisory Task Force.</p> <ul style="list-style-type: none"> • In October 2013, County staff attended a Parents for a Safer Environment's IPM workshop and found it informative. Parents for a Safer Environment can provide a useful community service by hosting more such workshops. • In April 2014, the IPM Coordinator provided an in-person IPM tutorial for the Grounds Division's new spray technician. • In May 2014, the IPM Coordinator arranged an IPM workshop given by Pestec, the County's Structural IPM Contractor, for the County's Head Start Home Base educators. Pestec presented information on how to prevent pests in the home and simple, non-toxic strategies for low income families to use to combat pest invasions. Home Base educators provide in-home education to Head Start families. • In May 2014, the Contra Costa Environmental Health Division sponsored a workshop on IPM for bed bugs for County Environmental Health Inspectors and code enforcement officers in Contra Costa municipalities. • In July 2014, the County hosted a presentation by the U.C. Horticultural Advisor on how landscapes should be managed during drought and how to plan landscapes for what is likely to be continual droughts. County staff, both administrators and maintenance personnel, along with park personnel from the city of Danville attended. • In July 2014, the IPM Coordinator provided a bed bug awareness training for the residents of Meadow Wood at Alamo Creek, a senior living facility in Danville, along with subsequent consultation with individual residents and staff. • In September 2014, the IPM Coordinator provided the Greater Richmond Interfaith Program with assistance for a bed bug infestation at their Family Housing Program. • In February 2015, the IPM Coordinator met with staff at the Bay Area Rescue Mission in Richmond to discuss bed bug prevention. • In June 2015, the IPM Coordinator completed an IPM Guidance manual for municipalities in Contra Costa County with help from Beth Baldwin of the County Clean Water Program and Stephen Pree of the City of El Cerrito. The three had worked for 2 years to develop IPM guidance for cities on implementing IPM and to develop standard operating procedures for various pests. The three presented an IPM workshop for municipal staff that included information on how to use the manual and resources available to them within the County. • In November 2015, the IPM Coordinator and Luis Agurto from Pestec provided a bed bug training for County Adult Protective Services staff who have been encountering bed bug problems in their clients homes more frequently. • In April 2016, the IPM Coordinator helped arrange a County-sponsored Bay Friendly Landscaping refresher training at the Pittsburg Civic Center open to all Bay Friendly certified landscaping professionals in the County. • In April 2016, the IPM Coordinator and Luis Agurto from Pestec provided a bed bug awareness training for staff from the Behavioral Health Division. • In May 2016, the IPM Coordinator arranged a talk on mosquitoes as vectors of disease by Dr. Steve Schutz of CC Mosquito and Vector Control for the IPM Advisory Committee. • In May 2016, the IPM Coordinator gave a class in home and garden pests at the

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		<p>Gardens at Heather Farms for the general public.</p> <ul style="list-style-type: none"> • In May 2016, the IPM Coordinator helped arrange a talk at the Richmond Civic Center on vertebrate pest management for County and municipal staff and professional landscapers. • In May 2016, the IPM Coordinator provided a bed bug prevention training to the County's Discovery House staff. • In June 2016, the IPM Coordinator and Carlos Agurto from Pestec provided a bed bug prevention refresher training to the Concord Homeless Shelter and Calli House youth shelter staff. • In July 2016, the IPM Coordinator provided bed bug prevention trainings for both Adult Mental Health and Older Adult Mental Health staff. • In August 2016, the IPM Coordinator provided bed bug prevention trainings for the Behavioral Health safety coordinators and for a group of board and care owners and managers. • In October 2016, the IPM Coordinator provided a bed bug prevention talk for homeless care providers, worked with the City of Richmond to create a plan for managing bed bugs in their city, and talked to staff at 1650 Cavallo about preventing ant infestations. • <u>In January 2017, the IPM Coordinator gave a presentation on bed bugs for a group home in Antioch.</u> • <u>In February 2017, the IPM Coordinator provided the IPM presentation for the Bay Friendly Landscaping training in Concord.</u> • <u>In February 2017, the IPM Coordinator gave a bed bug talk at a home for HIV patients in El Cerrito.</u> • <u>During the spring of 2017, the IPM Coordinator consulted on a project of the Alameda County Healthy Homes program to create a three-part online training series on IPM for landlords and property owners.</u> • <u>In May of 2017, the IPM Coordinator participated in a bed bug investigation of a motel in Richmond and helped to educate the owner about bed bug prevention.</u> • <u>In August, the IPM Coordinator gave a bed bug awareness presentation to WIC staff.</u> • <u>During the summer of 2017, the IPM Outreach subcommittee of the IPM Advisory Committee developed a short presentation on pest management in homes for County in-home visitors. The subcommittee has three presentations scheduled through the end of 2017, and will be contacting additional groups for presentations in the new year.</u> • <u>In August of 2017, the IPM Coordinator and Carlos Agurto from Pestec, the County's structural pest management contractor, provided a bed bug prevention training for Calli House Youth Shelter staff. In January 2018, they will provide addition training for all staff from all of the County shelters. They had provided this training in the past, but will now provide it at least annually to make sure new staff understand the threat, how to take precautions, and how to prevent infestations.</u>
	Violations of the Brown Act	
12/5/13-TWIC	<i>From Parents for a Safer Environment (PfSE):</i>	<ul style="list-style-type: none"> • Staff always respond within 10 days to public records requests. In almost all cases staff respond within 1 to 3 days. The only reason for delay has been to find

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3/2/15-TWIC 8/6/15-IPM 2/17/16-IPM	<p>"continued violations of the Brown Act including repeated disposal of original meeting minutes, repeated failure to provide public records at all or much later than 10 working day, and meeting minutes that do not accurately reflect comments made or not made by participants"</p> <p>"our county's IPM policy and the Public Records Act have been violated at least on a quarterly basis by staff since 2009." (3/2/15)</p> <p>"We are still waiting to learn where Fusilade II Turf and Ornamental herbicide had been applied by the Grounds Program in the past years" (8/6/15)</p>	<p>and collect documents that have been requested.</p> <ul style="list-style-type: none"> • The County takes public records requests seriously and responds promptly to each one. • Hand written meeting minutes are recycled after official minutes have been typed up. Official minutes, once approved by the IPM Committee, are posted on the IPM website. • The IPM Committee approves the minutes for each meeting. The public is provided time to comment on the minutes, and as the IPM Committee sees fit, the minutes are corrected. • Staff are ready to respond to any specific instances or claims of Brown Act violations. Staff maintain written logs of all public records requests. • On July 8, 2015 Susan JunFish formally requested information about Fusilade use by the Grounds Division. On July 16, 2015 the IPM Coordinator provided her with a chart, created for her, showing how much and where Fusilade was used (0 used in FY 12-13 and FY 14-15 and 0.1 pound used once in a parking lot in FY 13-14).
Financial incentives to serve on the IPM Committee/Conflict of interest on the IPM Committee		
12/5/13-TWIC 1/14/15 IPM 3/2/15-TWIC 2/17/16-IPM	<p><i>From Parents for a Safer Environment (PfSE):</i></p> <p>The County should "discourage financial incentives of [IPM Committee] applicants by providing a minimum of a 5 year moratorium for those who serve to be eligible for receiving a county contract or any funding"</p> <p>"In 2009, Michael Baefsky, a community representative of the IPM Advisory Committee received a contract with the former General Services Department according to a document from Terry Mann, former Deputy Director of the General Services Dept. After receiving that contract, Mr. Baefsky's behavior on the Committee changed significantly."</p>	<ul style="list-style-type: none"> • Staff disagree that there are any kinds of financial incentives to serve on the IPM Advisory Committee, but will defer to the Board of Supervisors on whether to impose such a moratorium. • If the public has evidence of financial incentives for serving on the IPM Committee, we request that they bring that evidence forward. • Michael Baefsky was not a member of the IPM Advisory Committee when he was asked to contract with General Services to advise the County on non-chemical methods to manage weeds on the Camino Tassajara medians in 2009. His contract ended in 2009. That year he attended meetings of the IPM Task Force, an informal body with no official appointees. The IPM Advisory Committee was not created until 2010, and he was appointed by the Board to an At-Large seat in 2010. He has held no contracts with the County since 2009. • The IPM Committee bylaws state the following in sections III.B.2&3: <ul style="list-style-type: none"> • "Contractors who provide pest management services to the County may not serve on the Committee. The exception is A.1.d., above, the Current Structural Pest Management Contractor with General Services Department. • "If a member's work status or residence changes, he/she must notify the Committee in writing, within thirty (30) days of their change in status. The Chair will review the change of status and determine if the member is still eligible for membership according to these by-laws. If they are found to be ineligible, the member will be asked to resign his/her position."
Monetary compensation or gifts from pesticide salespeople		
12/5/13-TWIC	<i>From Parents for a Safer</i>	<ul style="list-style-type: none"> • County staff do not receive (and have not been offered) gifts or compensation in

Date(s) Issue Raised to: TWIC = Transportation, Water & Infrastructure Committee IPM = IPM Committee or subcommittees IO=Internal Operations Committee	Issues Raised by the Public	Steps taken by the IPM Advisory Committee and County Staff from January 2009 to the present
3/2/15-TWIC	<i>Environment (PfSE):</i> "We are requesting that TWIC require that all staff involved in ordering pesticides from salespersons fill out a form disclosing any monetary compensation or any other forms of gifts from pesticide salespersons"	any form from pesticide salespeople or any other salespeople. Accepting gifts or compensation would be against County policy ⁵ and would subject staff and their departments to disciplinary action <ul style="list-style-type: none"> If the public has evidence of County staff taking bribes, we urge the public to provide that evidence for investigation.
IPM Committee did not accept all of Parents for a Safer Environment's priorities as their own		
2/12/14-TWIC	<i>From Parents for a Safer Environment (PfSE):</i> The IPM Committee is planning to include only 70% of PfSE's priorities as the Committee's priorities for 2014	<ul style="list-style-type: none"> The IPM Committee devoted more than an entire meeting to the discussion of its work priorities for 2014. The public was fully involved in the discussion and PfSE provided documents and testimony detailing their own priorities. The Committee had a thorough discussion and then voted on which priorities to pursue.
IPM Coordinator references statements by members of Parents for a Safer Environment that were never made		
3/2/15	<i>From Parents for a Safer Environment (PfSE):</i> "PfSE members also feel a lack of goodwill and collaboration when the IPM Coordinator references statements by members that were never made. For example, in the Response Table, it states that a PfSE member stated at the February 12, 2015 [sic] TWIC meeting that 'The IPM Committee is planning to include only 70% of PfSE's priorities as the Committee's priorities for 2014.' We would be thrilled if this was the case..."	<ul style="list-style-type: none"> In her written public comments to TWIC on February 12, 2014, Susan JunFish states: "We believe that the Committee is planning to address about 70% of the priority issues the community has raised, so we are hopeful. The two areas where there has been no plan to address are columns 4 and 5 of the table."
The IPM Committee needs a non-voting facilitator		
2/12/14-TWIC	<i>From Parents for a Safer</i>	<ul style="list-style-type: none"> Staff believe that meetings are run effectively and efficiently.

⁵ California Government Code § 1090 prevents county employees and officials from being "financially interested" in any contract made by them in their official capacity, or by anybody or board of which they are members.

California Government Code § 81000 et seq., known as the Political Reform Act, requires, among other things, that certain public employees perform their duties in an impartial manner, free from bias caused by their own financial interest. See Cal Gov Code § 81001(b). It also prevents certain employees from using their positions to influence county decisions in which they have a financial interest. See Cal Gov Code 87100. The Act also requires certain employees and officers to file a Form 700, Statement of Economic Interests (the CCC Agricultural Commissioner, the managers in Public Works and the IPM Coordinator fill out this form) See Cal Gov Code 89503.

CCC Administrative Bulletin 117.6, paragraph 6, can be read to prevent employees from accepting any gift which "is intended, or could reasonably considered as tending to influence business or applications pending before the Board of Supervisors."

Date(s) Issue Raised to: TWIC = Transportation, Water & Infrastructure Committee IPM = IPM Committee or subcommittees IO=Internal Operations Committee	Issues Raised by the Public	Steps taken by the IPM Advisory Committee and County Staff from January 2009 to the present
3/2/15-TWIC	<i>Environment:</i> "an impartial, non-voting facilitator would make the meetings run smoother and become more viable"	<ul style="list-style-type: none"> • The new IPM Committee chair has been very effective at running the 2014 and 2015 IPM Committee meetings and allowing the public ample opportunities to provide comment.
	Parents for a Safer Environment disagrees with responses to "unresolved" issues in the Triennial Review Report	
11/6/13-IPM 2/12/14-TWIC 3/5/14-IPM 3/2/15-TWIC	<i>From Parents for a Safer Environment:</i> Disagreement with the response by staff to "unresolved issues" in the Triennial Review Report for the IPM Advisory Committee	<ul style="list-style-type: none"> • The response in dispute refers to the question in Section VIII of the Triennial Review report to the Board of Supervisors from the IPM Committee: "The purpose of this section is to briefly describe any potential issues raised by advisory body members, stakeholders, or the general public that the advisory body has been unable to resolve." • The response given to this question in the report accurately reflects the response intended by the IPM Committee as agreed at their November 6, 2013 meeting. • The Triennial Review Report has been accepted by TWIC and the BOS, and the IPM Committee cannot go back and change the report. • The issue in question for the IPM Committee was whether to describe in Section VIII only issues that the Committee had been unable to resolve, or to also include a discussion of issues that PfSE felt were still unresolved. The Committee debated this and decided to also include a discussion of issues that PfSE felt were unresolved. However, it was completely clear from the discussion at the meeting that the Committee agreed that the issues described in this section (with the exception of the two that were noted as ongoing) had previously been given due consideration by the Committee, and that the Committee had addressed the issues. The Committee directed the IPM Coordinator to meet with the Committee Secretary to compile Committee and staff responses to the "unresolved" PfSE issues to include in the report and then to submit the report. • Note that in the IPM Committee's extensive planning sessions for 2014 work, the Committee did not identify any of the "unresolved" issues as priorities for 2014.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

9.

Meeting Date: 12/11/2017

Subject: RECEIVE Report on PG&E Coordination with Cities & Contra Costa County for Street Light Maintenance & MONITOR Implementation with PG&E.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: 13

Referral Name: Monitor implementation of the Letter of Understand with PG&E for the maintenance of PG&E streetlights in Contra Costa County

Presenter: Rochelle Johnson, Department of
Public Works

Contact: Rochelle Johnson
(925)313-2299

Referral History:

The Transportation, Water and Infrastructure Committee (TWIC) accepted the 2016 status report regarding the pertaining to coordination between Cities (Countywide) and PG&E on November 10, 2016.

Referral Update:

The TWIC requested Public Works staff to report annually on the status of street light maintenance coordination efforts with PG&E. Staff last reported to the TWIC on November 10, 2016 regarding this item.

Background

The Letter of Understanding (LOU) dated February 2008, between PG&E and the County states the commitment of PG&E for open communication and responsive service levels and actions in resolving issues related to street light performance. A method of maintaining open communication channels was determined to be conducting regular discussions at Street Light Coordination meetings including the County, its constituents, Cities and Towns. However, in 2015 there was a change in the frequency of these meetings at the request of PG&E.

To address the consideration that cities may have determined that meetings were no longer useful, County staff administered a survey to all 19 cities within the County at the request of PG&E. The results of the survey were presented to TWIC in September 2016. The survey demonstrated to PG&E and County staff that the cities were interested in the continuance of the Street Light Coordination Meetings. Data from the survey reflected that coordination meetings should reconvene on a quarterly schedule, include presentations related to industry growth and advancement, and be conducted at various rotating governmental locations. Moreover, it was determined that meeting locations and topics would be decided at the end of each meeting in

preparation for the following meeting.

As a result of this data, meetings resumed on Monday October 2, 2017. Meetings to follow will be scheduled on Mondays-- January 22, April 23, July 23 and October 15, 2018, and follow a similar quarterly schedule moving forward. The meeting on October 2 was well attended with representation from 13 cities, the County, and PGE. Agencies who were not able to attend indicated that there was a scheduling conflict and would plan to attend future meetings.

Based on the interest of cities represented at the meeting, topics of interest for future meetings include:

- LOU update,
- Advanced Controls,
- And meeting other PG&E managers from other areas including the East Bay Division and Service Planning.

This information will be used to select presentations and develop agendas for the 2018 meeting. As a result of the feedback from the meeting convened on October 2, PG&E and Contra Costa County management will pursue updating the LOU to reflect the needs of the Cities and County, addressing the type of support needed from PG&E.

Recommendation(s)/Next Step(s):

RECEIVE this status report on the light coordination effort between PG&E and the County Public Works Department and Cities for street light maintenance.

Fiscal Impact (if any):

None. All costs for street lights are funded by County Service Area L-100 or Community Facility District 2010-1.

Attachments

No file(s) attached.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

10.

Meeting Date: 12/11/2017

Subject: CONSIDER report on Local, State, and Federal Transportation Related Issues: Legislation, Studies, Miscellaneous Updates & take ACTION as appropriate.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: 1

Referral Name: REVIEW legislative matters on transportation, water, and infrastructure.

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7883

Referral History:

This is a standing item on the Transportation, Water, and Infrastructure Committee referral list and meeting agenda.

Referral Update:

In developing transportation related issues and proposals to bring forward for consideration by TWIC, staff receives input from the Board of Supervisors (BOS), references the County's adopted Legislative Platforms, coordinates with our legislative advocates, partner agencies and organizations, and consults with the Committee itself.

Recommendations are summarized in the Recommendation(s)/Next Step(s) section at the end of this report. Specific recommendations, if provided, are underlined in the report below. This report includes four sections, 1: **LOCAL**, 2: **REGIONAL**, 3: **STATE**, and 4: **FEDERAL**.

1. LOCAL

1.1: Update - Caltrans SBI Grant: Accessible Transportation Strategic (ATS) Plan:

The Contra Costa Transportation Authority submitted this grant at the end of October 2017 with assistance from County staff. The staff report going to the California Transportation Commission for their December 4/5 meeting did not recommend CCTA's grant for funding.

As the Committee is aware, the County has an interest in making progress on this issue. County staff will consult with interested/affected parties regarding other options to move ahead.

1.2: Update - Contra Costa Office of Emergency Services (OES) - 11/30/17 Emergency Incident Tabletop Exercise - Disability/Access and Functional Needs (D/AFN) Population:

Transportation Planning Staff from Conservation and Development was requested by the Sheriff's Office to participate in November's exercise. During the exercise it was observed that 1) additional information from the County's five transit districts was necessary in order to facilitate an adequate response in the event of an emergency,

and 2) improvements in mapping the location of the D/AFN population are also necessary for the same reasons.

County staff distributed the attached email (Office of Emergency Services: Transit Information.pdf) to AC Transit/BART, County Connection, Tri Delta Transit, and WestCAT. As of the printing of this report we have received information from AC Transit (who also responded for BART/East Bay Paratransit) and Tri Delta Transit.

County staff also initiated an effort to establish a mapping protocol for the D/AFN population in collaboration with staff from OES, Contra Costa Health Services, the advocate community, and others.

1.3 Update on County Obligations Relative to Administration of Taxicabs

The County does not have an ordinance to require a taxicab driver to obtain a permit to operate in unincorporated areas. This is a requirement under California Government Code (CA GC) Section 53075.5.

This omission was originally brought to the Committee at their November 13, 2012 meeting. At that meeting the specific activity, "Establishment of a Taxicab Driver Permit in the Unincorporated Areas of Contra Costa County" was referred to the Public Protection Committee. However, that referral has subsequently been retired. The broad topic of taxi services continues to be a referral to the Transportation, Water, and Infrastructure Committee (TWIC).

The County Administrator's Office made substantial progress in establishing a regional approach to complying with the applicable statute. In 2016 the City of Walnut Creek, representing the regional partners, approached the Public Managers Association (PMA) with a proposal. The PMA was not prepared to support the proposal as presented and staff continued to refine the approach. Subsequently, staff from the City of Walnut Creek (who was providing leadership on the effort) turned over and progress stalled.

However, just as this report was being posted Walnut Creek staff contacted the County and the process appears to be re-initiated.

RECOMMENDATION: DISCUSS any local issues of note, REFER the administration of taxicabs to the Public Protection Committee, and take other ACTION as appropriate.

2. REGIONAL

2.1 The Metropolitan Transportation Commission (MTC) has circulated the 2017 draft of their "Coordinated Public Transit-Human Services Transportation Plan". (Plan) The plan addresses the mobility needs of seniors, people with disabilities, people on low-incomes, and veterans and identifies strategies to guide MTC's efforts over the next four years. The Executive Summary and Introduction to the Plan are attached to this staff report.

Staff prepared the attached draft comment letter to MTC on the Plan and is recommending it be forwarded to the Board of Supervisors for consideration.

RECOMMENDATION: CONSIDER recommending the Board of Supervisors AUTHORIZE a letter to the Metropolitan Transportation Commission regarding the Draft 2017 Coordinated Public Transit-Human Services Transportation Plan, and take other ACTION as appropriate.

3. STATE

3.1: Legislative Report

The December State legislative reports from the County's advocate, Mark Watts, is attached. The report covers the following issues:

- Senate Bill 1 Repeal Efforts
- Regional Measure 3 (RM3) Bridge Tolls
- Iron Horse Trail

3.2: Public Works Senate Bill 1 (SB1) Project Update: The Committee asked that staff return

with reports as SB1 projects are implemented. Attached are updates from the Morgan Territory Road Slide Repair Project and the Alhambra Valley Road Washout Repair Project. Also attached are fact sheets regarding SB 1.

3.3 Request from the California State Association of Counties (CSAC) regarding the revised Rule 20 A General Conditions Agreement Program Background: Utilities annually allocate funds under Rule 20 to communities, either cities or unincorporated areas of counties, to convert overhead electric and telecommunication facilities to underground electric facilities. The recipient communities may either bank (accumulate) their allotments, or borrow (mortgage) future undergrounding allocations for five years at most.

Update: CSAC negotiated a new general conditions agreement with PG&E. The stated intent of the modification are to, "...to provide more cost certainty for project proponents and add efficiencies in project timing.". CSAC is requesting letters of support from localities the the Public Utilities Commission (PUC) in support of the modification.

CSAC materials on this issue are attached to this staff report.

RECOMMENDATION: DIRECT staff to bring the Public Works SB1 report to the full Board of Supervisors, DIRECT staff to draft a letter to the PUC in support of modification of the Rule 20a General Conditions, DISCUSS any other state issues of note, and take other ACTION as appropriate.

4. FEDERAL

No written report in December. However, *Item 12: RECEIVE Communication, News...* on this agenda includes information relative to transportation and infrastructure at the federal level.

RECOMMENDATION: DISCUSS any federal issues of note and take ACTION as appropriate.

Recommendation(s)/Next Step(s):

CONSIDER report on Local, State, and Federal Transportation Related Issues: Legislation, Studies, Miscellaneous Updates, take ACTION as appropriate, including CONSIDERATION of any specific recommendations in the report above.

Fiscal Impact (if any):

There is no fiscal impact.

Attachments

Office of Emergency Services: Transit Information

MTC DRAFT Coordinated Plan November 2017 ES-Intro.pdf

01-9-17 BOS to MTC re DRAFT Coordinated Plan v2

December State Legislative Report

CCC PWD SB1 Project Delivery Update December 2017

Senate Bill 1 Facts

CSAC 20a materials

John Cunningham

From: John Cunningham
Sent: Friday, December 01, 2017 2:15 PM
To: [General Manager/CEO]
Cc: Peter Engel; 'Marcelle Indelicato'; Maureen Toms; Anna Battagello
Subject: Request for Emergency Contact Information: Sheriff's Office of Emergency Services

[General Manager/CEO],

I'm following up on an emergency incident exercise that the Sheriff's Office of Emergency Services held yesterday. They need a contact list for all the transit districts that can be kept at the Emergency Operations Center. Marcelle Indelicato, an emergency planner w/the Sheriff's office (copied on this email), asked me to help compile the list.

Can you please provide as much information as possible below. Where necessary, please provide numbers for normal operating hours/after hours, fixed route/paratransit, landline/cell phone:

Phone Numbers

1. Agency designated first point of contact:
2. Dispatch:
3. Supervisor:
4. General Manager:

In addition to the emergency contact information above, can you please provide the contact information for your staff that can attend the occasional emergency operations training exercises that the Sheriff conducts?

Please let me or Marcelle know if you have any questions on this request.

Thanks in advance for your assistance.

- John

John Cunningham
Principal Planner
Contra Costa County
Department of Conservation and Development
30 Muir Road, Martinez, CA 94553

Direct Line: 925-674-7833
Main Transportation Line: 925-674-7209

Anna, please file this email here: COMDEV > Transportation > Transit > OES-AFN



COORDINATED PUBLIC TRANSIT- HUMAN SERVICES TRANSPORTATION PLAN

November 2017

DRAFT



METROPOLITAN TRANSPORTATION COMMISSION

Bay Area Metro Center
375 Beale Street, Suite 800
San Francisco, CA 94105
415.778.6700
www.mtc.ca.gov



METROPOLITAN TRANSPORTATION COMMISSION

DRAFT

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Transportation Agency

Libby Schaaf
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Cities of Contra Costa County

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Kearey Smith
Tom Buckley
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Shimon Israel
Demographic Analysis

Michele Stone
Miguel A. Osorio
Graphic Design and Production

This Plan was
completed in consultation with
**Nelson/Nygaard Consulting
Associates**

COORDINATED PLAN TECHNICAL ADVISORY COMMITTEE

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Golden Gate Transit

Tracy Repp
Sonoma County Human Services
Area Agency on Aging

Debbie Toth
Choice in Aging

Shawn Fong
City of Fremont

Melissa Reggiardo
SamTrans

Katherine Heatley
Outreach

Annette Williams
San Francisco Municipal
Transportation Agency

Liz Niedzela
Solano Transportation Authority

DRAFT

EXECUTIVE



DRAFT SUMMARY



“How can MTC and its partners provide mobility options for seniors, people with disabilities, veterans, and people with low incomes that are also cost efficient for the region?”

SETTING THE VISION

This is a forward-thinking, big picture plan for the region that guides MTC’s coordination with partners throughout the Bay Area.



This Coordinated Public Transit-Human Services Transportation Plans goes beyond its basic federal requirements—considering the mobility needs of seniors, people with disabilities, people on low-incomes, and veterans—and designates strategies to guide MTC’s efforts over the next four years.

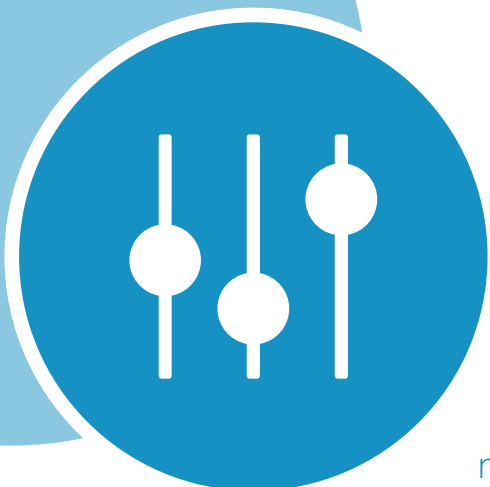
This plan asks the question:

How can MTC and its partners provide mobility options for seniors, people with disabilities, veterans, and people with low incomes that are also cost efficient for the region?

WHO IS SERVED?

The Coordinated Plan envisions a cost-effective expansion of services for seniors, people with disabilities, veterans, and those with low incomes.

Existing Targeted Services	Seniors	People with Disabilities	Veterans	Low-Income Populations
Fixed-route transit	✓	✓	✓	✓
ADA-mandated paratransit		✓		
Community-based shuttles	✓	✓	✓	✓
Private demand-response transportation	✓	✓	✓	✓
Subsidized fare or voucher programs	✓	✓		✓
Volunteer driver programs	✓		✓	
Information and referral	✓	✓	✓	✓
Travel training	✓	✓		
Mobility management	✓	✓	✓	✓

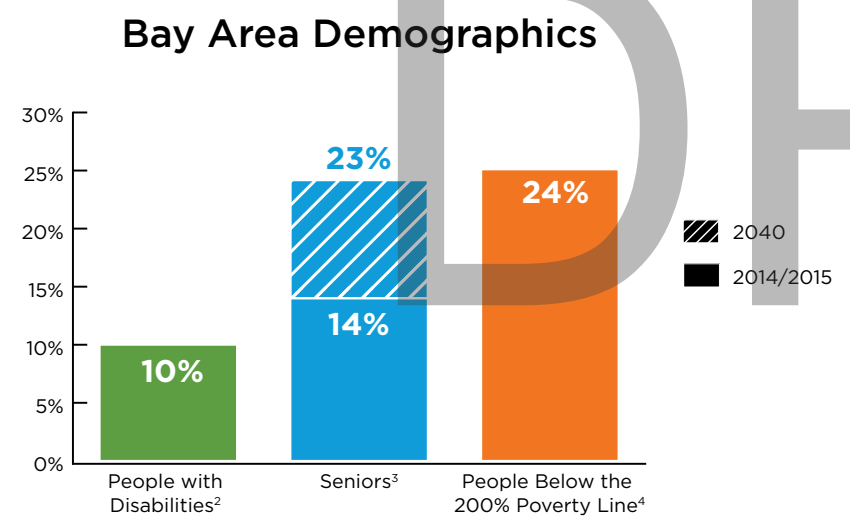


KEY CHALLENGES FOR THE REGION

The Bay Area's population is aging, and the portion of the population living in poverty has increased and suburbanized in the last decade. Combined with a growing share of the population that lacks access to a vehicle, this means that **fewer of the most vulnerable people in our region have access to opportunities.**

WHAT DOES THE DATA TELL US?

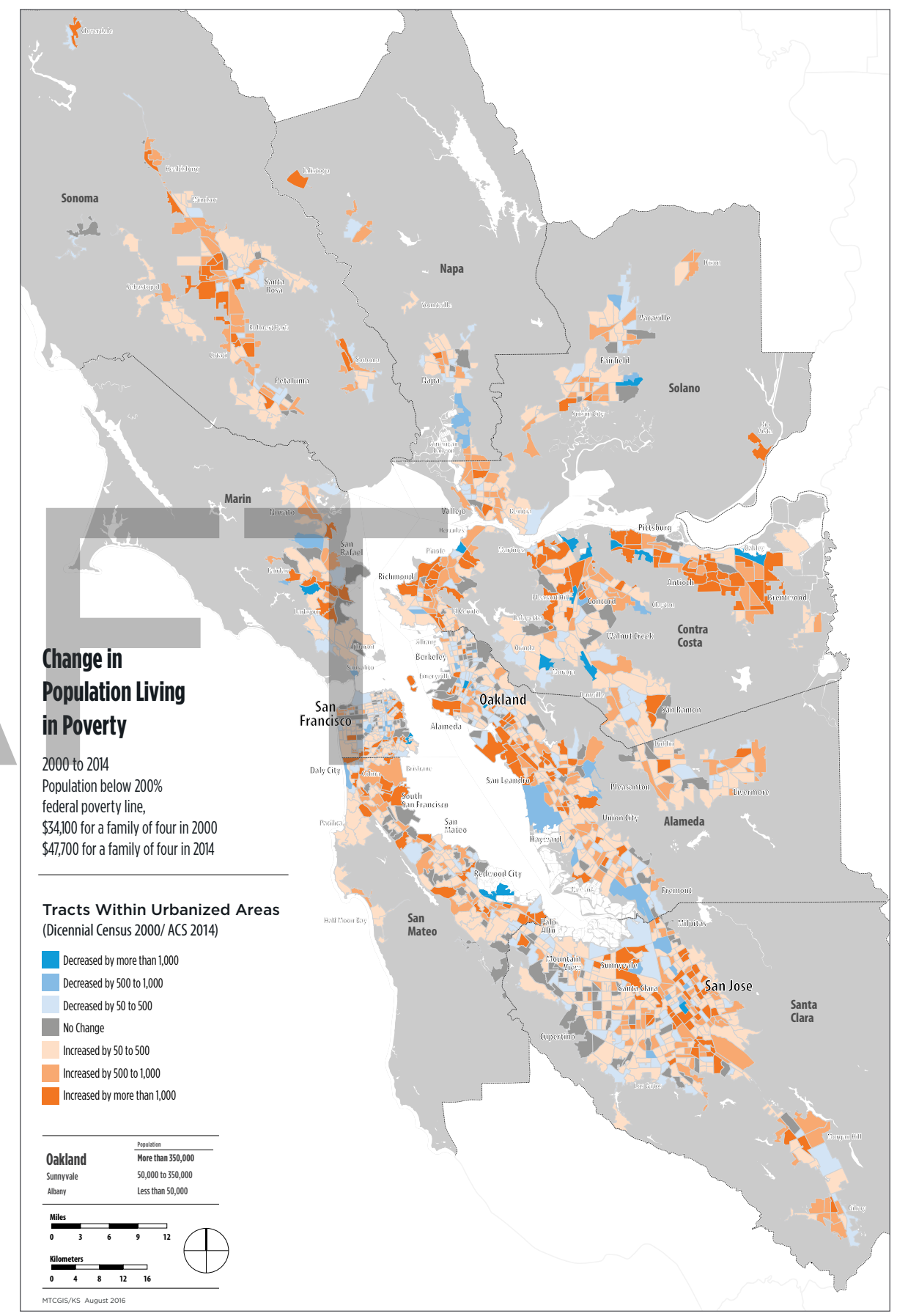
Predictions for the region's growth through the year 2040 indicate that the **senior population will grow from 14% of today's population to 23% of the 2040 population.**¹ However, those seniors are expected to stay healthy longer, with almost no growth expected in the portion of the population that is disabled.



The cost of providing paratransit is increasing. According to the Federal Transit Administration, between 1999 and 2012, the average cost per trip on ADA paratransit services increased 138%, from \$13.76 to \$32.74.⁵

Today, 24% live in poverty in the Bay Area. **Poverty has risen faster** in suburban than urban areas, particularly in Solano, Contra Costa, and Marin counties. Low-income populations increasingly have less access to public transit and public services.

1. 2014 American Community Survey 5-Year Estimate S0101; Metropolitan Transportation Commission and Association of Bay Area Governments, Plan Bay Area 2040 Projections, Scenario 2040_03_116
2. 2014 American Community Survey 1-Year Estimate S0103
3. 2014 American Community Survey 5-Year Estimate S0101; Metropolitan Transportation Commission and Association of Bay Area Governments, Plan Bay Area 2040 Projections, Scenario 2040_03_116
4. 2015 American Community Survey 1-year Estimate B17002
5. FTA Report No. 0081, Accessible Transit Services for All



WHAT DO REGIONAL STAKEHOLDERS SEE AS THE BIGGEST GAPS?

Representatives from over 30 Bay Area stakeholder groups were asked to identify the biggest mobility gaps faced by their constituents. These are the most common themes heard.

- **Spatial gaps**—areas of our region that are either difficult or impossible to reach by public transportation—continue to be a key need expressed throughout the region
- **Temporal gaps**—points in time that lack service—also constrain the mobility of target populations
- With regional consolidation of facilities and growing rates of disease, **healthcare access** is a major concern in the region
- Transit and paratransit **fares are unaffordable** for many people in all parts of the Bay Area
- **Funding needs** are growing faster than revenues
- Constituents recognize that **safety investments for pedestrians and people on bicycles** improve mobility for all, and increase access to transit
- While suggestions were made to leverage emerging mobility service providers to assist in solving mobility gaps, people are concerned about the **lack of accessibility of both taxis and ride-hailing services**
- Stakeholders highlight the importance of **transportation information availability** and associated referral services to steer people to gap-filling services
- Consistent with the 2013 Plan, **transfers** on both the fixed-route transit network as well as between ADA Paratransit service providers (when trips cross county lines, for example) are barriers

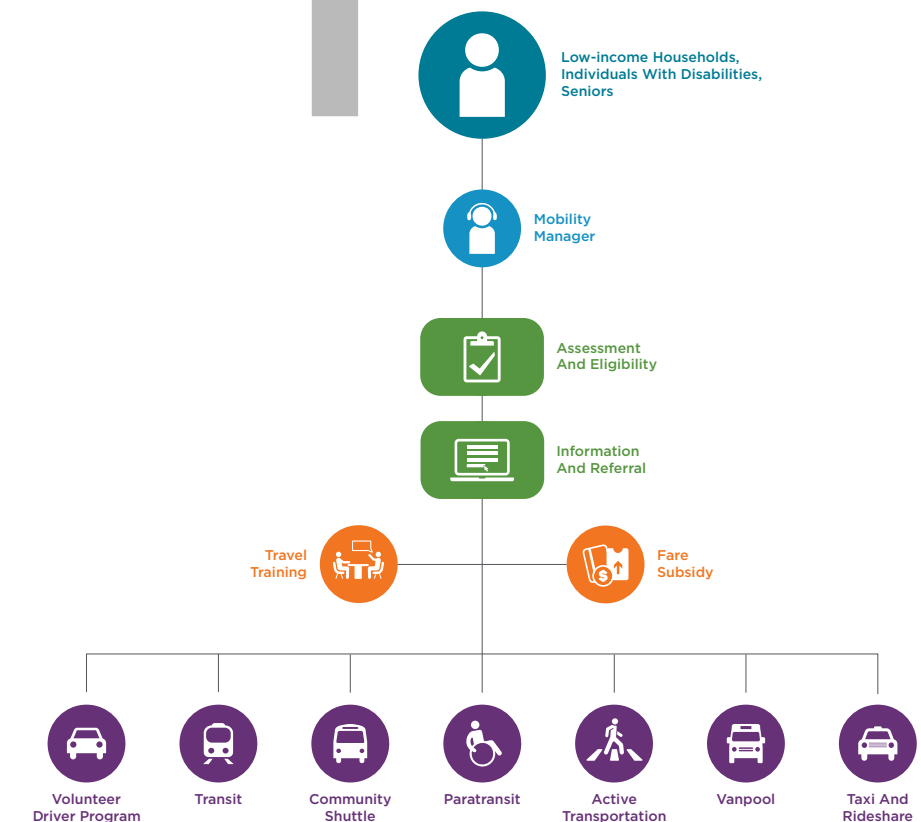
COORDINATION STRATEGIES

Strategies are big picture initiatives that MTC and its local partners can implement or facilitate. The plan identifies the following strategies for MTC and its partners:

IMPLEMENT COUNTY-BASED MOBILITY MANAGEMENT

Develop **County-Based Mobility Management Across the Region** that will direct passengers to all available transportation options and increase efficiency through coordination. A county-based mobility management program should include in-person eligibility assessments, travel training, and information and referral services.

The graphic below describes the typical Mobility Management process, in which an individual seeking mobility services works with a Mobility Manager to assess their needs, and to be referred to services, subsidy programs, or training opportunities for which they are eligible.





ACTION PLAN

To cost efficiently serve seniors, people with disabilities, veterans, and people with low incomes with a range of mobility options, this plan outlines key actions for MTC and its regional partners over the next four years.

IMPROVE PARATRANSIT

Address Access to Healthcare by supporting cost sharing agreements between transportation providers and healthcare clinics, and by exploring Medi-Cal cost recovery programs for public and private providers in the Bay Area.

Reduce the Cost of Providing ADA Paratransit. Implementation of mobility management strategies will help address paratransit per-rider costs, including in-person eligibility assessments and software upgrades to allow for trip screening or Interactive Voice Response systems.

Make it Easier for Customers to Pay by exploring potential solutions with Clipper 2.0

PROVIDE MOBILITY SOLUTIONS TO SUBURBAN AREAS

Increase Suburban Mobility Options. MTC can provide guidance on public-private partnerships, increasing the availability of subsidized same-day trip programs, increasing the functionality of information and referral systems such as “one-call/one-click” solutions, and subsidizing low-income carshare pilots or vehicle loan programs.

REGIONAL MEANS-BASED TRANSIT FARE PROGRAM

Pilot Means-Based Fares. To make transit more affordable for low-income people, MTC and partners should implement a financially viable and administratively feasible pilot program.

SHARED AND FUTURE MOBILITY

Advocate for the Accessibility of Shared Mobility Solutions and Autonomous Vehicles. MTC and partners ensure equity and accessibility of bikeshare, carshare, ride-hailing, and other new mobility options by issuing policy guidance and technical assistance for agencies and non-profits entering into partnerships.

IMPROVE MOBILITY FOR VETERANS

Support Veterans’-Specific Mobility Services. Serve localized and long-distance medical trips for veterans and create opportunities for veterans to advise MTC on mobility needs.



KEEP THE MOMENTUM (6-12 months)

In the first year of the 2017 Coordinated Plan’s adoption, MTC and its regional partners—transit operators, human service providers, Congestion Management Agencies, and others—should keep the momentum from the planning process by setting policies and establishing internal frameworks.

IMPLEMENT THE BASICS (1-2 years)

One to two years after adoption, the region should begin to see visible impacts of the planning process, with service pilots, coordination summits, and other basic programs being implemented.

BUILD OUT THE PROGRAM (3-4 years)

In the three to four year time frame, the major strategies for the region—county-based mobility management, means-based fares, in-person eligibility, access to health care, and an open dialog with shared mobility service providers—should come to fruition.



FOR MORE INFORMATION

Please contact:
Metropolitan Transportation Commission
415.778.6700
mtc.ca.gov

TABLE OF CONTENTS

DRAFT

1. INTRODUCTION AND METHODOLOGY 2

Plan Goals 3

Planning Requirements 3

Federal and State Roles to Promote Human Service Transportation Coordination 4

How was the plan developed? 5

2. BAY AREA DEMOGRAPHICS 8

Key Findings 9

Seniors 9

People With Disabilities 12

Poverty 14

Access To Vehicles 18

Veterans 19

3. TRANSPORTATION RESOURCES 24

Regional Transportation Resources 25

Overview of Projects Funded Under Previous Coordinated Plans 38

4. OUTREACH AND STAKEHOLDER GAP IDENTIFICATION 42

Summary of Gaps 43

Community Input Opportunities 45

Summary Of Feedback By County 47

5. REGIONAL STRATEGIES FOR COORDINATION 50

Strategy 1: County-Based Mobility Management 51

Strategy 2: Improve Paratransit 53

Strategy 3: Provide Mobility Solutions To Suburban Areas 56

Strategy 4: Means-Based Fares 58

Strategy 5: Shared And Future Mobility Opportunities 58

Strategy 6: Improve Mobility For Veterans 59

Recommendations Timeline 59

Progress Reporting 60

TABLE OF APPENDICES

APPENDIX A 62
Demographics

APPENDIX B 66
List of Feedback Themes

APPENDIX C 68
List of Feedback Comments

APPENDIX D 102
Consolidated Transportation Service Agencies – MTC Designation Process

APPENDIX E 104
Project Types Eligible for Funding

APPENDIX F 110
Promote Walkable Communities, Complete Streets, and the Integration of Transportation and Land Use Decisions

APPENDIX G 112
What is Mobility Management?

TABLE OF FIGURES

Figure 2.1 Percent of Senior Population (2000-2040) 10

Figure 2.2 Percent Change in Seniors (local geography) 11

Figure 2.3 Percent of Population with a Disability (2010-2014)..... 12

Figure 2.4 Percent of Seniors with a Disability (2010-2014) 13

Figure 2.5 Percent of Population Living in Poverty (2000-2015)..... 15

Figure 2.6 Percent of Seniors Living in Poverty (2015) 16

Figure 2.7 Percent Change for Population Living in Poverty (local geography) 17

Figure 2.8 Comparison of General Public to Seniors without Access to a Vehicle (2015)..... 18

Figure 2.9 Percent of Population (18 and over) who are Veterans (2000-2014)..... 19

Figure 2.10 Percent of Veterans who are Seniors (2014) 20

Figure 2.11 Percent Change in Veterans (local geography) 21

Figure 3.1 Mobility Management Process 25

Figure 3.2 Types of Transportation Resources in the Bay Area 26

Figure 3.3 Providers of Fixed-Route and ADA-Mandated Paratransit in the San Francisco Bay Area 28-29

Figure 3.4 Volunteer Driver Partners in the Bay Area 33

Figure 3.5 Information and Referral Services in the San Francisco Bay Area 34

Figure 3.6 Mobility Management Providers in the San Francisco Bay Area 35-36

Figure 3.7 FTA Specialized Program Funding by Urbanized Area (UA), Since 2012 Coordinated Plan 38

Figure 3.8 JARC/5307 Funding by Project Type, FY 2011 – FY 2016 39

Figure 3.9 New Freedom Funding by Project Type, FY 2012 40

Figure 3.10 5310 Funding by Project Type, FY 2013 – FY 2017 40

Figure 4.1 Community Engagement and Outreach Activities 45-46

Figure 5.1 Ride Connection Support Services Provided to Service Partners 52

Figure 5.2 Access Services Paratransit Payment Methods 55

Figure 5.3 Implementation Timeline 60

Figure A.1 Existing 2014 Population Breakdown 63

Figure A2 Veteran Statistics..... 65

Figure B.1 List of Feedback Received in Order of Frequency 67

Figure C.1 List of Feedback Comments 69-100

Figure E.1 Project Types Eligible for Funding 105-108

DRAFT

1. INTRODUCTION AND METHODOLOGY

To serve the needs of seniors, people with disabilities, those with low incomes, and veterans, the 2017 Coordinated Public Transit-Human Services Transportation Plan sets regional priorities for transportation investments and initiatives for human services and public transit coordination. It also serves as a federally required update to the 2013 Coordinated Public Transit-Human Services Transportation Plan, and is being completed in concert with the region's long-range regional transportation plan, Plan Bay Area 2040.

Through the involvement of the Technical Advisory Committee (TAC)—a group of regional stakeholders representing the plan's target populations,¹ this Coordinated Plan considers numerous existing or ongoing planning efforts focused on the transportation needs of low-income, senior, disabled, and veteran residents in the Bay Area. These include the Means-Based Fare Study and the Plan Bay Area Equity Analysis. Extensive, locally targeted outreach with residents and users of the system, regional stakeholders, and local advisory groups identified the transportation gaps that strategies and projects were designed to address.



¹ The 2017 Coordinated Plan TAC includes representatives from Golden Gate Transit, Sonoma County Human Services Area Agency on Aging, Choice in Aging (Contra Costa County), City of Fremont, SamTrans, Outreach (Santa Clara County), San Francisco Municipal Transportation Agency, and Solano Transportation Authority.

The Board of Supervisors

County Administration Building
651 Pine Street, Room 106
Martinez, California 94553

John Gioia, 1st District
Candace Andersen, 2nd District
Diane Burgis, 3rd District
Karen Mitchoff, 4th District
Federal D. Glover, 5th District

Contra Costa County



David Twa
Clerk of the Board
and
County Administrator
(925) 335-1900

January 9, 2018

Honorable Jake Mackenzie, Chair
Metropolitan Transportation Commission
375 Beale St #800
San Francisco, CA 94105

Subject: DRAFT Comments on the November 2017 Draft Coordinated Public Transit-Human Services Transportation Plan. DRAFT

Dear Chair Mackenzie:

On behalf of the Contra Costa County Board of Supervisors, I am writing to provide input on the Metropolitan Transportation Commission's (MTC's) November 2017 Draft Coordinated Public Transit-Human Services Transportation Plan. The Plan addresses the mobility needs of seniors, people with disabilities, people on low-incomes, and veterans and identifies strategies to guide MTC's efforts over the next four years.

We applaud the plan which provides a focused implementation timeline including the initial strategy of recognizing mobility management as a regional priority. The candid statement provided in the plan, "*Current senior-oriented mobility services do not have the capacity to handle the increase in people over 65 years of age...*" should be accompanied by equally unambiguous strategies to address the situation. The coordination activities listed in the implementation section are necessary and a positive step.

However, we should consider what the practical impacts of coordination requirements have had in the decade since they have been imposed. This history is well covered in the plan, it may be time to consider if "coordination" and the outcomes are the best we can do. The limitation of coordination as an effective strategy is described in the seminal book, "*Implementation: How Great Expectations in Washington Are Dashed in Oakland...*". The book goes in to some detail on the topic of coordination but summarizes the strategy as follows, "*Invocation of coordination does not necessarily provide either a statement of or a solution to the problem, but it may be a way of avoiding both when an accurate prescription would be too painful.*"

In order to make progress, technical assistance and funding should be provided, but limited to local activities accompanied by concrete strategy that will break down service silos, emphasize a "continuum of services", fundamentally improve the service experience (via a one-call/one-click strategy for example), and be accompanied by necessary intergovernmental agreements that assure improved service and increased efficiency. Without such funding, local jurisdictions are typically faced with using paratransit operating revenue to invest in capital improvements. As the coordinated plan points out, the system is already underfunded making this an unpopular choice.

The strategy, "Improve Paratransit" includes the action to "...make it easier to pay for ADA paratransit services". Thank you for including this concept, it highlights a critical component of an effective mobility management operation. The accounting function is critical and a full service mobility management operation can act as a funding aggregator on behalf of the client. Too often superficial discussions on how to improve paratransit focus on the vehicle itself (TNCs) or other emerging technologies when in reality, the solution is much more mundane and complex.

[internal staff comment: Address transfer trips and "Roadmap Study"]

Broadly, sophistication in the transportation planning field has increased, green bike lanes, express lanes, complete streets, etc. We urge MTC to continue this trend in the paratransit field and offer some concrete, funded strategies to address the "lack of capacity" highlighted in the plan.

Sincerely,

Federal D. Glover, Chair
Contra Costa County Board of Supervisors
Supervisor, District V

C: Amy Worth, MTC Commissioner
Drennen Shelton, MTC Staff
RMMG c/o Naomi Armenta, Nelson Nygaard

Smith, Watts & Hartmann, LLC.

Consulting and Governmental Relations

MEMORANDUM

TO: Transportation, Water, and Infrastructure Committee

FROM: Mark Watts

DATE: December 2, 2017

SUBJECT: December TWIC Report

SB 1 Repeal Initiatives - Update

There are two separate initiative measures introduced in 2017, with each recently having received their respective official Title and Summary (to be affixed on the signature petitions). For reference, these two Title and Summary statements are set forth here:

#1 AM T. Allen Initiative

Statutory measure - 365,000 valid signatures needed

Title & Summary (Initiative # 17-0004):

ELIMINATES RECENTLY ENACTED ROAD REPAIR AND TRANSPORTATION FUNDING BY REPEALING REVENUES DEDICATED FOR THOSE PURPOSES.

Eliminates recently enacted state and local transportation funding for repair and maintenance of streets, highways, bridges, safety projects, and public transportation by repealing portions of the tax on gasoline (\$0.12 per gallon) and diesel fuel (\$0.20 per gallon), sales and excise taxes on diesel fuel (4% per gallon), vehicle registration fees (\$25 - \$175, depending on vehicle value), and \$100 zero- emission vehicle fee.

#2 Carl DeMaio (Give Voters A Voice) Initiative:

Constitutional Measure - 585,000 valid signatures needed

Title & Summary (Initiative # 17-033; Amdt #1):

ELIMINATES RECENTLY ENACTED ROAD REPAIR AND TRANSPORTATION FUNDING BY REPEALING REVENUES DEDICATED FOR THOSE PURPOSES.

Requires any measure to enact certain vehicle fuel taxes and vehicle fees be submitted to and approved by the electorate.

Alike as these two measures are in their targeted effort to repeal the SB 1 taxes, the proponents of the two initiatives to repeal SB 1 have undertaken different tacks this past week.

First, Assemblymember Travis Allen, author of the initiative that would directly repeal all of SB 1, (Initiative # 17-0004) attacked the Court of Appeal which had upheld the Title and Summary for the initiative issued by the Attorney General (AG) and announced that he would seek review of the appellate decision in the state Supreme Court.

Proponents of the initiative that would amend the state constitution and effectively repeal the funding under SB 1, have begun their signature gathering efforts. Carl DeMaio, the former Congressional Candidate and radio talk show host in San Diego, presented himself as the face of the initiative by launching a media campaign to solicit signatures. Interestingly, the ads seemed to feature DeMaio more than the initiative itself. Nonetheless, about \$675,000 has been contributed to the campaign committee supporting this initiative, so it cannot simply be dismissed as an exercise in self-promotion.

Additionally, the proponents of the SB 1 repeal measures are actively spreading false information and flat-out untruths full of potholes in their zeal to gain signatures. The Fix Our Roads Coalition (which included CSAC, League of Cities, Transportation California and many other organization) has prepared a Myth Buster page on their website: <http://fixcaroads.com/sb-1-myths-vs-facts/> as an early step in forming into a campaign committee to oppose the initiatives, should they qualify for the statewide ballot.

Regional Measure 3 – Timeline

Senate Bill 595 (Beall), authorized BATA to place on the ballot in the nine Bay Area counties a bridge toll increase of up to \$3 to fund a \$4.5 billion expenditure plan of 35 specific projects and capital programs, along with an ongoing annual operating program for public transit.

BATA is to determine both the amount of the toll and phasing in of the increase and determine the date when the measure appears on the ballot. BATA may submit the measure for consideration at any statewide election, and may submit the measure multiple times up to the \$3 maximum toll hike.

For a June 2018 ballot measure, the deadline for action by the various boards of supervisors is March 9, 2018. Based on conversations with staff at the various boards of supervisors and offices of registrar in the region, action by BATA in January is recommended so as to allow ample time for translations and placement on the ballot prior to March 9 by the boards of supervisors.

In preparation to undertake these activities, MTC will conduct a workshop on December 20 to cover amount of toll increase, phasing, and possible congestion pricing as well as, discounts for FasTrak and two-bridge toll payers.

The components of a BATA resolution to place the measure on the ballot are as follows:

- A request that each of the region's nine counties place the measure on the June 2018 ballot;
- The proposed rate of the toll increase, including any discounts applicable to FasTrak® customers or users of more than one bridge as part of their commute;
- The schedule for a bridge toll increase to take effect, including any proposed phase-in periods;
- The ballot question (75-word limit);
- The ballot measure (a summary of RM 3 that SB 595 requires MTC to prepare); and
- A sample resolution placing the measure on the ballot for county boards of supervisors.

Iron Horse Trail

While Caltrans is sympathetic to assisting the County in seeking release from the strictures surrounding the 1980's grants, they recently have found a possible statutory issue with the fund source.

To address possible solutions to this development, I have a consultation scheduled with the new Chief Consultant to the Assembly Transportation Committee to cover the statutory framework of the original fund sources. In addition, I have a briefing session with the Transportation Committee Chair to work on an approach to the Iron Horse grants in early January.

SB1 (new gas tax) Project Delivery Update

Morgan Territory Road Slide Repair Project

The road was reopened to traffic on November 18th after being closed to traffic in February 2017 when a landslide occurred during winter storms. The project includes installation of two structural retaining wall systems, excavation and backfill between the walls, reconstruction of pavement, drainage improvements, and pavement striping. The project also includes the relocation of water, electric and telephone utilities to accommodate construction. This quality repair project represents the efforts and cooperation of many project partners as well as local, state and federal efforts to expedite this repair project. The required local match of this project was provided by SB1 (new gas tax) with the remaining funded through FEMA and Cal OES.



Delivered in 9 months!



Alhambra Valley Road Washout Repair Project

The road was reopened to traffic on November 2nd after being closed to traffic since January 2017 when the road washed out during winter storms. The new bridge over Pinole Creek replaces a 1930's era 9-foot steel pipe culvert. The new clear span bridge allows for unimpeded fish passage, specifically steelhead. This quality repair represents the efforts of engineers, biologists, and construction contractors as well as local, state and federal efforts to identify funding to expedite the repair to this key plink in the infrastructure. The required local share of this project was funded with SB1 (new gas tax) with the remaining funds coming from the Federal Highway Administration.



Photo provided by Earl Combs

Delivered in 10 months!



SB 1 Fact Sheet

Problem: Without dedicated, accountable funding to fix crumbling infrastructure, California's roads are in disrepair.

48th

California ranks **48th** in the nation in the condition of our highways.

94
million

Californians waste **94 million hours** a year sitting in traffic congestion.

87%

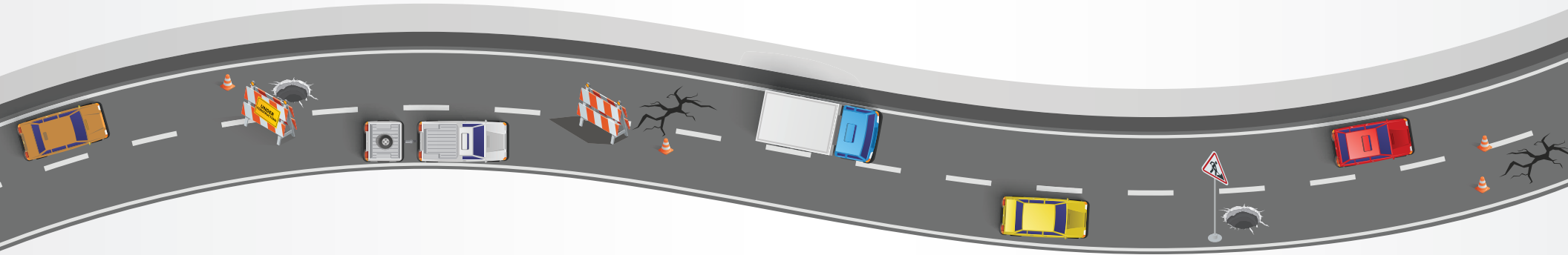
87% of California's counties have an Average Pavement Rating of "At Risk" or "Poor."

\$762

The average Californian spends **\$762** a year on repairs for road-caused damage.

60%

6 of the nation's 10 worst urban area pavement conditions are in California.



70%

14 of the nation's 20 most congested transportation corridors are in California.

55%

55% of local bridges will require rehabilitation or replacement within the next 10 years.

100%

All current gas and diesel tax revenues are spent for transportation purposes.

50%

Because of inflation and increased fuel economy, current gas tax revenue covers **less than one-half** of the costs they covered in 1994. *(when the gas tax was last raised)*

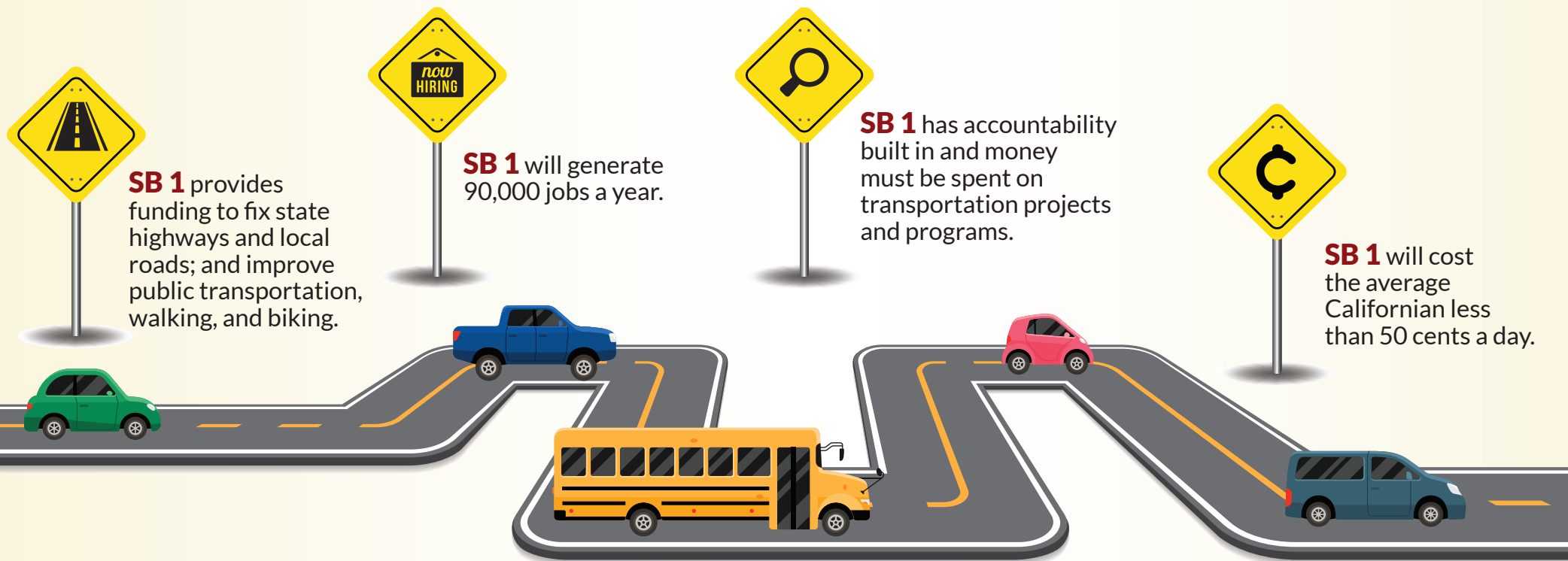
\$300
billion

California needs nearly **\$300 billion** in investment to have our transportation system meet our needs.

SB 1 Fact Sheet



Solution: SB 1 is the “Road Repair and Accountability Act” passed by the Legislature in 2017.



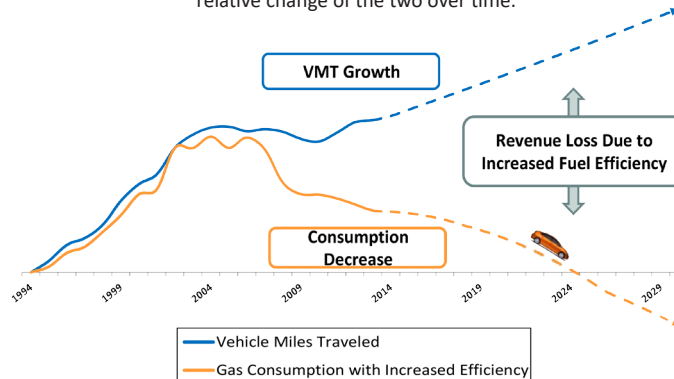
10-Year Statewide Investment Programs (50%)

Fix-it-First Highways	\$15 billion
Bridge and Culvert Repair	\$4 billion
Trade Corridor Investments	\$3 billion
Solutions for Congested Commute Corridors	\$2.5 billion
Parks Funding for Ag, Off-Highway Vehicle & Boating	\$800 million
STIP (State Share)	\$275 million
Freeway Service Patrol	\$250 million
California Public Universities Transportation Research	\$70 million

10-Year Local or Regional Investments Programs (50%)

Fix-it-First Local Roads	\$15 billion
Transit Capital & Operations	\$7.5 billion
Local Partnership Funds	\$2 billion
Active Transportation Program Bicycle & Pedestrian Investments	\$1 billion
STIP (Local Share)	\$825 million
Local Planning Grants	\$250 million
TOTAL	\$52.4 billion

In this chart, same starting point in 1994 has been used for Vehicle Miles Travelled and Fuel Consumption to enable comparison to the relative change of the two over time.



10-Year Revenue Sources

Fuel Taxes	
Gas Excise	\$24.4 billion
Diesel Excise	\$7.3 billion
Diesel Sales	\$3.5 billion
Vehicle-Based Fees	
Value-Based Transportation Improvement Fee	\$16.3 billion
ZEV Fee Commencing in 2020	\$2 billion
One-Time Repayment of Transportation Loans	
Repaying Outstanding Loans from General Fund	\$706 million
TOTAL	\$52.4 billion



SB 1: Debunking the Myths

The Road Repair and Accountability Act of 2017 (SB 1) is a long-term transportation solution that will provide new revenues for road safety improvements, fill potholes and repair local streets, highways, and bridges. SB 1 will provide transportation investments in **every** community, improving the quality of life for all Californians. SB 1 includes strict accountability provisions to reduce waste and bureaucracy and dedicates all funds to transportation improvements. Opponents of SB 1 are spreading false information and flat-out untruths full of potholes.

We want to cement the facts.

1. MYTH— *Practically none of the SB 1 funds will be used to fix our roads.*



SB 1 invests more than \$5 billion annually directly for maintenance, repair, and safety improvements on state highways, local streets and roads, and bridges. SB 1 also provides investments in mass transit to help relieve congestion. In total, SB 1 will provide:

- \$1.5 billion for the State Highway Operations and Protection Program
 - \$1.5 billion for local streets and roads
 - \$400 million for bridge maintenance and repairs
 - \$300 million for goods movement and freight projects
 - \$275 million for congested corridors and relief management
 - \$200 million for the Local Partnership Program to match locally generated transportation funds
 - \$100 million for the Active Transportation Program to improve safety and expand access on streets, roads and highways for bicyclists and pedestrians.
 - \$750 million for mass transit
-

2. MYTH— *SB 1 funds go directly into the state's General Fund, meaning there's zero guarantee the money will be used to fund transportation improvement projects.*



Revenues go directly into transportation accounts and are constitutionally protected.

Article XIX of the California Constitution already protects the gasoline excise tax and vehicle registration fees, and a portion of the sales tax on diesel, and dedicates them to transportation purposes. This accounts for about 70% of the revenues generated by SB 1. ACA 5, a constitutional ballot measure which will go before the voters in June 2018, extends these same constitutional protections to the remaining 30% of new revenues generated by SB 1. It's also important to remember, all gas tax moneys that were loaned in prior decades to the General Fund will have been repaid under SB 1.

3. MYTH— *There is no oversight.*



SB 1 creates a new Office of the Inspector General (IG) charged with overseeing projects and programs to ensure all SB 1 funds are spent as promised and to reduce bureaucracy, waste and red tape. The IG is required to report annually to the state Legislature.

Furthermore, SB 1 has significant accountability and transparency provisions designed to ensure the public has full access to information on how their tax dollars are being invested. Cities and counties must publicly adopt and submit to the state a planned list of projects and year-end reporting that accounts for every single dollar of SB 1 revenue they receive. Bottom line: SB 1 includes provisions to streamline projects by cutting red tape to ensure transportation funds are spent efficiently and effectively.

4. MYTH— *SB 1 will not relieve congestion or add new lanes.*



SB 1 dedicates hundreds of millions of dollars toward transportation improvements that will directly relieve congestion on our streets, roads and highways. For example, SB 1 contains funds to repair crumbling roads and freeways, which cause bottlenecks and traffic snarls.

SB 1 contains funds to improve interchanges and to invest money into intelligent transportation systems, such as ramp meters, speed management systems, etc. The congested corridors and freight funds will be used to relieve choke points, add capacity in corridors and get goods and people moving faster and safer. Finally, SB 1 restores funding to the State and Regional Transportation Improvement Programs (STIP and RTIPS) which provide the state and every county with the capacity to continue to make necessary roadway and highway lane upgrades or improvements.

5. MYTH— *California can dedicate existing General Fund revenues to fix transportation.*



California has a combined need of over \$130 billion over the next 10 years just to bring the state highway and local street and road systems into a good and safe condition. If we were to use funds from the General Fund, we would need to pull \$130 billion from important areas like education, healthcare, public safety, and other programs that Californians rely upon.

SB 1 follows the user-pay model where everyone pays their fair share and all drivers pay a little more to fix the roads they drive on. It's a responsible, accountable way to fix our roads.

6. MYTH— *California already has the highest gas tax in the nation.*



Figures from the Tax Foundation and the American Petroleum Institute show Pennsylvania tops out as the highest in the nation. California's gas taxes haven't been raised in more than 20 years and, as a result, transportation improvement funding simply hasn't kept pace with inflation, leading to the backlogs of unfunded infrastructure. SB 1 changes that.

Since 2013, 26 states have increased gas taxes and other transportation revenues to fix their roads and bridges. In fact, of those 26 states, 17 are governed by Republicans.

7. MYTH— *California's working families and businesses cannot afford this tax increase.*



California motorists currently pay \$763 per year, on average, in extra vehicle repair costs due to wear and tear because of the poor condition of our roads. With SB 1, CA drivers will save money by driving on improved roads and will need fewer vehicle repairs.

8. MYTH— *According to polling, Californians oppose the gas tax increase. They will support a ballot measure to repeal SB 1.*



Polls consistently show voters are fed up with California's bad roads and will support new revenues to get them fixed. If a repeal measure makes it on the November 2018 ballot, we are confident voters will want to preserve funding to provide safer roads and bridges, improve congestion, and fix potholes.

9. MYTH— *California Gov. Jerry Brown has proposed "diverting 30 percent of the funding" from the state's gas tax increase "to non-road related projects like building parks and lifeguards."*



A percentage of the existing gas tax revenue related to fuel sales from boats, agricultural equipment, and other off-highway vehicles (quads, dirt bikes) has always gone toward supporting infrastructure related to these economic and recreational activities. The percent of gas tax revenues collected from these sources is two-percent (2%).

10. MYTH— *SB 1 funds are being diverted to CSU and UC for research.*



SB 1 directs \$7 million (one-tenth of one percent of total SB 1 revenues) to CSU and UC transportation research institutions for research directly related to improving transportation technology, practices, materials, and impacts to the environment.

11. MYTH— *Some of the funds raised by SB 1 will be used to repay outstanding loans from certain transportation funds.*



All outstanding transportation loans are being repaid by the General Fund. In fact, the FY 2016-17 state budget already started to repay those loans. SB 1 requires all loans to be repaid by 2020.

12. MYTH— *According to the state legislative analyst, Caltrans is overstaffed by 3,500 positions.*



Caltrans staffing levels are currently at the lowest they've been in a decade. Additionally, SB 1 mandates that the California Department of Transportation "shall implement efficiency measures with the goal to generate at least one hundred million dollars (\$100,000,000) per year in savings to invest in maintenance and rehabilitation of the state highway system."

13. MYTH— *SB 1 dollars will be diverted to fund high-speed rail.*



No funds raised from SB 1 will be used to fund high-speed rail. California's state-maintained transportation infrastructure will receive roughly half of SB 1 revenue: \$26 billion. The other half will go to local roads, transit agencies and an expansion of the state's growing network of pedestrian and cycle routes. There is no remaining balance that could be used for the high-speed rail project. A full overview of how the funds are allocated [can be found here](#).

John Cunningham

Subject: FW: Friendly Reminder: Support Letters: Rule 20 A Revised General Conditions Agreement
Attachments: CSAC Comments - Rule 20A Advice Letter 10 25 17.pdf; PGE AL 5166-E.PDF

From: Kiana Valentine [mailto:kvalentine@counties.org]
Sent: Friday, December 01, 2017 12:24 PM
To: Kiana Valentine <kvalentine@counties.org>
Cc: Chris Lee <clee@counties.org>; Merrin Gerety <mgerety@counties.org>
Subject: Friendly Reminder: Support Letters: Rule 20 A Revised General Conditions Agreement

Pursuant to our conversation at the CEAC Land Use Policy Committee meeting earlier this week, this email serves as a friendly reminder to counties to submit letters of support to the CPUC regarding the revised Rule 20 A general conditions agreement PG&E recently resubmitted and that reflect the agreement CSAC/CEAC negotiated with PG&E (attached). I've also attached the CSAC letter to CPUC which counties should feel free to use as a template.

Currently, the Commission is "studying" the advice letter and is considering incorporating the general conditions agreement into the larger rulemaking on the Rule 20 A program. This could extend the Rule 20 A general conditions issues by another 12-18 months. Support letters from individual counties to the CPUC requesting expeditious approval of the Rule 20 A revised general conditions agreement could help impress upon the CPUC this issue should be resolved without any further delay.

It's more important to register your support with the CPUC by Wednesday (12/6) than the content of the letter. That being said, as time allows, please feel free to add localized information about what Rule 20 A would mean to your counties.

Please let me know if you have any questions.

Thanks, Kiana

Kiana Valentine
Senior Legislative Representative
Housing, Land Use, and Transportation
California State Association of Counties®
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® October 25, 2017

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CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Re: Advice 5166-E - Revisions to Sample Form No. 79-1127, "Agreement to Perform Tariff Schedule Related Work, Rule 20A General Conditions"

The California State Association of Counties (CSAC) submits the following comments in response to the above-referenced advice letter.

CSAC is a non-profit association representing the interests of California's 58 counties. In particular, CSAC is submitting these comments on behalf of our members with respect to the Rule 20A General Conditions advice letter. Rule 20A provides important funding to cities and counties for conversion of existing overhead electric facilities to underground. The projects funded through Rule 20A provide significant benefits to the residents and commercial property owners in the cities and counties in PG&E's territory.

CSAC appreciates PG&E's extensive work with our organization, representatives of individual counties, and other local government representatives through an open and transparent process to revise the Rule 20A General Conditions over the past seven-years. The revised form represents a carefully negotiated compromise that not only provides greater clarity to the roles and responsibilities for Rule 20A projects, but also facilitates project execution and helps reduce the overall timeline for project completion. Moreover, CSAC fully expects that the revised General Conditions and the additional certainty they provide will lead to the immediate implementation of Rule 20A-funded projects and a reduction in the current work credit backlog.

Given the extensive effort undertaken to revise the Rule 20A General Conditions and the significant benefits to the ratepayers, both residential and commercial, that this program provides within PG&E's service territory, CSAC hopes that the revised General Conditions will become effective without delay.

Sincerely,

A handwritten signature in blue ink that reads 'Kiana L. Valentine'.

Kiana L. Valentine
Senior Legislative Representative
California State Association of Counties

cc: Erik Jacobson, Director, Regulatory Relations, PG&E

October 24, 2017

Advice 5166-E

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Revisions to Sample Form No. 79-1127, "Agreement to Perform Tariff Schedule Related Work, Rule 20A General Conditions"

Pacific Gas and Electric Company (PG&E) hereby submits this filing pursuant to California Public Utilities Commission (CPUC or Commission) General Order 96-B, Section 8.1, to revise Form 79-1127, "Agreement to Perform Tariff Schedule Related Work, Rule 20A General Conditions", for use on Rule 20A projects.

Purpose

PG&E is submitting modifications to its "Agreement to Perform Tariff Schedule Related Work, Rule 20A General Conditions," (Form 79-1127) in order to further clarify roles and responsibilities with cities and counties (Governmental Bodies) on Rule 20A projects. The modifications are intended to provide more cost certainty for project proponents and add efficiencies in project timing.

Background

On December 31, 2010, the Commission approved Advice 3767-E establishing Form 79-1127, which memorializes the roles and responsibilities of both the Applicant and PG&E on Rule 20A projects.

Since the inception of Form 79-1127, Governmental Bodies have expressed the need to revise Form 79-1127 to add further clarity. As a result, since 2012 PG&E worked extensively with various Governmental Bodies to further streamline the Rule 20A process. After working collaboratively with the California State Association of Counties (CSAC), the League of California Cities (LOCC), and interested local cities and counties, PG&E is now filing revisions to Form 79-1127 (Revised Form 79-1127) that further clarify the responsibilities of the Governmental Bodies and PG&E and the use of the Rule 20A allocation funds to project related costs. The attached Revised Form 79-1127 is a product of over six years of open, transparent discussions and negotiations between PG&E and Governmental Bodies and represents a compromise between

PG&E, CSAC, LOCC and various cities and counties that will help facilitate project execution of the Rule 20A projects.

On October 31, 2016, PG&E filed Advice Letter 4948-E to submit the Revised Form 79-1127 to the Commission for approval. On November 21, 2017, CSAC submitted comments of support for PG&E's filing and approval of the Revised Form 79-1127. However, on the same day of CSAC's comments, the City of San Jose submitted a Protest objecting to several terms included in the Revised Form 79-1127 and urged the Commission to reject Advice Letter 4948-E. Because it appears from the Protest that there is no longer agreement among the cities and counties, PG&E withdrew its Advice Letter to determine how to further proceed with cities and counties.

PG&E hereby re-submits this Advice Letter for timely approval of the Revised Form 79-1127, which will allow PG&E and Governmental Bodies to move forward with Rule 20A projects that have currently been on hold due to years of negotiations of the Revised Form 79-1127. The Revised Form 79-1127 attached to this Advice Letter is the same Revised Form 79-1127 previously attached to Advice Letter 4948-E.

The Commission issued an Order Instituting Rulemaking (OIR) proceeding, R. 17-05-010, to consider revisions to Rule 20 (Rule 20 OIR) on May 19, 2017. The filing of this Advice Letter is not intended to and will not prejudice any issues or outcomes in the Rule 20 OIR. Any resulting subsequent changes from the Rule 20 OIR could result in changes and further modifications to Form 79-1127. Further, any entity or party with a dispute may use existing Commission processes to either timely protest this Advice Letter filing under General Order 96-B or raise the issue in the Rule 20 OIR as it deems appropriate. For clarity and transparency, this Advice Letter is being served to the Rule 20 OIR service list.

Tariff Revisions

The following are the major substantive changes to Form 79-1127:

- **Americans with Disabilities Act (ADA) Requirements:** The current Form 79-1127 does not require Governmental Bodies to account for ADA requirements when determining boundaries of the Rule 20A project. To provide clarity, the revised requirement is that Governmental Bodies will acknowledge wheelchair access and consider it as a basis for defining the boundaries of the Rule 20A project (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 4).
- **Maps:** In the current Form 79-1127, Governmental Bodies are required to provide PG&E with base maps for the Rule 20A project. After feedback from Governmental Bodies of having difficulties in providing the base map causing project delays, the revised requirement is that Governmental Bodies will provide PG&E with the project boundary map and available drawings of known Governmental Bodies-owned facilities and road improvements (see Revised Form 79-1127, Responsibility of

Governmental Body Section, # 5) and PG&E will prepare the base map (see Revised Form 79-1127, Responsibility of PG&E Section, # 2).

- **Easements:** In the current Form 79-1127, Governmental Bodies are required to secure all rights of way and easements to the satisfaction of PG&E. After feedback from Governmental Bodies that projects are delayed due to the current process of obtaining easements, the revised requirement delineate responsibilities to secure easements for the Rule 20A project so that the requirement is a shared responsibility (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 6 and Responsibility of PG&E Section, # 7).
- **Paving and Restoration Costs:** In the current Form 79-1127, Governmental Bodies are required to pay for all paving and restoration costs beyond the standard excavation and restoration cost necessary for the Rule 20A project. The revised requirement makes these costs a shared responsibility with joint trench participants and eliminates the current requirement of the Governmental Body to pay for costs beyond the standard excavation (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 7).
- **Paving Moratorium:** In the current Form 79-1127, Governmental Bodies are required to waive paving moratorium requirements or pay for the additional costs needed. The revision no longer requires waiver and clarifies the process for working in moratorium areas (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 8).
- **Streetlights:** In the current Form 79-1127, Governmental Bodies are required pay for streetlights according to a Street Light Agreement and remove streetlights attached to utility poles and located within the underground district. Due to the complexity of streetlight conversions, the revision now requires the Governmental Bodies to elect how to address streetlights impacted within the project scope prior to the start of the project design and PG&E to disclose project impacts to the existing streetlight system (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 9 and Responsibility of PG&E Section, # 5).
- **Permit Conditions, Fees, and Cost Details:** In the current Form 79-1127, Governmental Bodies are required to waive all fees and permit costs. After feedback from the Governmental Bodies that the costs should not be waived, the requirement is revised to allow the Governmental Bodies to share these costs with joint trench participants (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 11).
- **Construction Yards:** In the current Form 79-1127, Governmental Bodies are required to provide acceptable construction yard for materials and equipment storage. The requirement is revised to allow the Governmental Bodies to share

these costs with joint trench participants (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 15).

- **Contaminated Soils and Cultural Resources:** In the current Form 79-1127, the Governmental Bodies own and manage all contaminated soils and cultural resource findings and Rule 20A funds cannot be used for environmental remediation costs. After much discussion with Governmental Bodies, the revised requirement does not change the responsibility of the Governmental Body to own and manage all contaminated soil and cultural resource findings, but further clarifies the process when contamination and cultural resources are encountered. However, the revision allows for Rule 20A funds to be used for core samples to design a project to avoid environmental issues (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 16 and Responsibility of PG&E Section, # 12).
- **Electric Service Panel Conversions:** In the current Form 79-1127, the electric service panel conversion responsibility was solely under the PG&E responsibility section creating confusion. The revision provides more clarity and allows the Governmental Bodies to elect to be the lead in the conversion of electric service panels and further clarifies the payment and reimbursement process (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 17 and Responsibility of PG&E Section, # 13).
- **Subsurface Equipment:** The current Form 79-1127, does not specify a process to deal with subsurface equipment. The additional sections in the Revised Form 79-1127 provide clarity that the Governmental Bodies may request PG&E to install subsurface equipment and if PG&E agrees then the Rule 20A allocation funds will be used for the additional installation costs for the subsurface installation. The Governmental Bodies will be required to pay the one-time maintenance charge associated with the subsurface installation (see Revised Form 79-1127, Responsibility of Governmental Body Section, # 18 and Responsibility of PG&E Section, # 14).

The filing would not increase any current rate or charge, cause the withdrawal of service, or conflict with any rate schedule or rule.

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or e-mail, no later than November 13, 2017, which is 20 days after the date of this filing. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

Erik Jacobson
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

PG&E requests that this Tier 2 advice filing become effective on regular notice, November 23, 2017, which is 30 calendar days after the date of filing.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and Service List R.17-05-010. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs/>.

/S/

Erik Jacobson
Director, Regulatory Relations

Attachments

cc: Service List R.17-05-010

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 E)**

Utility type:

☒ ELC

☐ GAS

☐ PLC

☐ HEAT

☐ WATER

Contact Person: Yvonne Yang

Phone #: (415) 973-2094

E-mail: QXY1@pge.com and PGETariffs@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric

GAS = Gas

PLC = Pipeline

HEAT = Heat

WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **5166-E**

Tier: 2

Subject of AL: **Revisions to Sample Form No. 79-1127, "Agreement to Perform Tariff Schedule Related Work, Rule 20A General Conditions"**

Keywords (choose from CPUC listing): Forms

AL filing type: ☐ Monthly ☐ Quarterly ☐ Annual ☒ One-Time ☐ Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: N/A

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: Advice 4948-E

Summarize differences between the AL and the prior withdrawn or rejected AL: _____

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: No

Confidential information will be made available to those who have executed a nondisclosure agreement: N/A

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: _____

Resolution Required? ☐ Yes ☒ No

Requested effective date: **November 23, 2017**

No. of tariff sheets: **3**

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: **Electric Sample Form 79-1127**

Service affected and changes proposed: N/A

Pending advice letters that revise the same tariff sheets: N/A

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

California Public Utilities Commission

Energy Division

EDTariffUnit

505 Van Ness Ave., 4th Flr.

San Francisco, CA 94102

E-mail: EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company

Attn: Erik Jacobson

Director, Regulatory Relations

c/o Megan Lawson

77 Beale Street, Mail Code B13U

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
41097-E	Electric Sample Form 79-1127 Agreement to Perform Tariff Scheduled Related Work, Rule 20A General Conditions Sheet 1	29717-E
41098-E	ELECTRIC TABLE OF CONTENTS Sheet 1	41094-E
41099-E	ELECTRIC TABLE OF CONTENTS Sheet 30	40232-E



Electric Sample Form 79-1127
Agreement to Perform Tariff Scheduled Related Work,
Rule 20A General Conditions

Sheet 1

**Please Refer to Attached
Sample Form**



GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

PG&E Contract: _____
Contact #: _____

PROJECT NAME: _____

LOCATION: _____, CALIFORNIA

City/County of _____ (Governmental Body) has requested, and PACIFIC GAS AND ELECTRIC COMPANY (PG&E) has agreed to perform the replacement of overhead with underground electric facilities pursuant to Section A of PG&E's Electric Rule 20 Tariff (Electric Rule 20A), subject to the following General Conditions Agreement.

Rule 20A Tariff:

PG&E will, at its expense, replace its existing overhead electric facilities with underground electric facilities along public streets and roads, and on public lands and private property across which rights-of-way satisfactory to PG&E have been obtained by PG&E, consistent with Electric Rule 20A.

To ensure the success of this Electric Rule 20A project, Governmental Body and PG&E agree to the following terms. Any exceptions to these terms will require an advice filing with the California Public Utilities Commission (CPUC), with notice to the Governmental Body in accordance with General Order 96-B or any successor orders.

Responsibilities of the Governmental Body:

PG&E's Electric Rule 20A sets forth a program for replacing existing overhead electric facilities with underground electric facilities subject to certain requirements. In order to implement the Electric Rule 20A program as requested by the Governmental Body, the Governmental Body hereby agrees to:

- 1) Consult with PG&E to confirm the requirements of an Electric Rule 20A project and the location of the specific Electric Rule 20A project.
- 2) Hold public hearing(s) on the proposed Electric Rule 20A project in order to determine that the specific Electric Rule 20A project is in the general public interest.
- 3) Provide PG&E with a duly-adopted ordinance or resolution, as appropriate, creating an underground district in the area in which both the existing and new facilities are and will be located, requiring, among other things:
 - a) That all existing overhead communication and electric distribution facilities in such district shall be removed;
 - b) That each property served from such electric overhead facilities shall have installed in accordance with PG&E's rules for underground service, all electrical facility changes on the premises necessary to receive service from the underground facilities of PG&E as soon as it is available; and
 - c) Authorizing PG&E to discontinue its overhead electric service upon completion of the underground distribution system.
- 4) Acknowledge that wheelchair access is in the public interest and will be considered as a basis for defining the boundaries of projects that otherwise meet the criteria set forth in PG&E's Electric Rule 20A, Subsection 1(a).
- 5) Provide PG&E with a project boundary map and available drawings showing all known Governmental Body-owned facilities and known road improvements.
- 6) Identify property owners/persons responsible for the properties identified by PG&E as requiring easements. Make initial contact with the property owners/responsible persons, mail PG&E prepared

GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

easement documents, and coordinate meetings for the purpose of assisting PG&E with acquisition of necessary easements.

- 7) Provide PG&E with the Governmental Body's published standard for trench restoration and backfill requirements prior to start of engineering for the project, and require joint trench participants to replace paving, landscaping, sidewalk, etc., in accordance with the Governmental Body's published standard for trench restoration and backfill requirements that is removed or damaged during construction.
- 8) Work cooperatively with PG&E to schedule undergrounding projects prior to paving projects or after the paving moratorium period. If the Governmental Body elects to construct the undergrounding project prior to the end of the paving moratorium period, restoration and backfill requirements shall not exceed the standards for non-moratorium streets, described in Section 7 above.
- 9) Prior to the start of the project design, elect how to address streetlights impacted within the project scope.
- 10) Prior to the start of the project design, provide a list of all recorded property owners (including APNs and addresses based on current tax assessor records).
- 11) By the end of the project design, disclose all intended permit conditions, fees, and cost details. If the Governmental Body is a joint trench participant, the Governmental Body will pay its share of the associated permit costs.
- 12) Provide PG&E with recent pot holing/core samplings and soils/paving information from other projects, if available.
- 13) Work cooperatively with PG&E to establish work hour restrictions for construction, including holiday and/or special construction limitations.
- 14) Survey, stake, and provide drawings to PG&E for any future known Governmental Body road improvement, grade changes, or viaduct projects known or planned within the project limits.
- 15) Work cooperatively with PG&E to identify a suitable construction yard for the Rule 20A project. If the Governmental Body is a joint trench participant, will pay its share of the associated construction yard costs.
- 16) Work cooperatively with PG&E concerning contaminated soils and cultural resources.
 - a) Contaminated Soils. In the circumstance where contamination may be a concern, PG&E's Electric Rule 20A funds will be used for core samples to design a project to avoid environmental issues. In the event contamination is encountered that triggers federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work in the affected area until all measures required by law have been completed by the Governmental Body or other party responsible for such contamination.
 - b) Cultural Resources. In the circumstance where cultural resources are encountered that trigger federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work and comply with the appropriate notification requirements.
- 17) Electric Service Panel Conversion: Governmental Body may choose to be the lead in the conversion of electric service panels to accept underground service. If so and stated in the ordinance or resolution, PG&E shall pay the Governmental Body up to the maximum amount allowed by the Electric Rule 20A Tariff per service entrance, excluding permit fees. If the panel conversions are performed by the property owner, the Governmental Body will coordinate the reimbursement of PG&E funds, to the property owner / responsible party, up to the maximum amount allowed by the Electric Rule 20A Tariff per service entrance, excluding permit fees.
- 18) Subsurface Equipment: Governmental Body may request that PG&E install electrical equipment subsurface. If PG&E agrees, then, the Governmental Body's Electric Rule 20A allocation shall be used for the additional costs necessary to complete the subsurface installation. The Governmental Body shall be responsible for paying the appropriate one-time maintenance charge. However, in the event that pad-mounted equipment cannot be installed due to field conditions, the Governmental Body will not be charged the one-time maintenance fee.

GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

Responsibilities of PG&E:

PG&E's Electric Rule 20A sets forth a program for replacing existing overhead electric facilities with underground electric facilities subject to certain requirements. In order to implement the Electric Rule 20A program as requested by the Governmental Body, PG&E hereby agrees to:

- 1) Consult with the Governmental Body to confirm the requirements of Electric Rule 20A, including but not limited to holding public hearings, adoption of an ordinance or resolution, and creation of a project boundary map.
- 2) Prepare a base map showing the following: boundary, roads, sidewalks, curbs, property lines, buildings, existing water and sewer, easements, and any other known utilities or obstacles.
- 3) Upon request of the Governmental Body, initiate project design sufficient to identify trench routes and obtain any necessary easements with the express understanding that if the underground district is subsequently delayed or cancelled, PG&E shall deduct all project-related expenses, including overheads, from the Governmental Body's Electric Rule 20A allocation. If the necessary easement(s) cannot be obtained, the Governmental Body may elect to change the project scope, request redesign of the project to avoid the need for the easement(s), or request that the project be postponed.
- 4) If PG&E is designated as the design/trench lead, PG&E shall prepare the intent drawings, composite drawings and joint trench cost agreement for joint trench construction (costs will be shared by all joint trench participants). If an entity other than PG&E is designated as the design/trench lead, PG&E shall provide electric design to the design/trench lead agency.
- 5) Disclose project impacts to the existing streetlight system.
- 6) If PG&E is designated as the joint trench lead, provide Governmental Body with traffic control plan for PG&E construction pursuant to the California Manual on Uniform Traffic Control Devices (MUTCD) as part of the permit process.
- 7) Identify all locations that require an easement(s) for PG&E, prepare all necessary easement related documents, and with the cooperation of the Governmental Body (as described in item 6 of "Responsibilities of Governmental Body" above), secure easements to the satisfaction of PG&E.
- 8) Once the design process begins, provide a project schedule and cost updates on a quarterly basis to the Governmental Body.
- 9) Provide proper notification to all affected customers when electrical outages are necessary to complete project conversion to the new underground system.
- 10) Remove poles, portions of poles, or tenant poles from the underground district as required by the Joint Pole Utility Agreement.
- 11) Provide inspection services for the installation of PG&E facilities.
- 12) Work cooperatively with the Governmental Body concerning contaminated soils and cultural resources.
 - a) Contaminated Soils. In the circumstance where contamination may be a concern, PG&E's Electric Rule 20A funds will be used for core samples to design a project to avoid environmental issues. In the event contamination is encountered that triggers federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work in the affected area until all measures required by law have been completed by the Governmental Body or other party responsible for such contamination.
 - b) Cultural Resources. In the circumstance where cultural resources are encountered that trigger federal, state, and/or local laws and regulations which restrict or prohibit further work in the trench, PG&E will suspend work and comply with the appropriate notification requirements.



GENERAL CONDITIONS AGREEMENT TO PERFORM WORK PURSUANT TO PG&E ELECTRIC RULE 20A – REPLACEMENT OF OVERHEAD WITH UNDERGROUND ELECTRIC FACILITIES

- 13) Electric Service Panel Conversion: Governmental Body may choose for PG&E to be the lead for the panel conversion. If so, then PG&E will convert the electric service panels to accept underground services. PG&E will have its selected contractor communicate to each property owner / responsible party the plan for the trench and panel locations and reach an agreement with the property owner / responsible party before proceeding with conversion. PG&E will be responsible for any work up to and including the meter. Any additional work needed by the property owner / responsible party will be at owner's / responsible party's costs. PG&E will require its selected contractor to abide by all Governmental Body's applicable laws and regulations.
- 14) Subsurface Equipment: Governmental Body may request that PG&E install equipment subsurface. If PG&E agrees, then the Governmental Body's Electric Rule 20A allocation shall be used for the additional installation costs necessary to complete the subsurface installation. The Governmental Body shall be responsible for paying the appropriate one-time maintenance charge. However, in the event that pad-mounted equipment cannot be installed due to space constraints, the Governmental Body will not be charged the one-time maintenance fee.

I have read the above information and understand and agree with the provisions and responsibilities as described above. I hereby attest, under penalty of perjury, that I am authorized to enter into this agreement on behalf of the entity indicated below.

Executed this _____ day of _____ 20____

City/County of:

PACIFIC GAS AND ELECTRIC COMPANY

Governmental Body

Authorized by (Signature)

Authorized by (Signature)

Print Name

Print Name

Title

Title

Mailing Address



ELECTRIC TABLE OF CONTENTS

Sheet 1

TABLE OF CONTENTS

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.	
Title Page		41098-E	(T)
Rate Schedules	40657,40658,40929,40660,40661,40708,37981,40236,40663-E		
Preliminary Statements	40664,35423,40152,37737,34373,37727,41095-E		
Rules	37165,36649,41096-E		
Maps, Contracts and Deviations	37960-E		
Sample Forms	37166,37631,40820,36604,37632,40821,35796,37769, 41099 ,36059,37169-E		(T)

(Continued)

Advice 5166-E
Decision

Issued by
Robert S. Kenney
Vice President, Regulatory Affairs

Date Filed October 24, 2017
Effective _____
Resolution _____



ELECTRIC TABLE OF CONTENTS

Sheet 30

FORM	TITLE OF SHEET	CAL P.U.C. SHEET NO.
Sample Forms Miscellaneous (Cont'd)		
79-966	Agreement for Schedule E-OBMC	32491-E
79-995	Agreement for Customers Taking Service on Schedule E-31	33014-E
79-1006	Municipal Departing Load - Nonbypassable Charge Statement	32124-E
79-1013	New Municipal Departing Load Nonbypassable Charge Statement	33015-E
79-1024	Dual Supply Customer Authorizing Agreement	33017-E
79-1029	Community Choice Aggregator (CCA) Service Agreement	27499-E
79-1031	Community Choice Aggregator (CCA) Non-Disclosure Agreement	32646-E*
79-1039	Rate Schedule Selection Customer Agreement	35419-E
79-1040	Non-Disclosure and Use of Information Agreement	33020-E
79-1050	Contract for Customer Provision of Physically Assured Load Reduction	33021-E
79-1075	Notice to Add or Delete Customers Participating in the Capacity Bidding Program	32495-E
79-1076	Agreement for Aggregators Participating in the Capacity Bidding Program	32496-E
79-1079	Agreement for Aggregators Participating in the Base Interruptible Load Program	32497-E
79-1080	Notice to Add or Delete Customers Participating in the Base Interruptible Program	32498-E
79-1102	Section 399.20 Power Purchase Agreement	32140-E
79-1103	Small Renewable Generator Power Purchase Agreements	32141-E
79-1118	General Off-Bill and On-Bill Financing Loan Agreement	40226-E
79-1120	Standard Contract for Eligible CHP Facilities	30818-E
79-1121	Power Purchase and Sales Agreement - Contract For Eligible CHP Facilities with Net Output of Not Greater Than 5 MW	32148-E
79-1126	Off-Bill and On-Bill Financing Loan Agreement for Self-Installed Projects	32500-E
79-1127	Agreement to Perform Tariff Schedule Related Work, Rule 20A General Conditions	41097-E (T)
79-1128	Affidavit in Support of Customer Claim as Qualifying as a Small Business Customer under Government Code Section 14837*	33026-E
79-1138	Power Purchase and Sale Agreement - Contract For Eligible CHP Facilities with Power Rating of Less Than 500 KW	32150-E
79-1141	Agreement for Schedule A-15 Fixed Usage Estimate	33683-E
79-1143	California State Government Customers On-Bill Financing Loan Agreement	32501-E
79-1149	Election to Withdraw From the Capacity Bidding Program Form	32481-E
79-1150	Renewable Market Adjusting Tariff Power Purchase Agreement	36049-E
79-1156	Authorization To Add Loan Charges To Utility Bill (Residential)	35611-E
79-1157	Authorization To Add Loan Charges To Utility Bill (Non-Residential)	35612-E
79-1158	Electric Vehicle Submetering Meter Data Management Agent (MDMA) Registration Agreement	35264-E
79-1159	Electric Vehicle Submetering Pilot (Phase 1) Customer Enrollment Agreement	35265-E
79-1170	Authorization to Add MCE Loan Charges to Utility Bill	35485-E
79-1171	Authorization to Add MCE Storage Charges to Utility Bill	35099-E
79-1178	Plug-In Electric Vehicle Submetering Pilot Phase 2 Submeter MDMA Registration Agreement	37699-E
79-1180	Plug-In Electric Vehicle Submetering Pilot Phase 2 Multiple Customer-of-Record Enrollment Agreement	37700-E

(Continued)

Advice 5166-E
Decision

Issued by
Robert S. Kenney
Vice President, Regulatory Affairs

Date Filed
Effective
Resolution

October 24, 2017

**PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV**

AT&T	Don Pickett & Associates, Inc.	Office of Ratepayer Advocates
Albion Power Company	Douglass & Liddell	OnGrid Solar
Alcantar & Kahl LLP	Downey & Brand	Pacific Gas and Electric Company
Anderson & Poole	Ellison Schneider & Harris LLP	Praxair
Atlas ReFuel	Energy Management Service	Regulatory & Cogeneration Service, Inc.
BART	Evaluation + Strategy for Social Innovation	SCD Energy Solutions
Barkovich & Yap, Inc.	G. A. Krause & Assoc.	SCE
Braun Blaising Smith Wynne P.C.	GenOn Energy, Inc.	SDG&E and SoCalGas
CalCom Solar	Goodin, MacBride, Squeri, Schlotz & Ritchie	SPURR
California Cotton Ginners & Growers Assn	Green Charge Networks	San Francisco Water Power and Sewer
California Energy Commission	Green Power Institute	Seattle City Light
California Public Utilities Commission	Hanna & Morton	Sempra Utilities
California State Association of Counties	ICF	Southern California Edison Company
Calpine	International Power Technology	Southern California Gas Company
Casner, Steve	Intestate Gas Services, Inc.	Spark Energy
Cenergy Power	Kelly Group	Sun Light & Power
Center for Biological Diversity	Ken Bohn Consulting	Sunshine Design
City of Palo Alto	Leviton Manufacturing Co., Inc.	Tecogen, Inc.
City of San Jose	Linde	TerraVerde Renewable Partners
Clean Power Research	Los Angeles County Integrated Waste Management Task Force	Tiger Natural Gas, Inc.
Coast Economic Consulting	Los Angeles Dept of Water & Power	TransCanada
Commercial Energy	MRW & Associates	Troutman Sanders LLP
Cool Earth Solar, Inc.	Manatt Phelps Phillips	Utility Cost Management
County of Tehama - Department of Public Works	Marin Energy Authority	Utility Power Solutions
Crossborder Energy	McKenna Long & Aldridge LLP	Utility Specialists
Crown Road Energy, LLC	McKenzie & Associates	Verizon
Davis Wright Tremaine LLP	Modesto Irrigation District	Water and Energy Consulting
Day Carter Murphy	Morgan Stanley	Wellhead Electric Company
Defense Energy Support Center	NLine Energy, Inc.	Western Manufactured Housing Communities Association (WMA)
Dept of General Services	NRG Solar	Yep Energy
Division of Ratepayer Advocates	Nexant, Inc.	



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

11.

Meeting Date: 12/11/2017

Subject: CONSIDER report to the Board of Supervisors on the status of items referred to the Committee for 2017, and take ACTION as appropriate.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: N/A

Referral Name: This is an annual Administrative Item of the Committee

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

This is an annual Administrative Item of the Committee.

Referral Update:

See attached Status Report on Referrals to the Committee.

Recommendation(s)/Next Step(s):

REVIEW Status Report and DIRECT staff to forward the report to the Board of Supervisors with revisions as appropriate.

Fiscal Impact (if any):

N/A

Attachments

TWIC2017ReferralReport

DRAFT

Status Report: Referrals to the Transportation, Water, and Infrastructure Committee - 2017

Submitted: December 11, 2017 TWIC Meeting

Referral	Status
1. Review legislative matters on transportation, water, and infrastructure.	<ul style="list-style-type: none">• Recommended the Board of Supervisors (BOS) ADOPT positions of various state transportation bills as follows (Various Dates):<ul style="list-style-type: none">• Received a report on Senate Bill 595 (Bridge Tolls) and forwarded a “consider” recommendation to the BOS July, August 2017• Received reports regarding the status of the Iron Horse Corridor relative to legacy obligations to the State. The County’s legislative advocate met with Caltrans, California State Transportation Agency (CalSTA), and California Transportation Commission (CTC) leadership, and provided documentation, communication and reports to the Committee. Various Dates. Activities also relate to Referral #s 12 & 15.• Monitored and provided direction to staff and consultants, and made recommendations to the full BOS regarding the efforts by the State Legislature and Governor’s office to reform the state transportation funding system. Various Dates.• Coordinated a visit to Senator Glazer to discuss school siting, transportation funding, and Delta issues. February 2017• Monitored SB 1 activities in compliance with new requirements. August 2017• In the context of reports of declining state transportation revenues, the Committee provided direction to staff on project prioritization in light of reduced available funding. February 2017• The Committee provided recommendations to the full BOS for revisions to the County’s state and federal legislative platforms. October 2017

Referral	Status
2. Review applications for transportation, water and infrastructure grants to be prepared by the Public Works and Conservation and Development Departments.	<ul style="list-style-type: none"> • The Committee reviewed a joint CC County/CCTA grant to Caltrans under the SB1 Sustainable Transportation Planning Grant program. August 2017 • Directed staff to develop a grant reporting/tracking system. July 2017 • Received a report on efforts to pursue the Marsh Creek Trail concept including grants in support of a corridor plan. October, November 2017 • Received a report on a grant for a plan to develop a bicycle superhighway system in the Iron Horse Corridor. • The Committee approved grants to be submitted to CCTA under the OBAG Program. December 2016
3. Monitor the Contra Costa Transportation Authority (CCTA) including efforts to implement Measure J.	<ul style="list-style-type: none"> • Provided input and direction to staff on initiating an accessible transit study. Various Dates. Also relates to referral #17,
4. Monitor EBMUD and Contra Costa Water District projects and activities.	
5. Review projects, plans and legislative matters that may affect the health of the San Francisco Bay and Delta, including but not limited to conveyance, flood control, dredging, climate change, habitat conservation, governance, water storage, development of an ordinance regarding polystyrene foam food containers, water quality, supply and reliability, consistent with the Board of Supervisors adopted Delta Water Platform.	<ul style="list-style-type: none"> • Monitored the implementation and implications of Municipal Regional Permit 2.0, provided direction to staff, initiated communication with the State Water Resources Control Board. April, July 2017 • Received a report on the Lower Walnut Creek Restoration Project. October 2017
6. Review and monitor the establishment of Groundwater Sustainability Agencies and Groundwater Sustainability Plans for the three medium priority groundwater basins within Contra Costa County as required by the Sustainable Groundwater Management Act.	<ul style="list-style-type: none"> • Monitored, received reports, and provided direction to staff on the response to the Sustainable Groundwater Management Act of 2014 (SGMA) April, December 2017
7. Review issues associated with County flood control facilities.	

Referral	Status
8. Monitor creek and watershed issues and seek funding for improvement projects related to these issues.	Related items in #5
9. Monitor the implementation of the Integrated Pest Management (IPM) policy.	<ul style="list-style-type: none"> Received reports and provided direction to IPM staff on the program and interaction with the public, and forwarded reports to the full BOS. February, December 2017
10. Monitor the status of county park maintenance issues including, but not limited to, transfer of some County park maintenance responsibilities to other agencies and implementation of Measure WW grants and expenditure plan.	
11. Monitor and report on the East Contra Costa County Habitat Conservation Plan (HCP).	<i>The Board of Supervisors received a report on the HCP, referred by TWIC, in September 2017.</i>
12. Monitor the implementation of the County Complete Streets Policy.	<ul style="list-style-type: none"> Received report on the San Pablo Avenue Complete Streets Study December 2017 Received report on complete streets/vision zero implementation. October 2017
13. Monitor and report on the Underground Utilities Program.	<ul style="list-style-type: none"> Received report on revisions to the 20a general agreement and considered a letter to the Public Utilities Commission on the same. December 2017- Activities also relate to Referral #15
14. Monitor implementation of the Letter of Understanding (LOU) with PG&E for the maintenance of PG&E streetlights in Contra Costa.	<ul style="list-style-type: none"> Received updates on the status of streetlight maintenance and the LOU. December 2017
15. Freight transportation issues, including but not limited to potential increases in rail traffic such as that proposed by the Port of Oakland and other possible service increases, safety of freight trains, rail corridors, and trucks that transport hazardous materials, the planned truck route for North Richmond; and the deepening of the San Francisco-to-Stockton Ship Channel.	<ul style="list-style-type: none"> Reviewed and approved a grant application for a shoreline freight rail study in the Northern Waterfront area to the federal Economic Development Administration. Also relevant to referral #1. December 2017

Referral	Status
16. Monitor the Iron Horse Corridor Management Program.	See referral #1for related activities.
17. Monitor and report on the eBART Project.	
18. Review transportation plans and services for specific populations, including but not limited to County Low Income Transportation Action Plan, Coordinated Human Services Transportation Plan for the Bay Area, Priorities for Senior Mobility, Bay Point Community Based Transportation Plan, Contra Costa County Mobility Management Plan, and the work of Contra Costans for Every Generation.	<ul style="list-style-type: none"> • See Referrals #2, 3 for related actions. • The Committee reviewed and provided direction to staff regarding implementing an Accessible Transit Study in cooperation with CCTA. Various Dates
19. Monitor issues of interest in the provision of general transportation services, including but not limited to public transportation and taxicab, transportation network companies.	<ul style="list-style-type: none"> • Monitored staff's effort in implementing a regional taxicab permitting process, received reports, provided direction to staff, and kept the full BOS apprised of progress. December 2017 • Related, Assembly Bill 1069 (Low) Local Government: Taxicab Transportation Services came before TWIC but was ultimately taken up by the County Administrator's Office.
20. Monitor the statewide infrastructure bond programs.	
21. Monitor implementation and ensure compliance with the single-use carryout bag ban consistent with Public Resources Code, Chapter 5.3 (resulting from Senate Bill 270 [Padilla – 2014]).	<i>No update in 2017</i>



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

12.

Meeting Date: 12/11/2017

Subject: REVIEW Communication, News, Miscellaneous Items of Interest to the Committee and DIRECT staff as appropriate.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: N/A

Referral Name: N/A

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

Items of interest are a standing item on the TWIC agenda.

Referral Update:

Communication Received:

11-17-17 CCTA Memo to RTPCs Memo re: Items of Interest (Adoption of Resolution 17-55-G Finding FY 2017-18 Transportation Fund for Clean Air (TFCA) Projects Meet Bay Area Air Quality Management District (BAAQMD) Cost Effectiveness Criteria

News/Articles/Editorials/Etc:

10-13-17 Uber and Lyft Are Cannibalizing Transit in Major American Cities - Streetsblog; new research from UC Davis shows that cities must strengthen transit in response to the growth of ride-hailing services.

10-25-17 Gary Cohn Floats Idea of Gas Tax Hike for Infrastructure - Bloomberg; White House economic adviser met with Problem Solvers Caucus, and fuel tax hasn't been raised since 1993 because of opposition.

11-06-17 Two Gas Tax Repeal Efforts Compete To Make California's 2018 Ballot - Capital Public Radio; Californians frustrated over the state's recent gas tax hike could have two options to eliminate it next year.

11-06-17 Drafting A Blueprint - San Francisco Business Times; with support from the Metropolitan Transportation Commission (MTC), the nine-county Bay Area's transportation planning, financing and coordinating agency, CASA-The Committee to House the Bay Area- is focused on more reform, more funding, & more policy innovation to truly move the needle on our

region's chronic housing affordability challenges.

11-08-17 Self-Operating Shuttle Bus Crashes After Las Vegas Launch - AP; The human behind the wheel of the truck was at fault, police said. "The shuttle did what it was supposed to do... Had the truck had the same sensing equipment that the shuttle had, the accident would have been avoided."

11-13-17 It's the Same Ballot Measure - San Francisco Chronicle; a court will decide whether a ballot measure's title says it repeals the new gas tax or eliminates revenue for road repairs.

11-15-17 Morning Transportation - Politico; AASHTO Transit Highway Trust Fund.

11-21-17 If Gas Tax is Repealed - KPCC, SoCal; travelers are paying more in state fuel taxes this month as they fill up to hit the road, but voters could be asked next year if they want to scrap the increase.

11-22-17 AASHTO Tax Reform Bills Fail to Address Infrastructure Funding 'Crisis' - Rail News; unless Congress shores up the trust fund before its authorization law expires in 2020, federal highway spending would shrink by 40 percent in 2021, while new HTF mass-transit funding would evaporate completely for three years, AASHTO officials said.

11-27-17 Morning Transportation - Politico; Infrastructure Conflict and Marty Klepper resignation.

11-27-17 Chuck Schumer Opposes Gas Tax Hike - DC Examiner; "The bottom line is that we don't want to raise taxes on working people right now," Schumer said. (Graeme Jennings/Examiner)

11-28-17 Illegal Dumping Costs Millions Annually in Contra Costa County - East County Today; East County residents have been vocal as they say there is an ongoing notable visual blight problem which continues to exist throughout many parts of East Contra Costa County; littering and illegal dumping. And it is a problem that continues to persist.

Miscellaneous:

School Siting and Walkability: Experience and Policy Implications in California (1-1-2017): This paper published in the UC Berkeley California Journal of Politics and Policy references two letters from the Contra Costa County Board of Supervisors quoting John Gioia and Federal Glover. The specific passage is below and the complete paper can be found at this link: <https://escholarship.org/content/qt5mh127hc/qt5mh127hc.pdf>

In California, the relationship between school siting, transportation, and land use is an especially salient issue for state policymakers. The 2003 Davis Administration's Governor's Environmental Goals and Policy Report states, "The location of new schools . . . has an important influence on land use, but siting decisions are not always made in cooperation with local land use planning agencies. This is one of the most volatile and troublesome problems in California land use planning" (Governor's Office of Planning and Research 2003). Further, the Brown Administration's 2015 draft Governor's Environmental Goals and Policy Report acknowledges that better school environments promote better academic achievement outcomes, and goes on say that "as the State prioritizes efficient, infill

development, K-12 schools will be integrated into planning”. https://www.opr.ca.gov/docs/EGPR_Nov_2015.pdf).

However, it is unclear what policy fixes are needed to catalyze integration. A local articulation of the scope of this issue is illustrated by a 2015 letter from the Contra Costa County Board of Supervisors to Senators Block and Liu of the Education Subcommittee, which states, “This gap in responsibility and lack of acknowledgement of a problem has resulted in schools being developed that are inconsistent with state and local policies relative to safe routes to school, public health, climate change principles and orderly land development. Careful attention should be paid to ensure that this gap does not ultimately compromise any mechanism that is put in place to address issues with school siting and safety” (Gioia 2015). A 2017 letter from the same county supervisors, this time to Senator O’Donnell of the Assembly Education Committee, states, “Currently, school siting practices are in direct conflict with numerous state policies and goals including safe routes to school, complete streets, Health in All Policies, greenhouse gas reduction efforts, etc. There is no debate on this point” (Glover 2017).

Recommendation(s)/Next Step(s):

RECEIVE information and DIRECT staff as appropriate.

Fiscal Impact (if any):

N/A

Attachments

10-13-17 Uber and Lyft Are Cannibalizing Transit in Major American Cities - Streetsblog
10-25-17 Gary Cohn Floats Idea of Gas Tax Hike for Infrastructure - Bloomberg
11-06-17 Two Gas Tax Repeal Efforts Compete To Make California 2018 Ballot-Capitol Public Radio
11-06-17 Drafting A Blueprint - San Francisco Business Times
11-08-17 Self-Operating Shuttle Bus Crashes After Vegas Launch-AP
11-13-17 It’s the Same Ballot Measure - San Francisco Chronicle
11-15-17 Morning Transportation - Politico
11-21-17 If Gas Tax is Repealed - KPCC, SoCal
11-22-17 AASHTO Tax Reform Bills Fail to Address Infrastructure Funding Crisis-RailNews
11-27-17 Morning Transportation - Politico
11-27-17 Chuck Schumer Opposes Gas Tax Hike - DC Examiner
11-28-17 Illegal Dumping Costs Millions Annually in CC County-EastCountyToday

Uber and Lyft Are Cannibalizing Transit in Major American Cities

New research from UC Davis shows that cities must strengthen transit in response to the growth of ride-hailing services.

By Angie Schmitt | Oct 13, 2017 | 118



If cities don't act decisively to prioritize bus and rail service, more riders will switch to ride-hailing in a vicious cycle of increasing traffic and declining transit quality. Photo: Oran Viriyincy/Flickr

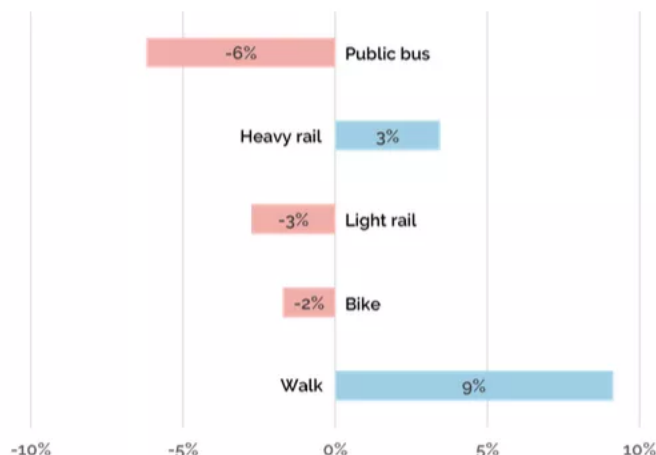
The arrival of ride-hailing services like Uber and Lyft has led to more car traffic and less transit ridership in major American cities, according to a new study from researchers at UC Davis [\[PDF\]](#). The results of their first-of-its-kind survey strongly suggest that large cities must take steps to prioritize and strengthen transit service in response to the growth of ride-hailing apps.

Unlike previous surveys that attempted to assess the effect of ride-hailing and car-sharing, which tended to be based on self-selected samples of people who use a particular service, Regina Clewlow and Gouri Shankar Mishra of UC Davis sampled the general population. They randomly surveyed 4,094 adults living in both urban and suburban areas of Boston, Chicago, New York, Seattle, DC, Los Angeles, and the Bay Area.

A large share of ride-hailing traffic is substituting for more efficient modes of transportation, they found. Between 49 percent to 61 percent of ride-hailing trips would have been made by transit, biking, or walking, or would not have been made at all, if the services were not available, according to the survey responses. In other words, Uber and Lyft are adding to traffic congestion.

After people start using ride-hailing services like Uber and Lyft, they are 6 percent less likely to ride the bus and 3 percent less likely to ride light rail. But ride-hailing apps did lead to a net increase in heavy rail use, which might indicate their use as a last-mile connection to stations beyond walking distance:

Figure 12. Changes in transit use, biking, and walking after adoption of ride-hailing services



Survey question: "Since you started using on-demand mobility services such as Uber and Lyft, do you find that you use the following transportation options more or less?"

Chart: UC Davis

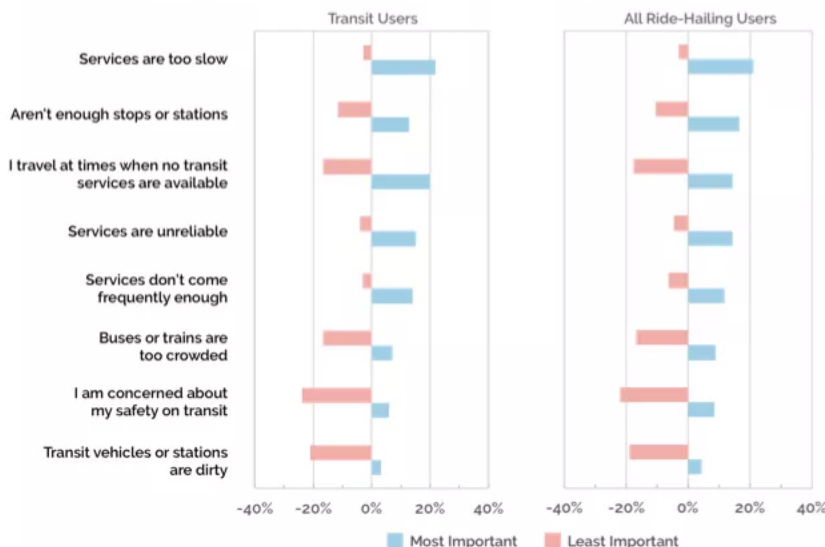
Ride-hailing services also appear to reduce drunk driving, with 38 percent of users saying they get regularly hire rides to get to bars and parties.

And they reduce car ownership, with about 9 percent of people who use the services reporting that they've gotten rid of at least one vehicle. Clewlow and Mishra caution that this is a smaller effect than previous research has suggested, however, and that decisions to own a car are primarily influenced by "socio-demographic, attitudinal, and built environment" factors.

Ride-hailing users tend to be younger, college-educated, higher-income people who live in urban areas. The 33 percent usage rate among people making more than \$150,000 a year is more than double the 15 percent rate among people making less than \$30,000.

The implications for transit riders are troubling. More affluent people are opting for ride-hailing because it's faster and more reliable than transit. This creates a vicious cycle where additional ride-hailing trips cause more congestion, which slows down transit — a dynamic that has been [documented in New York by analyst Bruce Schaller](#). People who can't afford an Uber fare are left with even worse bus service.

Figure 13. Reasons for substituting ride-hailing for transit services



Survey question: "What would you consider the most important versus least important reason you use on-demand mobility services such as Uber or Lyft instead of public transit?"

People say they switch from transit to ride-hailing because transit is slow, unreliable, and unavailable. Chart: UC Davis

Put it all together and Clewlow and Mishra's research suggests that cities have to strengthen and improve transit service in response to the growth of ride-hailing. They recommend dedicating street space to high-occupancy vehicles like buses and adopting policies like congestion

pricing to counteract the rising traffic caused by ride-hailing services in central cities.



Ride-hailing services can be a helpful addition to transportation systems, curbing car ownership, reducing drunk driving, and complementing transit networks. But if cities and transit agencies don't take action to improve the quality of bus and rail service, Uber and Lyft can end up doing more harm than good, clogging streets and cannibalizing transit.



Filed Under: Congestion, Transit, Uber, Promoted

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John Cunningham ▾

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JJAudubon • a month ago

Rail transit lines exist in Atlanta, Dallas, Miami, and New Orleans — why are these southern cities ignored in the UC Davis survey? Uber and Lyft are there too. Selection of cities surveyed was not random.

4 ^ | v • Reply • Share ›



Courtney → JJAudubon • a month ago

I would presume they weren't included because these cities don't have the robust transportation systems that other cities in the studies do.

^ | v • Reply • Share ›



KJ • a month ago

Dedicated transit lanes are needed (although this is difficult politically). In examples like the above crowded city (see picture in article), at least two of the lanes should be devoted to transit to allow buses to pass.

4 ^ | v • Reply • Share ›



Michael • 2 months ago

Hard to draw great conclusions since during the same period (2013 to current) a barrel of oil dropped from the 120s to the 20s. Seems around 50 bucks and above creates a lot of interest in transit.

4 ^ | v • Reply • Share ›



Richard • 2 months ago

I think we are at a point where we can call Ride-Hailing Taxis. They are better Taxis, cheaper Taxis, but still Taxis. They are not some brand new thing in the world, but a better version of an existing thing.

6 ^ | v • Reply • Share ›



Baloo Uriza → Richard • 2 months ago

They're gypsy cabs. And they've been around forever. The only difference now is that you can hail a gypsy cab with an app.

Also, I wish there was a term for this that didn't have a racial connotation.

3 ^ | v • Reply • Share ›



Jym Dyer → Baloo Uriza • a month ago

Touts.

^ | v • Reply • Share ›



baklazhan → Jym Dyer • a month ago

"Touts" conjures the image of someone actively trying to drum up business by approaching and soliciting people, which is kind of the opposite of uber.

I think "cabs" is fine. App-based cab if you need to make the distinction. Even Uber was originally named Ubercab.

^ | v • Reply • Share ›



kevd → Baloo Uriza • a month ago

"livery cab" works.

So does "car service" (which used to be summoned by telephone.

^ | v • Reply • Share ›



Mike • 2 months ago

As long as buses, taxis, cars, and bikes share the same road, people without any financial restrictions will usually choose the fastest, most convenient method, which is cars (if parking is cheap and easy and no alcohol is involved) or taxi-like services (if parking is expensive or alcohol is involved). But, those same riders choose rail over driving, probably because it is faster.

More taxis and taxi-like services slow traffic for everyone, but, those taxis remain the fastest option even while slowing down traffic for everyone.

Bus lanes, or other methods of making busses faster than cars and taxis, could tip the balance back to busses's favor..

3 ^ | v • Reply • Share ›



SDGreg • 2 months ago

My views on when and why I favor ride sharing over transit at times mirrors those of other transit users. For me, transit doesn't have to be as fast ride sharing to be my first choice. When I've chosen ride sharing over transit it's been either when transit service is too infrequent with transfer wait times too long, and/or times become too long due to unreliable service. Speed and frequency matter, a lot.

In San Diego, the bus to the airport only operates every 15 minutes on weekdays and every 30 minutes during evenings and on weekends. If I time it just wrong on an evening or weekend, a trip home from the airport can take 90 minutes versus 45 to 50 minutes if the wait times and transfer times are more optimal. With ride sharing, it takes as little as 15 minutes and rarely more than 30 minutes.

In Oakland, by contrast, the BART connector between the Oakland airport and the nearest BART station operates every 6 minutes and takes 8 minutes. From there, it's usually a 10 minute or less connection for the next train into San Francisco. I've never considered riding sharing a better or faster option for that trip.

5 ^ | v • Reply • Share ›





mx → SDGreg • 2 months ago

I agree. If I'm considering a trip, I can estimate with pretty good accuracy how long it will take in a rideshare (and I can open Waze for a realtime estimate if freeway traffic is a factor). Barring some calamity, I can plan around that. If transit service is too infrequent and/or unreliable that I might find myself sitting around for 30+ minutes, I'm going for another option, because I can't plan around that uncertainty.

I've done this in real-time arriving at SFO. Walk off the plane and head toward the BART station, checking the departures on my phone. Assuming it's not rush hour, if the timing is bad and it's going to be 20 minutes until the next train comes, I realize it's going to be over an hour before I get home, while it's about 25 minutes on Lyft for 2-2.3x the cost. If the train leaves in five minutes, I'll take it, even if it's going to be twice as slow as rideshare. But make me sit there waiting, and sorry I'm so impatient, but I'm gone.

For better or worse, we live in a world where making a web page take half a second longer to load will cause 20%+ of users to abandon the site. Is that good for society? Probably not, but transit has to adapt to that reality.

4 ^ | v • Reply • Share ›



GlobalLA • 2 months ago

This article only imposes the ideology that transportation is a zero-sum game. Nothing can be farther from the truth. How can ride-hailing services "cannibalize" mass transit when POPULATION GROWTH is INCREASING at the same time? It's remarkable that most major cities can adapt to these large inner-city migrations with both mass transit and ride-hailing services.

As a matter of fact, without Uber or Lyft, who's to say riders will take mass transit instead. If mass transit can't meet the general first-mile, last-mile requirements of most riders, guess what? Car ownership here we come! It's happened before and will continue to happen again absent of ride-hailing services. Thanks to Uber and Lyft, it's taken many single-rider vehicular trips off the road and REDUCED the number of people owning cars overall.

I'm all for mass transit, but I have nothing against Uber and Lyft if it means less people owning cars themselves. And to think, all this is happening while population rates are increasing in general.

5 ^ | v • Reply • Share ›



Jym Dyer → GlobalLA • a month ago

So I guess you didn't bother to read the part about car-ownership.

^ | v • Reply • Share ›



GlobalLA → Jym Dyer • a month ago

So I guess you love making assumptions. That part is more an AFTER THOUGHT. Sure, throw in some little research (which they don't even bother to elaborate on) to say it reduces ownership somewhat to make the reader say "wow, at least they are looking at this at all angles". BS. The key is rising population rates (eternally and externally) and how mass transit vs car ownership will absorb those rates.

"Clew low and Mishra caution that this is a smaller effect than previous research has suggested, however, and that decisions to own a car are primarily influenced by "socio-demographic, attitudinal, and built environment" factors."

Was born in L.A. and lived here most of my life. The biggest decision factor I see with everyone growing up here is the first mile, last mile convenience issue, which I mention. But it's okay if you think otherwise, you think whatever you want.

^ | v • Reply • Share ›



jamesbeaz • 2 months ago

This isn't surprising at all. In Paris, I take the Metro and generally arrive *early* at my destination, even if I'm running a bit late. In DC or NYC, I take the metro/subway and generally arrive *late* at my destination.

Honestly, when I look at the squalor and dysfunction of U.S. cities compared to those in Europe, Asia and, well, even much of rich South America, I think U.S. cities are beyond help.

3 ^ | v • Reply • Share ›



Bernard Finucane → jamesbeaz • 2 months ago

They aren't beyond help, but transit is only part of the problem. The real problem is land use.

Transit advocates in America always push for increasing mobility. That isn't really the solution to the problem in most American cities.

6 ^ | v • Reply • Share ›



Joe R. → Bernard Finucane • a month ago

I think the real answer is to get people to travel less, not more. That's particularly true of commuting to work. Any job which can be done at home should be. Any load we take off the transportation network means less money we need to spend for expansion, or even just routine maintenance.

^ | v • Reply • Share ›



Bernard Finucane → Joe R. • a month ago

Another solution is to reduce travel distances by allowing mixed use neighborhoods. I live in suburban Germany and my neighbor, a tax consultant, walks to work. I often walk or bike to the supermarket as well.

1 ^ | v • Reply • Share ›

commuting time. However, there will always be a dynamic ceiling for that. People will always have the need to choose when and where they want to travel. It's an expression of their FREEDOM and CHOICE. It's been part of the American dream and always will be in the future. I think your thoughts are a big part of that answer, but not necessarily the "real" answer.

^ | v • Reply • Share ›



Jym Dyer → GlobalLA • a month ago

The notion that car travel has something to do with FREEDOM and CHOICE is drummed into our heads over and over again by the largest advertising budget in the nation's history.

If it were as free as they say it is, they wouldn't have to spend so much money and effort insisting that it's so. And mind you, that's above and beyond the impetus created by an infrastructure that makes any other choice much more difficult.

4 ^ | v • Reply • Share ›



Stephen Simac → Jym Dyer • a month ago

I'm sure you've noticed that car ads invariably are filmed on wide open roads through beautiful scenery, not slowly moving traffic jammed "free"ways. I live near a popular car ad highway, (hint-probably the most expensive road in history) and they usually have another six vehicles for the crew, plus a few highway patrol cars stopping any traffic during shoots so they don't show any other cars. Lone drivers- the American Dream.

2 ^ | v • Reply • Share ›



GlobalLA → Jym Dyer • a month ago

Then you obviously ignore American history and I never said that the freedom to chose one's mode of transportation was "free". Enjoy keeping up your false narrative, whatever that is..

^ | v • Reply • Share ›



Jym Dyer → GlobalLA • a month ago

I don't ignore the inconvenient parts of American history that coerces this "choice" in so many ways.

2 ^ | v • Reply • Share ›



GlobalLA → Jym Dyer • a month ago

Oh ok, no problem have it your way.

^ | v • Reply • Share ›



voltairesmistress → jamesbeaz • 2 months ago

Well, if your attitude were shared by others, then U.S. cities definitely wouldn't improve. Fortunately, Americans in the U.S. tend toward optimism and innovation.

1 ^ | v • Reply • Share ›



Baloo Uriza → voltairesmistress • 2 months ago

"Well, if your attitude were shared by others, then U.S. cities definitely wouldn't improve."

I posit that this is actually the case; and this article is prima facie evidence supporting this hypothesis.

"Fortunately, Americans in the U.S. tend toward optimism and innovation."

That America died a long time ago. Now it's all about blaming minorities for the fact things suck instead of working to fix problems.

5 ^ | v • Reply • Share ›



Joe R. → Baloo Uriza • 2 months ago

I'd say that America started dying roughly in the early 1970s. Until then we were a forward-looking nation with people excited about the future and new technologies. Nowadays anytime something new comes out a lot of people can't let go of the old. And almost nobody can imagine things any way except the way they are. I don't know what happened between now and then, but we've lost our way.

I can say in many ways the present isn't the future I imagined when I was a kid. I thought we would have lunar and Mars bases by now, all our energy would be generated by fusion, solar, or wind, all our transportation would be electrified, we would have modern, efficient homes, we would be done with war, etc. Instead, we haven't sent anyone outside of low Earth orbit since the early 1970s, we're still using internal combustion engines and burning coal, we're still fighting wars, and we're living in inefficient, retro-look McMansions right down to the fake window panes. About the only area where we've embraced great advancement has been in electronics.

Meanwhile, other countries are doing many of the things I've envisioned. The future came to places like Japan, China, and much of Europe but skipped the United States. I'd love to see us get back on track but until the older generations who have kept us in the past let go of power I'm not seeing that happening. I'm just tired of hearing from that generation how wonderful the 1950s were, to the point it seems they want to keep us there forever.

2 ^ | v • Reply • Share ›

as much as we would want, I share many of those ideas you have written. Unfortunately, I think we have lost our collective drive to strive as a nation. Instead, we have granulated national goals into segmental and local ideologies competing for time, energy, and resources.

1 ^ | v • Reply • Share ›



RGD → Joe R. • a month ago

We will be on mars by 2022, as I recall (privately funded US venture). We lost some steam when we moved to the suburbs. Now they have no jobs, and no new job growth. See how many new houses out there sell over the course of the next few years compared to what happens to land values downtown.

^ | v • Reply • Share ›



jamesbeaz → voltairesmistress • a month ago

"Fortunately, Americans in the U.S. tend toward optimism and innovation."

Are you kidding me?

"No, we can't" do single-payer.

"No, we can't" build high-quality BRT.

"No, we can't" clean up the subway stations.

"No, we can't" do platform edge doors.

America is the most pessimistic place I've ever been.

2 ^ | v • Reply • Share ›



Jym Dyer → jamesbeaz • a month ago

BRT is basically "no we can't build LRT." It was coined to usurp a light-rail boom in the 1990s.

^ | v • Reply • Share ›



RGD → jamesbeaz • a month ago

I think it depends on where you live. I have seen much more cynicism in the North. But who invented the personal computer? The smartphone? The internet? How about electric lighting? Aviation? The telephone? Which is the only nation to put a man on the moon? Which nation ultimately became the proof of concept for a democratic government? There is one answer to all of these questions: the US. Innovative? Yes.

Unfortunately, we seem to not have much imagination when it comes to transportation...

As for optimism, that depends on where you live. I've found that some regions are quite cynical and pessimistic, while others are much more optimistic.

For those of you feel that the inventive America died a long time ago, to some extent it did: it became dormant as cities declined. When they come back, and they will, then we will once again have the full American ingenuity revived.

^ | v • Reply • Share ›



Jeremy • 2 months ago

These companies are just burning cash and will eventually die one day

Good riddance

3 ^ | v • Reply • Share ›



Jym Dyer → jeremy • a month ago

The question is what damage they do along the way. The spin is that they'll reform/reinvent the taxi industry, but this research (you know, the thing that this article is actually about?) indicates that public transit is also facing an impact.

4 ^ | v • Reply • Share ›



Stephen Simac → Jym Dyer • a month ago

I've read that Uber drivers (probably Lyft and others as well) are using bike lanes in SF to park and wait for a ride hail. The private buses to Silicon Valley businesses at least have to pay the city to use their bus stops.

1 ^ | v • Reply • Share ›



kevd → Stephen Simac • a month ago

if you go a block in NYC without a yellow cab or livery cab in a bike lane, you're doing really well.

^ | v • Reply • Share ›



Jym Dyer → Stephen Simac • a month ago

I encounter multiple Uber and Lyft drivers doing this in San Francisco bike lanes every single day.

^ | v • Reply • Share ›

not a matter of dying as they are taxis but on-call taxis you can contact which shortly will have no driver. There is a need and it's the taxi which will die, not Ü.

That said, Ü, becoming the new taxi, will become about as profitable as a taxi. Not dead, but not throwing off any cash.

^ | v • Reply • Share ›



jamesbeaz → jeremy • 2 months ago

Not in developing country markets (and this includes the USA, IMHO).

^ | v • Reply • Share ›



Baloo Uriza → jamesbeaz • 2 months ago

Oh no, they're definitely lighting cash on fire in the US. They're basically using the late 1990s "pets.com" business model, minus the cute mascot.

1 ^ | v • Reply • Share ›



Parque_Hundido • a month ago

Wow. Ride hailing leads to lower car ownership and increased use of rail. Yet it is "cannibalizing" transit?

How is anything that results in fewer single occupancy vehicles a bad thing? Cities should look to further restrict parking and single occupancy vehicles, not ride sharing or any other form of transit.

3 ^ | v • Reply • Share ›



com63 → Parque_Hundido • a month ago

Agreed. I gave up a car and fully depend on transit and uber/lyft now for gaps that transit cannot fill. It works just fine and I guarantee I cause less traffic than before. Seems like the easy solution is to just give more priority to buses so they are a competitive option to uber/lyft.

4 ^ | v • Reply • Share ›



Guy Ross → Parque_Hundido • a month ago

Good point. However please don't equate 'lower car ownership' with being a benefit to public transit. The problem is that an Ü is on the road at all times, sometime occupied and sometimes not. This is a disaster for other forms of surface transportation.

Really, it all goes back to removing transportation subsidies in all forms, then you will see public transportation explode and the need for wide streets and parking implode.

1 ^ | v • Reply • Share ›



Parque_Hundido → Guy Ross • a month ago

Not sure I can agree. Ride share is only profitable if there's more than one rider in the car. We should be asking how we can make it even more profitable to have more than two riders and how we can encourage this to become a reliable strategy for car sharing.

We need to remove all subsidies that encourage single occupancy vehicles from moving or parking. Everything else seems like it's on the right side of the transportation equation.

Am I missing something?

^ | v • Reply • Share ›



D G Spencer Ludgate → Parque_Hundido • a month ago

As long as the rideshare companies continue to pay drivers less (about 16% less on average) for Pool/Line rides, drivers will continue to refuse to give the rides. After vehicle expenses, the average UberX or Classic Lyft driver makes minimum wage (\$10 to \$12 an hour).

If you want wide-spread acceptance of Pool/Line lobby the rideshare companies to properly compensate their drivers. Drivers should be paid the same per mile/minute rates for Pool/Line as X/Classic. Riders should also be compensated for each additional passenger pick-up. I for one will not advance environmental ideologies on the backs of minimum wage labor. When I use rideshare, I never use Pool/Line and tip my driver (\$3.00 for short rides, \$5.00 for longer rides, \$10.00+ for airport rides).

1 ^ | v • Reply • Share ›



Parque_Hundido → D G Spencer Ludgate • a month ago

I hear what you're saying, but that sounds like a labor market regulation issue. If they refuse rides, the service stops and the vehicles revert to single occupancy.

^ | v • Reply • Share ›



Ray → Parque_Hundido • a month ago

Uber & Lyft are just taking advantage of the cheap roads. Price the roads at market rates, and buses will become more competitive, frequent, and rapid. Uber & Lyft will switch to shuttle based services to compete.

^ | v • Reply • Share ›



Parque_Hundido → Ray • a month ago

How would putting a toll on roads make buses better? It seems like it just makes driving worse. Singapore had a robust transit network in place before they instituted electronic road pricing.





Ray → Parque_Hundido • a month ago

Because the number one reason to someone to choose Uber over bus service is the time savings. Most of the reason why buses are slow is because they are stuck in congestion. Market pricing the roads will do 3 important things: 1) Make buses rapid. 2) discourage single-occupancy travel. 3) provide \$\$\$ for transportation innovation.

Singapore's road pricing is on top of the vehicle quota system. They don't allow more than a specific number of privately owned vehicle and the permits to own a vehicle are put to auction.

Also, to create the most efficient transportation system, you need to have it funded using fees from the system itself, not indirect general taxes.

^ | v • Reply • Share ›

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Cross-posted from City Observatory. Earlier, we rolled out our parking price index, showing the variation in parking prices among large US cities. Gleaning data from ParkMe, a web-based directory of parking lots and rates, we showed how much it cost to park on a monthly basis in different cities. There's a surprising degree of variation: [...]



Uber Can't Replace Transit — Here Are 3 Reasons Why

By Angie Schmitt | Dec 19, 2016

The latest line from anti-transit types is that ride-hailing apps like Uber and Lyft are going to make fixed-route bus or rail service obsolete. If you find yourself arguing with someone about why transit is essential, a new fact sheet from TransitCenter can help.

Can Ride-Hailing Apps Become More Like Buses and Less Like Taxis?

By Angie Schmitt | Feb 29, 2016

A big part of reducing car traffic involves using cars more efficiently. Ride-hailing services like Uber and Lyft are supposedly assisting in this transition by making car ownership less necessary. But even though both companies operate carpool-type services, most of their business still comes from single passenger trips. Other ride-hailing companies are all about shared trips. Network blog Cap'n Transit has [...]

How Transit Agencies Can Offer Better Paratransit Service at Lower Costs

By Angie Schmitt | Sep 20, 2016

Paratransit service for people with disabilities is a big part of what modern transit agencies do, and it's getting bigger all the time. As the population ages and more people rely on paratransit to get around, agencies need to get smart about how they provide the service — or else rising costs will eat into their capacity [...]

Does It Make Sense for Transit Agencies to Pay for “Last Mile” Uber Trips?

By Angie Schmitt | Apr 28, 2016

Should transit agencies subsidize short “last-mile” Uber trips to expand transit access for people who live outside comfortable walking distance of a train station? Columbus, Ohio, has proposed something along these lines as part of its application for U.S. DOT's Smart City Challenge. The city is one of seven finalists competing for a \$50 million federal grant. New technologies associated with ride-hailing services [...]

No, Uber's Not Going to Replace Buses, But It Can Complement Them

By Angie Schmitt | Sep 9, 2016

Not a day goes by without a raft of stories about “new mobility” providers — ride-hailing companies like Uber or car-share services like Car2Go that have tapped into recent technological advances to provide new ways to get around. In a new report, “Private Mobility, Public Interest” [PDF], TransitCenter deflates some of the hype surrounding these services while laying out [...]

Gary Cohn Floats Idea of Gas Tax Hike for Infrastructure

By **Erik Wasson** and **Mark Niquette**

October 25, 2017, 11:19 AM PDT

- White House economic adviser met with Problem Solvers Caucus
- Fuel tax hasn't been raised since 1993 because of opposition

President Donald Trump's chief economic adviser raised the possibility of increasing the federal gasoline tax next year to help pay for the administration's \$1 trillion infrastructure plan, U.S. Representative Tom Reed said.

National Economic Council Director Gary Cohn brought up the fuel tax as a way to help fund promised upgrades to U.S. roads, bridges and other public works during a meeting with a bipartisan group of lawmakers dubbed the Problem Solvers Caucus on Wednesday, said Reed, a New York Republican who is co-chairman of the caucus.

There have been proposals over the years to raise the gas tax, which hasn't been increased since 1993, but they have faced stiff opposition from congressional Republicans and others loath to raise taxes.

As recently as May 1, after Trump floated the idea in an interview with Bloomberg News, House Ways and Means Chairman Kevin Brady seemed cold to the idea. Asked then if he'd rule it out, he said, "In my view, yes, but we're going to have that discussion."

On Wednesday, Brady was no more enthusiastic. "Hm. I'm going to stay focused on tax reform right now," he said.

Revenue from the federal per-gallon taxes of 18.4 cents on gasoline and 24.4 cents on diesel has declined as inflation robbed them of their purchasing power and the average fuel economy of a passenger vehicle increased by 12 percent, according to the U.S. Department of Transportation. Business and transportation groups have called for increasing the federal gas tax to help sustain the federal Highway Trust Fund that provides money to states for projects.

Representative Mike Simpson, a Republican from Idaho, said he would support an increase.

"It's a user fee," Simpson said. "We've got to convince people that the money goes to roads and bridges and not all the other bull."

In the Bloomberg News interview, Trump [said <https://www.bloomberg.com/politics/articles/2017-05-01/trump-pursuit-of-gas-tax-could-run-afoul-of-gop-rural-voters>](https://www.bloomberg.com/politics/articles/2017-05-01/trump-pursuit-of-gas-tax-could-run-afoul-of-gop-rural-voters) he "would certainly consider" raising the U.S. gas tax to fund the infrastructure improvements he promised during the campaign. He described the idea as supported by truckers "if we earmarked money toward the highways." But the White House quickly said the president wasn't endorsing the idea.

The White House didn't immediately return a message seeking comment on Cohn's remarks. The administration has said it plans to pursue an infrastructure package after ongoing efforts to overhaul the U.S. tax code are resolved.

[State Government](#) [Environment](#) [Business](#)

Two Gas Tax Repeal Efforts Compete To Make California's 2018 Ballot

👤 [Chris Nichols](#)

Monday, November 6, 2017 | Sacramento, CA | [🔗 Permalink](#)



Mike Mozart / Flickr

Californians frustrated over the state's recent gas tax hike could have two options to eliminate it next year.

Separate campaigns are working to qualify repeal initiatives for the November 2018 ballot.

One is backed by Orange County state Asm. Travis Allen, a Republican candidate for governor. It would simply get rid of the increase.

The other is supported by the Howard Jarvis Taxpayer's Association and John Cox, also a Republican candidate for governor. It would eliminate this year's gas tax increase and require voter approval on all future proposals to raise the gas tax.

This year's increase went into effect on Nov. 1 following approvals by the Legislature and Gov. Jerry Brown in April.

It includes an initial 12-cent-per-gallon gas tax increase; a diesel tax hike; and a new "transportation improvement fee" ranging from \$25 to \$175 per year, depending on the value of one's vehicle. It's expected to raise billions for backlogged state highway and bridge repairs.

Sacramento State Associate Political Science Professor Wesley Hussey said having two competing plans could harm the overall repeal effort.

"It does confuse voters," Hussey said. "It requires an extra bit of information that voters need to seek out to figure out the difference between them. And that can oftentimes lead to an increased amount of no votes on both initiatives."

Of the two campaigns, Hussey said the one backed by the taxpayer's association was the most likely to succeed because it will likely receive more funding.

He said the repeal effort will face strong opposition from groups who are benefitting from the gas tax increase.

"I imagine there would be a lot of money spent to defeat this initiative," Hussey said, "by the trade unions and manufacturers that benefit from the extra money for road construction. There could be a big coalition that does not want this initiative to pass. And there could be a sizeable coalition of conservative and anti-tax groups that would like it to pass."

[jerry brown](#)[gas tax](#)[California Legislature](#)[Travis Allen](#)[John Cox](#)[gas tax repeal](#)

Chris Nichols

PolitiFact Reporter



Residential Real Estate Guest Opinion

Guest opinion: Drafting a blueprint for a better Bay Area

By Fred Blackwell – Leslye Corsiglia, and Michael Covarrubias
Nov 6, 2017, 4:25pm

Every day, the headlines bring more confirmation of the grim reality of California's housing crisis. Soaring rents and astronomical housing prices. Record-low homeownership rates. Long-time residents leaving the state — or strongly considering it. Poverty. Homelessness. The list goes on.

The recent approval of a major housing package by the California Legislature comes as welcome relief from this onslaught of bad news. With new funding for affordable housing and reforms aimed at sparking more housing production, the package represents a commitment from state legislators and the governor to push housing solutions that will work for all Californians.

These state actions, however, are just the start of the changes needed to address the housing crisis. Here in the Bay Area, we have all the problems that exist at the state level, but worse. More reform, more funding, more policy innovation will be needed to truly move the needle on our region's chronic housing affordability challenges. But how can the Bay Area build on the momentum created by the state? How can we produce more housing for all while protecting our most vulnerable residents — so that more people can continue to call the Bay Area “home” without undue financial hardship?

This is where our group comes in. Together, we are co-chairing a new initiative called CASA — The Committee to House the Bay Area. With support from the Metropolitan Transportation Commission (MTC), the nine-county Bay Area's transportation planning, financing and coordinating agency, CASA is bringing together nearly 50 leaders from across the region to, in plain terms, figure this thing out.

As an affordable-housing advocate, market-rate housing developer and philanthropist dedicated to racial and economic equity, each of us have our own perspective on how to move the region forward. The people serving on the committee also represent a diverse cross-section of stakeholders and constituencies: Elected officials, market-rate and affordable housing developers, non-profits, labor, business, social equity organizations,

environmental advocates, transportation providers and the technology industry. They all have their own reservoirs of deeply considered, and sometimes differing, ideas about getting the Bay Area on the right track out of this housing crisis.

This is because the Bay Area has not one but many crises – not nearly enough housing production, a “missing middle” of market-rate affordability, gentrification and displacement disproportionately affecting low-income residents and communities of color and not enough affordable housing for our most vulnerable neighbors, among others. Rather than minor policy changes, or limited funding infusions, we will be asking our CASA partners to propose bold, groundbreaking actions that will move the needle on these difficult, seemingly intractable problems.

Our perspective is that solutions must be forged through a consistent lens of meeting the region’s long-term needs and by participants being willing to compromise on behalf of the greater good. We hope that the support of the Metropolitan Transportation Commission, CASA’s hosts and conveners, will help us structure a big-picture, regional and long-term view. The ultimate hope is getting to a “Grand Bargain” amongst all the stakeholders at the table that will allow us to chart a path forward.

We will set a very high bar for agreement, such that only actions that enjoy near-total consensus amongst CASA participants will be approved. Getting to this level of consensus among so many different interests may seem like a tall order, but recent, similar efforts have seen some success, including the Housing Affordability and Livability Agenda (HALA) in Seattle. After a sometimes contentious process, a diverse, 28-member stakeholder group was ultimately able to approve 65 policy recommendations and a “Grand Bargain” around one of the Seattle’s thorniest issues: inclusionary zoning.

Ultimately, we hope to develop a suite of integrated legislative, financial, policy and regulatory recommendations that together will form a Regional Housing Implementation Strategy for the nine-county region, with a final report scheduled for release in late 2018.

CASA officially kicked off its efforts in September. Buckle your seatbelts.

*Fred Blackwell is CEO of the San Francisco Foundation. Leslye Corsiglia is executive director of SV@Home, an affordable housing advocacy group in Silicon Valley. Michael Covarrubias is chairman and CEO of **TMG Partners**, a development firm focused on urban infill projects in the Bay Area.*

Self-operating shuttle bus crashes after Las Vegas launch

By THE ASSOCIATED PRESS |

PUBLISHED: November 8, 2017 at 4:03 pm | UPDATED: November 8, 2017 at 5:35 pm



By Regina Garcia Cano | Associated Press

LAS VEGAS — The robots won this one.

A driverless shuttle bus was involved in a minor crash with a semi-truck less than two hours after it made its debut on Las Vegas streets Wednesday in front of cameras and celebrities.

The human behind the wheel of the truck was at fault, police said.

Las Vegas police officer Aden Ocampo-Gomez said the semi-truck's driver was cited for illegal backing. No injuries were reported.

"The shuttle did what it was supposed to do, in that it's sensors registered the truck and the shuttle stopped to avoid the accident," the city said in a statement.

"Unfortunately the delivery truck did not stop and grazed the front fender of the shuttle. Had the truck had the same sensing equipment that the shuttle has the accident would have been avoided."

The oval-shaped shuttle that can transport up to 12 people has an attendant and computer monitor, but no steering wheel and no brake pedals. It uses GPS, electronic curb sensors and other technology to make its way. It was developed by the French company Navya and was tested in January in Las Vegas.

At the unveiling ceremony, officials promoted it as the nation's first self-driving shuttle pilot project geared toward the public.

Before it crashed, dozens of people had lined up in downtown Las Vegas to get a free trip on a 0.6-mile loop in downtown Las Vegas. City spokesman Jace Radke said the shuttle took two more loops after the crash.

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NASCAR driver Danica Patrick and magic duo Penn and Teller were among the first passengers.

The transportation company Keolis is operating the shuttle. Its vice president of mobility solutions, Maurice Bell, said the bus will scoot through Las Vegas at more than 15 mph. AAA Northern California, Nevada and Utah, which is sponsoring the one-year pilot project, expects that 250,000 people will use the shuttle.

Las Vegas resident Stacey Gray and her dog Socrates were among the first to board the bus Wednesday. She said the drive was so smooth that she couldn't even tell she was in a car, but approaching the intersection made her a little nervous.

"A little bit of that looking around and you know wondering if it was going to stop, and 'Oh my gosh, there's a car behind us, kind of little hesitation,'" she said. "But it stopped and it was fine."



Repeal gas tax or end revenue for road repairs? It's the same ballot measure

By Bob Egelko | November 13, 2017



Photo: Rich Pedroncelli, Associated Press

A court will decide whether a ballot measure's title says it repeals the new gas tax or eliminates revenue for road repairs.

The future of California's new fuel tax — 12 cents a gallon for gasoline, 20 cents for diesel fuel — is likely to go before the voters in November 2018. What's less clear is whether the official title on the state ballot pamphlet, an important source of voter information, will start by saying it "repeals taxes" or "eliminates ... revenues" for transportation and road repair.

Both descriptions are accurate. Which one will accompany a Republican-sponsored initiative to repeal the tax, as of January 2019, is a question now before a state appeals court in Sacramento. The justices must weigh their duty to inform the voters against the authority provided by law to Attorney General Xavier Becerra, whose office prepares the title and summary for every proposed ballot measure.

Becerra, a Democrat, drafted a title for the initiative that referred only to its impact on repair programs and revenue, though his more-detailed summary that followed listed each tax that would be repealed. In September, a Sacramento County judge, in an unusual but not unprecedented action, found the title misleading and rewrote it to lead with the gas tax repeal.

The attorney general's office challenged the judge's action to the Third District Court of Appeal.



Anthony Ballester and others protest California's 12-cent gas tax increase in San Francisco on Nov. 4. The tax is intended to help the state repair roads.

Photo: Paul Chinn, The Chronicle

"Courts have stated that considerable deference must be afforded to the attorney general's title and summary," lawyers from Becerra's office said in the filing. The judge, the lawyers said, "simply substituted (his) judgment for the judgment of the official vested by state law with the task."



On the other hand, the attorney general is also a politician, from the party that steered the gas tax through the Legislature. He was appointed to his current position by Gov. Jerry Brown, “the very governor who champions this” tax increase, to replace Kamala Harris after her election to the U.S. Senate, noted Benjamin Pugh, lawyer for Assemblyman Travis Allen, R-Huntington Beach (Orange County), sponsor of the tax repeal initiative.

The new taxes and fees, signed into law by Brown in April, are intended to raise more than \$5 billion a year to repair the state’s deteriorating streets and highways. Besides the gas tax, they include a vehicle registration fee of \$25 to \$175, depending on the value of the vehicle, starting next year, and a \$100 fee on zero-emission vehicles, starting in 2020.

In a USC Dornsife/Los Angeles Times poll conducted online among 1,504 Californians from Oct. 27 to Nov. 6, 54 percent said they would vote to repeal the tax.

Becerra’s title said the repeal initiative “eliminates recently enacted road repair and transportation funding by eliminating revenues dedicated for those purposes.”

In response to a lawsuit by Allen, a prospective Republican candidate for governor next year, Superior Court Judge Timothy Frawley recast the title to say that the measure “repeals recently enacted gas and diesel taxes and vehicle registration fees. Eliminates road repair and transportation programs funded by these taxes and fees.”

But under state law, Becerra’s appeal of Frawley’s ruling automatically reinstated the attorney general’s language on initiative petitions, at least until the appellate court acts. Pugh said a speedy ruling is needed so that supporters will have a chance to collect 365,880 valid signatures and submit them by the June 28 deadline.

The title of a proposed ballot measure, written in all capital letters, and the summary

that follows appear on signature-gathering petitions as well as the state ballot pamphlet, and represent most voters' first view of the measure's contents. Their importance was illustrated in 1996 in a dispute over Proposition 209, which eliminated any consideration of race or sex in state education, employment and contracting programs.

Then-Attorney General Dan Lungren, a Republican who supported Prop. 209, gave it a title and summary that said it prohibited "discrimination or preferential treatment" based on race or gender. In a suit by civil rights groups, a Sacramento judge ordered Lungren to also state that the measure would ban "affirmative action" for minorities — a ban that most Californians opposed, according to opinion polls.

The appeals court disagreed, saying Lungren had taken his wording from the text of the initiative, which did not mention affirmative action. Prop. 209 passed with 54.6 percent of the vote.

Other challenges to ballot titles have occasionally succeeded, and there have been a few unsuccessful legislative efforts to shift responsibility for titles and summaries to a less partisan office. The drafter of the current law that assigned those tasks to the attorney general says he now regrets it.

The Legislature's nonpartisan fiscal analyst now does assessments of each ballot measure's likely financial impact for the ballot pamphlet, and "we should have put them in charge of the titles as well," attorney Robert Stern said. "The legislative analyst, as far as I can remember, has never been accused of playing politics."

The law was part of the state's Political Reform Act, a 1974 ballot measure that also regulated political contributions and spending. Stern helped to write it as legal counsel to then-Secretary of State Jerry Brown and later served as the first general counsel of the enforcement agency, the Fair Political Practices Commission.

He now teaches an extension class at UCLA, where Becerra appeared as a guest speaker last month and defended his role in writing the state's official descriptions of ballot measures.

There is "no one who has more expertise on this than the attorney general's office," Becerra said, responding to questions by Stern. "It doesn't make any difference to me if you're a Republican or a Democrat. ... We are the attorney for the state."

Bob Egelko is a San Francisco Chronicle staff writer. Email: begeko@sfchronicle.com Twitter: [@egelko](https://twitter.com/egelko)



POLITICO

Morning Transportation

A daily speed read on transportation and infrastructure

By TANYA SNYDER and LAUREN GARDNER

11/15/2017 10:00 AM EST

YOU HAD ONE JOB (WELL, TWO): The American Association of State Highway and Transportation Officials [wrote](#) to Senate leaders Tuesday to say how disappointed they are that the tax overhaul bill ([H.R. 1 \(115\)](#)) does not include a fix to the Highway Trust Fund's structural deficit. Calling it a missed opportunity, AASHTO said that if nothing is done, federal highways will face a 40 percent cut in 2021 and federal transit funding will be zeroed out completely from 2021 to 2023. AASHTO also called out the GOP doublespeak on an infrastructure plan: "We need to be honest with the American people: failure to find the revenue for an infrastructure initiative now, as part of tax reform, will make passage of such a package nearly impossible in the future."

If California's gas tax is repealed, what would happen?

[Meghan McCarty Carino](#) | November 21, 2017

Thanksgiving travelers are paying more in state fuel taxes this month as they fill up to hit the road, but voters could be asked next year if they want to scrap the increase.

A 12-cent per gallon [tax hike took effect](#) on Nov. 1 along with a 20-cent tax hike for diesel fuel and new vehicle registration fees, all to fund billions of dollars in road repairs and other transportation projects.

One of two proposed initiatives to repeal the new fuel tax and vehicle fees has been cleared to move forward. Organizers must now collect signatures of 585,407 registered voters to put the measure on next year's ballot.

Backers say that goal should be achievable given recent polling on the issue.

The University of California, Berkeley Institute of Governmental Studies released a poll in June that found 58 percent of voters oppose the new taxes and fees, even in communities like Los Angeles County, which enacted its own transportation sales tax last November called [Measure M](#) with 71 percent voter approval.

Poll director Mark DiCamillo said many voters see Sacramento as wasteful and they worry they won't see direct benefits from the revenues in their own backyard.

"The further away you get from your own community, the harder it is to get people to support a tax increase," DiCamillo said. He said that local taxes, like Measure M, consistently garner more support than state-level tax increases.

Californians will pay an additional \$10 a month in new tax and fee increases, the state has estimated. Although offset somewhat by the season's cheaper winter blend, that advantage will go away next year with the pricier summer fuel.

Drivers in the state already pay among the highest gas prices in the country but could pay even more over the next few days: AAA predicts drivers nationwide will see the highest Thanksgiving gas prices since 2014.

Rising gas prices could strengthen momentum for a repeal of the tax and fees, according to Mark Baldessare, president of the Public Policy Institute of California, which surveyed voters about the gas tax last year and found similar levels of opposition.

"If we were to see a spike over the next months, people are going to complain a lot more about this tax," he said. Those behind the effort to roll back the higher tax and fees have until May 21 to collect the needed signatures to place their measure on the November 2018 ballot.

If they succeed and voters approve the repeal, the fate of hundreds of transportation projects would be uncertain. Caltrans has published a map highlighting local projects that are earmarked to be funded by the gas tax. Some are already under construction. The revenues fund about 300 projects in Los Angeles County, including repaving large sections of the 10 and 605 freeways and the Pacific Coast Highway. Other projects include building bikeways, better crosswalks and local street repairs.

AASHTO: Tax reform bills fail to address infrastructure funding 'crisis'



[Rail News Home](#) » [Federal Legislation & Regulation](#)

11/22/2017

Rail News: Federal Legislation & Regulation

Congress is missing the opportunity to use tax reform legislation to address the nation's infrastructure investment "crisis," according to the [American Association of State Highway and Transportation Officials](#) (AASHTO).

AASHTO officials told congressional leaders that the proposed "Tax Cuts and Jobs Act" legislation not only misses the opportunity to address infrastructure funding, but would make it "nearly impossible" to later fund a major infrastructure package, the [AASHTO Journal](#) reported.

Neither the House nor Senate tax bills address the federal Highway Trust Fund's (HTF) "looming solvency crisis." Unless Congress shores up the trust fund before its current authorization law expires in 2020, federal highway spending would shrink by 40 percent in 2021, while new HTF mass-transit funding would evaporate completely for three years, AASHTO officials said.

"We are extremely disappointed that it appears, once again, that Congress will not address this funding crisis," [AASHTO wrote in a Nov. 14 letter to Senate leaders](#).

Only major tax legislation offers a vehicle to come up with the money for a major infrastructure program that President Donald Trump has promised, AASHTO leaders wrote.

The Trump administration has said it plans to roll out an infrastructure plan after Congress passes tax reform, but AASHTO officials believe such a strategy won't work.

"Failure to find the revenue for an infrastructure initiative now, as part of tax reform, will make passage of such a package nearly impossible in the future," the association's letter stated.

2 Comments



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Malcolm Cunningham · University of Illinois at Chicago

It fails to address ANYTHING except lining conservative billionaires pockets. And proposed cuts/elimination of TIGER grants, FAST starts and other turnkey programs for infrastructure will do even more damage. Billionaires kids however will do very well. I guess the administration is seeking to turn America into a third world country as quickly as possible.

Like · Reply · Nov 22, 2017 10:17am



Harvey Kahler · Rail transportation planner at Retired

An infrastructure bill coming after the budget is passed guarantees deficit spending or withholding budgeted allocations and subverting compromises.

Like · Reply · Nov 22, 2017 10:32am

John Cunningham

From: Morning Transportation <morningtransportation@politico.com>
Sent: Monday, November 27, 2017 7:04 AM
To: John Cunningham
Subject: POLITICO's Morning Transportation: TSA gets through Thanksgiving weekend without any major glitches — Lawmakers huddle this week on appropriations — Could infrastructure still make its way into the tax plan?

By Tanya Snyder | 11/27/2017 10:02 AM EDT

With help from Stephanie Beasley

SO LONG AND THANKS FOR ALL THE TIFIA LOANS: Marty Klepper resigned his post at the helm of DOT's Build America Bureau last month, pleased with all he'd been able to accomplish but frustrated by a slew of mixed messages from the administration and Congress on infrastructure. There's the cognitive dissonance created when an administration that's supposedly planning a major infusion of cash for infrastructure proposes to [cut funding](#) for infrastructure programs. Plus, the House tax bill seeks to eliminate the tax break for private activity bonds (which the administration has previously said it planned to expand). And who could forget Trump's bewildering statement that public-private partnerships are "more trouble than they're worth?" But worst of all is that the promised infrastructure initiative itself "appears to be stalled and the future is uncertain," he said. Klepper was tapped by the Obama administration in its waning days to take over the newborn Build America Bureau, created as a one-stop shop for federal infrastructure financing programs, but had been excited by the incoming Trump administration's apparent commitment to a \$1 trillion infrastructure initiative, he told POLITICO in an [interview](#).

Monday, November 27, 2017

Chuck Schumer opposes gas tax hike

by Diana Stancy Correll | Nov 23, 2017, 9:35 AM

"The bottom line is that we don't want to raise taxes on working people right now," Schumer said. (Graeme Jennings/Examiner)

Senate Minority Leader Chuck Schumer, D-N.Y., said he opposes increasing the gas tax as a means to raise revenue to fund a new infrastructure bill.

"The bottom line is that we don't want to raise taxes on working people right now," Schumer **told the Daily Beast**. "As it stands now that is where we are at. Income distribution is so bad, I would rather pay for infrastructure by taking the money that comes from overseas [repatriation] and putting it into infrastructure."

President Trump's chief economic adviser Gary Cohn **indicated last month the White House is open to the idea** of raising the gas tax, which sits at 18.4 cents per gallon and has not been raised since 1993.

Trump had promised during his campaign for a \$1 trillion plan to overhaul the nation's roads and bridges utilizing public-private partnerships to help offset the costs.

Trump said he would release his proposal for a new infrastructure package once Congress wraps up tax reform.

"We'll be submitting plans on infrastructure ... soon after taxes," Trump said Monday.

Illegal Dumping Costs Millions Annually in Contra Costa County

By Sean Tongson

By **ECT** - Nov 28, 2017



Photo by Sean Tongson

Costa County provides a wide range of scenic and natural beauty. From the many acres of wide open space, to beautiful hiking trails with panoramic views, to the serenity and activity of the Delta, to the scenery of Mount Diablo serving as a picturesque backdrop, there are an infinite number of things here in East County to admire and enjoy visually.

East County residents have been vocal as they say there is an ongoing notable visual blight problem which continues to exist throughout many parts of East Contra Costa County; littering and illegal dumping. And it is a problem that continues to persist.

"I'm passionate about it!" said Antioch resident **Beverly Knight**, who makes it a point to pick up two bags of garbage weekly at Mira Vista Park and City Park. Long tired of the litter, Knight has adopted these parks so that children and families have a clean place to play, even picking up broken glass, cigarette butts, and even birthday party confetti. "We spend millions on picking up litter, but what are we doing to prevent it?"

Stacey Frost, a resident of East County since the mid-1980's, mentioned that she has been planning to retire out of state because the littering and dumping problem has been so overwhelming.

"You cannot go anywhere in East County any longer without garbage blowing in the wind, piled in parking lots of shopping areas, abandoned piles of household furniture along back country roads and dumped in neighborhoods," said Frost. "We have so many bills being introduced and signed into law for requirements for clean air, water quality, protecting endangered plants and animals, and banning plastic bags. All of these bills and laws are to protect us and the wildlife around us from one thing; pollutants, yet one of the primary sources currently polluting our state is household garbage.

Additionally, multiple Facebook groups have now popped within the past few months up which take photographs of the blight and dumping and post them for residents to see which results in dialogue.

"I regularly get calls from constituents about illegal dumping. It's a huge problem in East County and Public Works estimates it's costing the County \$1 million dollars every year," said Supervisor **Diane Burgis**. "The Board of Supervisors will be considering a waste hauler ordinance that would create a permitting process that would allow Code Enforcement to go after illegal dumpers. I've also reached out to the garbage hauling companies, the District Attorney's office, and County staff about convening an Illegal Dumping Task Force in East County. In Antioch, Public Works says they see a variety of littering and dumping, but notes it's not just within the city, but all over the county who is dealing with similar issues. Scores of litter are often visible alongside city streets, vacant lots, empty fields, main roads and along Highway 4, particularly on the on and off-ramps and along the shoulders. Street sweepers are often utilized to clean up the mess and debris on the roadways, but within a short period of time, the litter returns."



Illegal dumping on private property along Kirker Pass. Photo provided by Stacey Frost

In Antioch, they conduct litter abatement activities explained Code Enforcement Manager **Curt Michael**.

"The City of Antioch conducts litter abatement activity through Commercial Support Services in various areas throughout the City, which results in approximately 80 garbage bags of litter removed from city streets and sidewalks each month," said Michael. "Additionally, the City of Antioch's Abatement Team removes illegally dumped junk from city streets, sidewalks, and other public areas."

According to Michael, approximately 100 cubic yards of dumped debris are removed from city property on a weekly basis. Michael notes that if less time and resources are utilized towards collecting illegally dumped garbage, the city can use those resources to focus on other things.

"Illegal dumping and littering creates a visual blight which has a negative effect on a community's quality of life," added Michael. "With less occurrences of illegal dumping and littering on city property, the Abatement Team could spend more time on graffiti abatement, abandoned shopping cart abatement, or assisting Public Works with other projects.

Countywide, \$14 million dollars annually is allotted to maintain the 363 main miles of roads and grounds in Contra Costa County. The funds are raised through a gas tax, which has been decreasing since 2009 due to the advent of more fuel efficient cars such hybrid and electric vehicles. The majority of those funds are utilized for arguably more important issues, such a pothole repair and fixing pipes.

"We see both; littering and dumping all throughout the county," said Assistant Public Works Director **Allison Knapp**. "Furniture, mattresses, refrigerators, couches, we see it all. What people also don't understand is that the trash and debris can get into our waterways, where it can affect wildlife and their habitats."

The City of Brentwood averages one to two cleans ups a month to combat littering and dumping. Brentwood Public Works have collected approximately 178 cubic yards of illegally dumped trash and debris so far this year, while street sweepers have collected approximately 1,173,000 pounds of debris from city streets. Additionally, approximately 10 cubic yards of trash has been collected this year along Marsh Creek and various other locations in partnership with volunteer groups, such as the Friends of Marsh Creek.

"Our city prides itself on keeping our surface streets, parks and city facilities clean for our amazing citizens and visitors," said Brentwood Police Lieutenant **Walter O'Grodnick**. "Over the past 12 months, we've seen a significant increase in the amount of trash and debris recovered from homeless encampments in various spots throughout the city. These clean-ups can be costly depending on the amount of trash left behind and the resources used to perform the clean-ups. The amount of time and resources used to mitigate and clean-up trash could absolutely be used in other areas, such as preventive maintenance on our surface streets, parks, and other city facilities to name a few."

The City of Oakley has a contract with the non-profit Commercial Support Services to assist with the trash and litter pickup at City parks and facilities. Much of the \$60,000 annual budget is spent servicing trash cans, although some of that is used for litter clean up, particularly during significantly windy days, where litter becomes more visible.

“Oakley residents do a good job helping to pick up litter,” said City Manager Assistant **Nancy Marquez**. “We appreciate all residents that pick up trash as they see it to help Oakley become even more litter free.”

If Antioch residents observe any illegal dumping activity or littering and wish to report it, they are encouraged to notify the Antioch Police Department at (925) 778-3911. To report any illegally dumped junk or garbage on city property, residents and businesses may contact the Code Enforcement Division at (925)779-7042, or visit the web page at:

<http://www.ci.antioch.ca.us/CityGov/CommDev/Code-Enforcement>. Antioch Police can issue a citation to any individuals that is caught illegally dumping if they witness the illegal action.

Additionally, for any volunteers or organizations interested in assisting with litter pickup or removal in Oakley, they can contact emailinfo@ci.oakley.ca.us. Vests, bags, and pickup tools will be provided by the City to volunteers who wish to participate in litter removal.

The City of Brentwood’s Public Works Department provides regular Neighborhood Cleanup Events, and more information can be found at

(<http://brentwoodca.gov/gov/pw/recycling/events.asp>), along with information from the Contra Costa Clean Water Program at <http://www.cccleanwater.org>