EAST CONTRA COSTA COUNTY HCP / NCCP MITIGATION FEE AUDIT AND NEXUS STUDY

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Table of Contents

List of Tables (excluding appendix tables)

EXECUTIVE SUMMARY

The purpose of this report is to present the findings, conclusions, and recommendations of an audit of mitigation fees that partially fund the *East Contra Costa Habitat Conservation Plan and Natural Community Conservation Plan* (HCP/NCCP or Plan). The purpose of this audit is to fulfill the requirements of the periodic audit requirements of the Plan. The audit also provides the basis for findings required by the Mitigation Fee Act (MFA) related to the mandatory five-year review and any action establishing, increasing, or imposing a fee (commonly referred to as a "nexus analysis").

Revenue sources to fund estimated HCP/NCCP costs during the 30-year permit term include four types of mitigation fees:

- Development fee
- Rural road fee
- Wetland mitigation fee
- Temporary impact fee.

Covered activities that cause permanent impacts to habitat pay the development fee (except rural transportation projects, see below). If the impact is to one of several wetland land cover types, then the wetland mitigation fee applies in addition to the development fee.

The rural road fee is a multiple of the development fee and applies to 18 identified rural transportation projects in the Plan. Covered activities that temporarily disturb habitat pay the temporary impact fee.

Table E.1 summarizes how the four types of mitigation fees are applied to covered activities based on the type of impact.

Table E.1: Mitigation Fees

Type of Impact	Mitigation Fee	Applicability
Permanent	Development fee	All permanent impacts except those subject to the rural road fee.
	Rural road fee	Permanent impacts from rural road projects specifically identified in Table 9-6 of the Plan.
	Wetland mitigation fee	Permanent impacts to wetland land cover types and streams, paid in addition to applicable development or rural road fee.
Temporary	Temporary impact fee	All temporary impacts and based on the associated development, rural road, or wetland mitigation fee adjusted for the length (in time) of the temporary impact and recovery.

Funding for post-permit term costs in perpetuity is required by the HCP/NCCP. The Plan allowed this cost obligation to be deferred until year 15 of implementation, or when half of the impacts allowed under the permits occur, whichever comes first. The prior audit completed in 2017 included estimates for an endowment to fund post-permit term costs. The endowment was established with the Regional Parks Foundation in 2020, year 13 of Plan implementation.

This audit like prior audits assumes that all development impacts allowed under the permits will occur by the end of the 30-year permit term in 2037. This approach is necessary to align funding sources to meet mitigation and conservation goals under the Plan, and to ensure sufficient funding for an endowment by the end of the permit term.

A significant finding of this audit is that only a minority of total development impacts allowed under the permits are likely to occur by the end of the 30-year permit term in 2037. This finding suggests that an extension to the permit term should be considered to align the term more closely with the timing of development impacts.

The audit was completed based on data through fiscal year 2021 so the calculated mitigation fees are comparable to the 2022 fee schedule. The audit results for the development fee are shown in **Table E.2**. The development fee is also the basis for the rural road and temporary impact fees so the same trends would apply to those fees as well.

Table E.2: Development Fee Comparison

Zone	2022 Fee Schedule	2022 Audit	Change
Zone 1	$18,938	$19,170	1.2%
Zone 2	$37,876	$38,340	1.2%
Zone 3	$9,469	$9,585	1.2%

Sources: Table 6.3.

The adjustment to the 2022 fee schedule is minor (1.2 percent). This indicates that the annual inflation adjustment process (since the prior 2017 audit) has been effective tracking the fee with changes in Plan costs. The fee includes necessary funding for the endowment.

The audit results for the wetland mitigation fees are shown in **Table E.3**. The wetland mitigation fees are also the basis for the wetland mitigation component of the temporary fee so the same trends would apply to the wetland component of that fee as well.

As shown in the table, the increase in the fee because of the audit is between 0.4 percent and 2.5 percent compared to the current fee, depending on the land cover type.

Table E.3: Wetland Mitigation Fee Comparison

Land Cover Type	Fee Basis	2022 Fee Schedule	2022 Audit	Change
Riparian	per acre	$105,516	$105,891	0.4%
Perennial Wetland	per acre	$159,912	$162,953	1.9%
Seasonal Wetland	per acre	$374,220	$382,792	2.3%
Alkali Wetland	per acre	$378,310	$386,980	2.3%
Pond	per acre	$205,924	$211,115	2.5%
Aquatic (open water)	per acre	$102,962	$105,558	2.5%
Slough / Channel	per acre	$147,029	$149,516	1.7%
Streams (<=25 ft. wide)	per linear foot	$543	$553	1.8%
Streams (>25 ft. wide)	per linear foot	$814	$829	1.8%

Sources: Table 5.2.

1. INTRODUCTION

The purpose of this report is to present the findings, conclusions, and recommendations of an audit of mitigation fees that partially fund the *East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan* (HCP/NCCP or Plan). This introduction provides background on the Plan and the Mitigation Fee Act (MFA), the state enabling statute for mitigation fees. This chapter also describes the purpose and scope of this audit and explains the general approach taken to complete the audit.

Background

The HCP/NCCP was completed in 2006 after an extensive planning process initiated in 1999 that built on prior efforts begun in 1995.[1] The HCP/NCCP enables the protection of natural resources in east Contra Costa County while streamlining the environmental permitting process for impacts on endangered species covered by the Plan. Adoption of the Plan allowed state and federal wildlife agencies to issue various permits for a 30-year term (the permits). These permits allow the incidental take of endangered species by the projects and activities of the permittees under the Plan.[2] Covered activities include all ground- or habitat-disturbing activities within the Plan's urban development area (UDA), and other specifically named projects. These include, for example, urban development projects, public infrastructure projects, and ongoing infrastructure maintenance activities.

Implementation of the Plan preserves specified natural lands in eastern Contra Costa County in perpetuity (the Preserve System) to mitigate the impacts of covered activities on endangered species and contribute to their recovery.

The five local agencies responsible for implementing portions of the Plan that relate to the development entitlement process are the County of Contra Costa and the cities of Brentwood, Clayton, Oakley, and Pittsburg. The City of Antioch chose not to participate in the Plan. These five participating local agencies formed a joint powers authority (JPA) known as the East Contra Costa County Habitat Conservancy (the Conservancy) to perform the many implementation duties assigned to the "Implementing Entity" by the Plan.

[1] HCP/NCCP, Chapter 1, pp. 1-1 to 1-2.

[2] The permittees include Contra Costa County, the cities of Brentwood, Clayton, Oakley, and Pittsburg, the East Bay Regional Park District, the Contra Costa County Flood Control And Water Conservation District, and the East Contra Costa County Habitat Conservancy.

In late 2006 and through 2007 the local agencies formed the JPA, the Conservancy, permittees, and wildlife agencies executed the Implementing Agreement, and the wildlife agencies issued the permits. The local agencies and the Conservancy began collecting mitigation fees in 2008. The first full year of implementation was 2008. The Conservancy's fiscal year (FY) is from January 1 to December 31.

Consistent with the financial planning presented in Chapter 9 of the HCP/NCCP, 2007 is year 0, 2008 is year 1, and the permit term would end in 2037, year 30. This audit is conducted in 2022 (year 15) as required by the Plan and is based on data through FY 2021 (year 14). The next audit required by the Plan is in 2027 (year 20).

HCP/NCCP Mitigation Fees

Revenue sources to fund estimated HCP/NCCP costs during the 30-year permit term include four types of mitigation fees:

- Development fee
- Rural road fee
- Wetland mitigation fee
- Temporary impact fee.

The type of mitigation fee paid by a covered activity depends on fee zone, land cover type affected, and type of impact ("impact" and "covered activity" are used interchangeably in this report). Most covered activities occur within the UDA. The UDA is defined as (1) the County of Contra Costa urban limit line, or (2) the boundaries of the four cities implementing the Plan, whichever is larger.[3]

Applicants can dedicate land for the Preserve System or generate alternative special taxes, fees, or charges in lieu of paying a portion of the full development fee, subject to approval by the Conservancy.

Covered activities that cause permanent impacts to habitat pay the development fee (except rural road projects, see below). If the impact is to wetland land cover types, then the wetland mitigation fee applies in addition to the development fee. This additional fee applies because of the greater mitigation requirements (restoration and creation) associated with wetland impacts.

The Plan includes a separate rural road fee based on a multiple of the development fee for specifically-identified rural transportation projects in the Plan. These projects generally have a greater per-acre impact than other types of development projects.

[3] HCP/NCCP, Chapter 2, pp. 2-16 to 2-18, Figure 2-3. Excludes City of Antioch that is not covered under the Plan.

Covered activities that temporarily disturb habitat pay the temporary impact fee. The fee is calculated based on the permanent fee that otherwise would apply (development, rural road, or wetland) adjusted for the length of time of the temporary impact and its recovery.

Table 1.1 summarizes how the four types of mitigation fees are applied to covered activities based on the type of impact.

Table 1.1: Mitigation Fees

Type of Impact	Mitigation Fee	Applicability
Permanent	Development fee	All permanent impacts except those subject to the rural road fee.
	Rural road fee	Permanent impacts from rural road projects specifically identified in Table 9-6 of the Plan.
	Wetland mitigation fee	Permanent impacts to wetland land cover types and streams, paid in addition to applicable development or rural road fee.
Temporary	Temporary impact fee	All temporary impacts and based on the associated development, rural road, or wetland mitigation fee adjusted for the length (in time) of the temporary impact and recovery.

Audit Objectives and Scope

The objectives of this audit are defined by the requirements of the HCP/NCCP. The audit also provides the basis for findings required by the MFA related to the mandatory five-year review and any action establishing, increasing, or imposing a fee.

Periodic Audit Requirements of the HCP/NCCP

The HCP/NCCP calls for periodic audits of the mitigation fees in the following years: 2010 (year 3), 2013 (year 6), 2017 (year 10), 2022 (year 15), 2027 (year 20), and 2032 (year 25). The purpose of the audit is "[t]o ensure that the fees generated by development and other covered activities are adequately covering their share of Plan costs."[4]

Audits must compare current actual costs to the cost assumptions used in the current mitigation fee calculation. The audit must review actual land acquisition costs as well as costs to operate, manage, and maintain the Preserve System. The audit must recalculate fees based on this cost review. As with prior

[4] HCP/NCCP, Chapter 9, p. 9-31.

audits, this audit uses the same approach as the HCP/NCCP to calculate the development fee based on a specified fair share of total Plan costs (see Chapter 6 for more explanation).

In between periodic audits the Plan calls for automatic annual adjustments to the Plan's mitigation fees. Annual adjustments are based on two inflation indices weighted by the appropriate Plan cost component reflected by each index.[5] A real estate cost index is used to update the land acquisition cost component reflecting more than half of total plan costs. The Consumer Price Index is used to update the share of fees funding the balance of Plan costs.

Mitigation Fee Act Requirements

The mitigation fees collected pursuant to the HCP/NCCP are authorized by California law under the Mitigation Fee Act (MFA) found in Sections 66000 through 66025 of the *California Government Code*.

Section 66001

This audit provides a revised fee schedule based on updated cost data. If the audit results in an increase in fees, the audit must make the following four "reasonable relationship", or "nexus" findings required by the MFA:

> *Sec. 66001(a) In any action establishing, increasing, or imposing a fee as a condition of approval of a development project by a local agency, the local agency shall do all of the following:*
>
> *(1) Identify the purpose of the fee.*
>
> *(2) Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specified in Section 65403 or 66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the public facilities for which the fee is charged.*
>
> *(3) Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed.*
>
> *(4) Determine how there is a reasonable relationship between the need for the public facility and the type of development on which the fee is imposed.*

[5] HCP/NCCP, Chapter 9, p. 9-30.

The following finding is not required though this audit makes this finding as well:

> *Section 66001(b) In any action imposing a fee as a condition of approval of a development project by a local agency, the local agency shall determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.*

Each of these findings are made in association with the analysis of each fee in Chapters 5, 6, and 7.

Section 66016.5

Section 66016.5(a) of the MFA includes certain requirements for nexus studies completed on and after January 1, 2022. These requirements and how this audit meets these requirements are presented below.

> *(1) Before the adoption of an associated development fee, an impact fee nexus study shall be adopted.*

This audit constitutes a nexus study for the purposes of this section of the MFA.

> *(2) When applicable, the nexus study shall identify the existing level of service for each public facility, identify the proposed new level of service, and include an explanation of why the new level of service is appropriate.*

This section is not applicable because this audit does not result in a change in the existing level of service.

> *(3) A nexus study shall include information that supports the local agency's actions, as required by subdivision (a) of Section 66001.*

As mentioned above, section 66001(a) findings are included in Chapters 5, 6, and 7.

> *(4) If a nexus study supports the increase of an existing fee, the local agency shall review the assumptions of the nexus study supporting the original fee and evaluate the amount of fees collected under the original fee.*

This audit evaluates the amount of fees collected under the current fee schedule and the underlying cost assumptions and finds revenue insufficient to fully fund new development's fair share of the Plan costs. See Chapters 5 and 6.

> *(5)(A) A nexus study adopted after July 1, 2022, shall calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development. A local agency that imposes a fee proportionately to the square footage of the proposed units of the development shall be deemed to have used a valid method to establish a reasonable relationship between the fee charged and the burden posed by the development.*

Application of the Plan's mitigation fees on housing development by square foot is not an appropriate nexus based on the findings presented below.

> *(B) A nexus study is not required to comply with subparagraph (A) if the local agency makes a finding that includes all of the following:*
>
> *(i) An explanation as to why square footage is not appropriate metric to calculate fees imposed on housing development project.*

As explained in Chapters 5, 6, and 7, the impact of development to species and natural habitats is measured in acres of disturbed land. Building square feet does not correlate with acres of disturbed land (or linear feet in the case of stream impacts) and therefore the amount of impacts.

> *(ii) An explanation that an alternative basis of calculating the fee bears a reasonable relationship between the fee charged and the burden posed by the development.*

Mitigation fees are most appropriately imposed based on acres of disturbed land (or linear feet in the case of stream impacts) to have a reasonable relationship with the burden posed by (impacts from) development.

> *(iii) That other policies in the fee structure support smaller developments, or otherwise ensure that smaller developments are not charged disproportionate fees.*

Because mitigation fees are imposed based on the amount of disturbed acres (or linear feet in the case of stream impacts) smaller developments pay a smaller fee.

> *(C) This paragraph does not prohibit an agency from establishing different fees for different types of developments.*

Mitigation fees are imposed consistently across all types of development based on the amount of disturbed acres (or linear feet in the case of stream impacts).

> *(6) Large jurisdictions shall adopt a capital improvement plan as a part of the nexus study.*

The permittees (excluding the Conservancy) have adopted the HCP/NCCP that is a "capital improvement plan" as defined in section 66002(a).

Funding Mitigation and Conservation Goals

A Natural Community Conservation Plan (NCCP) under California law provides unique regulatory benefits in addition to those provided by a Habitat Conservation Plan (HCP) under federal law. An NCCP must not only mitigate impacts to the maximum extent practicable as required by an HCP. An NCCP must also contribute to the recovery and continued viability of species whether or not those species are protected under the California Endangered Species Act.[6] This "conservation" component of the Plan is in addition to Plan "mitigation" requirements It is accomplished by protecting habitat, natural communities, and species diversity on a landscape or ecosystem level through the creation and long-term management of large habitat reserves.

A key objective of the nexus analysis in Chapters 5, 6, and 7 is to only allocate the mitigation share of total Plan costs to the development fees and other mitigation-related revenue sources. The updated funding plan presented in Chapter 8 ensures that other local, state, and federal funding is kept consistent with the Plan's estimates for funding to achieve the Plan's conservation goals.

Objectives and Scope

The findings required by the MFA described above are similar in intent to the HCP/NCCP's objectives for periodic audits. Both suggest the need to update the fee amount based on recent data and confirm the role of fee revenues in a feasible funding plan. To address both the periodic audit requirements of the Plan and the findings required by the MFA, the objectives and scope of this audit are:

1. Update cost assumptions underlying the mitigation fees
2. Recalculate fee amounts based on a reasonable relationship (nexus) between new development and the need for the fee, the amount of the fee, and the use of fee revenues
3. Update local, state, and federal revenue estimates consistent with the Plan's anticipated funding from these sources to achieve the Plan's conservation goals (contribute to the recovery of species and habitats)
4. Update the funding plan including an endowment for post-permit term costs that demonstrates the continued financial feasibility of the HCP/NCCP.

This audit uses the most recently available data on financial transactions and covered activities through December 31, 2021.

[6] *California Fish & Game Code*, Sections 2050 through 2089.25 and 2890 through 2835.

This audit is not a comprehensive audit of the Conservancy's finances. The Conservancy separately has an annual financial audit conducted by an outside auditor. The data and methods used by this audit are sufficient to achieve the objectives described above.

The HCP/NCCP states that the Conservancy will "hire an outside, independent financial auditor to conduct" the audit.[7] The expertise required to complete the audit is more closely related to maintaining compliance with mitigation fee legal statutes than with accounting standards. Consequently, the Conservancy has elected to engage a professional services firm with direct experience developing and implementing mitigation fee nexus studies in the context of regional habitat conservation plans rather than a certified public accountant.

Organization of the Audit

Covered activities (impacts) under the HCP/NCCP to date are summarized in Chapter 2 as well as remaining impacts through the 30-year permit term. The update to the cost model used to estimate implementation costs of the Plan is presented in Chapter 3. Chapter 4 describes post-permit term costs and funding of an endowment.

Updates to the four fees are presented in Chapters 5 through 7. The wetland mitigation fee is presented first in Chapter 5 because it is calculated independently of the other fees. The development fee is presented next in Chapter 6 based on urban development's fair share of total Plan costs net of the wetland mitigation fees and costs. The rural road and temporary impact fees are presented in Chapter 7 because they use the same rates as the development and wetland mitigation fees, adjusted for rural road or temporary impacts.

The updated 30-year funding plan based on revised cost and revenue estimates is presented in Chapter 8.

The appendices provide additional supporting documentation for the audit.

[7] HCP/NCCP, Chapter 9, p. 9-31.

2. IMPACTS

This section of the audit describes the impacts that have occurred to date during from 2008 through 2021 (years 1-14). This section also identifies the remaining impacts based on the total amount of impacts permitted under the HCP/NCCP.

This chapter will show that only a small amount of development relative to permit term limits allowed under the permits has occurred through 2021. This finding is used to support an audit recommendation for the Conservancy to seek an extension of the permit term (see *Permit Term Extension* in this chapter, below).

The Plan uses the amount of acreage from development projects and other activities as the primary unit of measurement for impacts. The Plan uses linear feet to measure stream impacts subject to the wetland mitigation fee.

Urban Development Area (UDA)

The boundaries of the UDA are subject to change over time based on local land use policy decisions by the five agencies implementing the HCP/NCCP. Thus, boundary changes could lead to changes in the land use capacity for, and eventual amount of, urban development.

To accommodate the uncertainty regarding the amount of urban development that would be covered under the Plan, the Plan uses two scenarios to "book end" the potential urban development levels:

- The initial UDA is defined by the County of Contra Costa urban limit line and the boundaries of the cities of Brentwood, Clayton, Oakley, and Pittsburg existing at the time the Plan was adopted.[8]
- The maximum UDA is the maximum development capacity for urban development under the terms of the permits. Although boundaries are not defined, the development capacity considers areas outside the initial UDA proposed for future development in the general plans of Brentwood, Clayton, Pittsburg, and the County.

The urban development area covered under the Plan at the end of the permit term could fall anywhere in the range defined by the initial urban development area and the maximum urban development area. The ultimate boundaries depend on local land use decisions occurring during the permit term. The conservation requirements of the Plan are greater for the maximum UDA

[8] Excluding some areas within the County urban limit line surrounding the Byron Airport. See HCP/NCCP, p. 2-17.

compared to the initial UDA to accommodate the greater impacts under the maximum UDA scenario.

Development Fee Zones

The development fee is implemented based on three fee zones defined by the HCP/NCCP.[9] A map of the zones is provided in Figure 9-1 of the Plan. The zones represent varying levels of impacts on covered species and natural habitats caused by development projects and activities. The development fee is lowest in the zone where development would have the least impacts and highest in the zone where development would have the greatest impacts. The zones generally correspond to the dominant land cover type and habitat and open space values. Below is a summary of the zones:

- Zone I: Cultivated and disturbed lands, primarily areas in agricultural use and some undeveloped areas within existing urban areas.
- Zone II: Natural areas where lands are dominated by natural land cover types.
- Zone III: Small vacant lots (less than 10 acres) within the initial UDA.

The lowest development fee is in Zone III because the habitat and open space value is lowest on vacant land within existing developed areas. As the Plan states in Chapter 4, "[d]evelopment of these areas will result in loss of open space and some habitat values, but impacts will be less than those in Zone I and substantially less than those in Zone II."[10] An acre of permanent impacts in Zone III is given a weight of **one** for the purposes of allocating the fair share of total plan costs to the development fee.

The highest fee is in Zone II because this predominantly natural area has the highest habitat value. The dominant land cover type is annual grassland and covers 34 percent of the land included in the Plan's inventory area. The greatest impacts in Zone II are in this land cover type. Chapter 4 of the Plan references the importance of annual grassland throughout its detailed analysis of impacts on covered species and critical habitats.[11] An acre of permanent impacts in Zone II is given a weight of **four** for the purposes of allocating the fair share of total plan costs to the development fee (four times the weight of impacts in Zone III).

The amount of the Zone I fee is between the fees in the other two zones because cultivated and other disturbed uses have greater habitat value than

[9] HCP/NCCP, Chapter 9, pp. 9-20 to 9-21.

[10] Ibid.

[11] HCP/NCCP, Chapter 4, pp. 4-14 to 4-22.

vacant lots but less value than natural areas. Chapter 4 of the Plan includes several findings to support this approach.[12] An acre of permanent impact in Zone I is given a weight of **two** for the purposes of allocating the fair share of total plan costs to the development fee (twice the weight of impacts in Zone III and half the weight of impacts in Zone II).

The fee zone map in the Plan (Chapter 9, Figure 9-1) is the sole determination of the fee zone applicable to a project or other covered activity.[13] Individual parcels within a zone will have greater or lesser impact on covered species, natural communities, and open space. An individual parcel in zone A, for example, may have characteristics like land cover types in zone B. However, the parcel's location adjacent to lands within zone A combined with the benefits of contiguous open space to meeting the Plan's objectives, provides reasonable justification to include the parcel in zone A. The mapping of the zones was completed at a level of detail sufficient to provide a reasonable relationship between all land within a specific zone and the relative weight of impacts assigned to that zone.[14]

Summary of Impacts to Date

Permanent impacts to date by zone are shown in **Table 2.1**. Temporary impacts are tracked by the Conservancy but not shown in Table 2.1 because they have no effect on the development or wetland fee calculations. Temporary impact fee revenue is included in the funding plan in Chapter 8. See **Table A.1** in Appendix A for a detailed list of covered activities to date.

Remaining Permanent Impacts Under the HCP/NCCP

The HCP/NCCP allows for a fixed amount of permanent impacts. Permanent impacts are used to calculate and update the development fee. The remaining permanent impacts allowed under the Plan until the permit term (years 15-30) are summarized in **Table 2.2** by subtracting impacts to date (Table 2.1) from the total impacts allowed for the 30-year permit term. The table applies the weighting factors by zone discussed above. The result is the total acreage of permanent impacts with the UDA remaining under the Plan weighted by the relative impact in each zone. Remaining impacts for the maximum and initial UDAs is used to allocate costs to the development fee in Chapter 6.

[12] HCP/NCCP, Chapter 4, pp. 4-6, 4-15, and HCP/NCCP, Appendix D, *Species Profiles*.

[13] HCP/NCCP, Chapter 9, p. 9-20.

[14] See, for example, HCP/NCCP, Chapter 3, pp. 3-2 to 3-5.

Table 2.1: Permanent Impacts, 2008 Through 2021

Location	Land Conversion	
Urban Development Area (UDA)		
Zone 1	931.44	acres
Zone 2	211.33	acres
Zone 3	34.05	acres
Subtotal UDA	1,176.82	acres
Rural (outside UDA)[1]	76.94	acres
Total Land Conversion	1,253.76	acres
Wetlands[2]		
Wetlands (except streams)	4.32	acres
Streams (linear feet)	1,089.31	linear feet

[1] Covered activities occurring outside the urban development area (UDA) could occur in either zones 1 or 2. Includes rural road projects as shown in Table 9-6 of the HCP/NCCP, plus rural infrastructure projects and activities, and activities within the Preserve System (see Sections 2.3.2 through 2.3.4 of the HCP/NCCP).

[2] Wetland impacts are included in land conversion impacts. Wetland impacts pay wetland fees in addition to the applicable development fee or rural road fee.

Sources: Appendix A, Table A.1.

Table 2.2 shows 12,979 acres for the permit limit under the maximum UDA. Table 4-3 in the Plan shows 13,029. There appears to be an addition error in the Table 4-3 that included an extra 50 acres. These 50 acres are excluded in Table 2.2. The Conservancy should consult with the permittees and the wildlife agencies to resolve this issue. The difference has no impact on any of the analyses for this audit, including the cost model update, the mitigation fee calculations, or other revenue estimates developed for the funding plan.

Remaining impacts to wetland land cover types (riparian, wetlands, ponds, and streams) are shown in **Table 2.3**. This audit contains the same adjustment made by prior audits to total acres of restoration/creation assumed in the Plan cost model to be consistent with Tables 5-16 and 5-17 in Chapter 5 of the Plan. Estimated compensatory restoration/creation acreage for seasonal wetlands under the maximum UDA scenario was adjusted to match the 2:1 mitigation ratio applied to the acres of impact shown in the tables. Also, consistent with Plan assumptions, a 30 percent reduction was made to the estimate of compensatory restoration/creation acreage (not contribution to recovery acreage) for the perennial, seasonal, and alkali wetlands to reflect overestimates due to mapping of these areas.[15]

[15] For seasonal wetlands, the total restored acreage for the initial [maximum] UDA scenario equals 45.2 [53.6] acres based on: (42 [56] impact acres x 2:1 mitigation ratio x 30 percent adjustment for mapping overestimate) + 20 acres contribution to recovery. See Tables 5-16 and 5-17 and Appendix G of the HCP/NCCP.

Table 2.2: Permanent Impacts (acres)

	Zone 1[1]	Zone 2	Zone 3	Subtotal	Share	Outside UDA	Total[2]	Share
Permit Limits (2008-2037)								
Initial UDA	6,198	2,306	166	8,670	100.0%	1,126	9,796	100.0%
Maximum UDA	7,507	4,180	166	11,853	100.0%	1,126	12,979	100.0%
Actual Impacts to Date (through 2021)								
Initial UDA	931	211	34	1,176	13.6%	77	1,253	12.8%
Maximum UDA	931	211	34	1,176	9.9%	77	1,253	9.7%
Remaining Impacts (2022-2037)								
Initial UDA	5,267	2,095	132	7,494	86.4%	1,049	8,543	87.2%
Maximum UDA	6,576	3,969	132	10,677	90.1%	1,049	11,726	90.3%
Impact Weighting Factor[3]	*2*	*4*	*1*					
Permit Limits - Equivalent Acres (2008-2037)								
Initial UDA	12,396	9,224	166	21,786	100.0%			
Maximum UDA	15,014	16,720	166	31,900	100.0%			
Actual Impacts to Date - Equivalent Acres (through 2021)								
Initial UDA	1,862	844	34	2,740	12.6%	Not Available[4]		
Maximum UDA	1,862	844	34	2,740	8.6%			
Remaining Impacts - Equivalent Acres (2022-2037)								
Initial UDA	10,534	8,380	132	19,046	87.4%			
Maximum UDA	13,152	15,876	132	29,160	91.4%			

Notes: "UDA" is the urban development area.

[1] The permit limits used to calculate the initial fees shown in Chapter 9, Table 9-4, and Appendix H of the HCP/NCCP are revised to control to the totals in Chapter 4, Tables 4-2 and 4-3 (corrected, see note 2), of the Plan (14 acres less for the Initial UDA and 26 acres less for the Maximum UDA). These adjustments are made to zone 1 though they could be allocated to any zone within the UDA.

[2] Table 4-3 in Chapter 4 of the HCP/NCCP appears to have a mathematical error for the maximum UDA permit limit, showing 13,029 acres instead of 12,979.

[3] Weighting factor reflects relative impacts by zone (see Plan, Appendix H). Equivalent acres for impacts outside the UDA not calculated because impacts occur in both zones 1 and 2.

[4] The HCP/NCCP did not identify the location of all covered activities occurring outside the UDA by zone, except for rural road projects (see HCP/NCCP, Table 9-6). Includes rural infrastructure projects and activities, and activities within the Preserve System (see NCP/NCCP, Sections 2.3.2 through 2.3.4).

Sources: HCP/NCCP, Tables 4-2 and 4-2, Table 9-4 (revised), and Appendix H, Table 1 (second memorandum); Table 2.1 (this report).

Table 2.3: Wetland Impacts

	Estimated Impacts (2008-2037)[1] (acres or linear feet)		Actual Wetland Impacts (2008-2021)[2]	Remaining Impacts (Years 2022-2037) (acres or linear feet)	
	Initial UDA	Maximum UDA		Initial UDA	Maximum UDA
Impacts Based on Acres					
Riparian	30.00	35.00	1.29	28.71	33.71
Perennial Wetland	22.20	22.50	0.07	22.13	22.43
Seasonal Wetland	12.60	16.80	1.61	10.99	15.19
Alkali Wetland	8.40	9.30	0.14	8.26	9.16
Pond	7.00	8.00	0.10	6.90	7.90
Aquatic (open water)	]12.00	12.00	0.47	11.53	11.53
Slough / Channel	72.00	72.00	0.65	71.35	71.35
Subtotal (acres)	164.20	175.60	4.32	159.88	171.28
Impacts Based on Linear Feet					
Streams (<=25 ft. wide)	21,120	26,400	685	20,435	25,715
Streams (>25 ft. wide)	3,168	4,224	404	2,764	3,820
Subtotal (linear feet)	24,288	30,624	1,089	23,199	29,535

Notes: "UDA" is the urban development area.

Impacts includes wetland impacts outside the UDA because these impacts are counted against the estimates of permanent impacts in the Plan (see Tables 5-16 and 5-17).

[1] Perennial, Seasonal, and Alkali wetland impacts reduced by 70 percent to account for overestimates in mapping analysis (see Tables 5-16 and 5-17, footnote 2.

[2] Assume ephemeral streams are equal to or less than 25 feet wide, and intermittent and perennial streams are greater than 25 feet wide.

Source: HCP/NCCP, Tables 5-16 and 5-17; Appendix A, Table A.1.

Permit Term Extension

As shown in Table 2.2, in terms of equivalent acres, 12.6 percent of impacts in the initial UDA allowed under the HCP/NCCP have occurred through 2021 (year 14). The comparable figure for the maximum UDA is 8.6 percent. Thus, with just over half of the permit term remaining (years 15 through 30), approximately 90 percent of the impacts have yet to occur. However, the HCP/NCCP does not provide a means to reduce estimated impacts and associated mitigation fee funding within the existing permit term.

The HCP/NCCP is a comprehensive plan that achieves both mitigation and conservation goals (see *Funding Mitigation and Conservation Goals* in Chapter 1). The HCP/NCCP does not provide the detail needed to separate mitigation

from conservation costs.[16] So the HCP/NCCP does not provide a basis to adjust conservation costs based on lower mitigation estimates and fee revenues without a reconsideration of Plan goals.

Moreover, the nexus analysis used to determine the mitigation share of total Plan costs is dependent upon achieving the Plan's overall goals.[17] Reducing estimated development impacts and associated mitigation fee funding would require significant reconsideration of the nexus analysis and the mitigation cost share used to calculate fees.

Thus, this audit like prior audits assumes that all development impacts allowed under the permits will occur by the end of the 30-year permit term in 2037. This approach is necessary to align funding sources to meet the mitigation and conservation goals under the Plan at the end of the permit term.

The most effective way to address the slower pace of impacts without fundamentally altering the HCP/NCCP cost model and funding plan would be to extend the permit term. A permit term extension would enable the cost model and funding plan to:

- Incorporate the effects of a more realistic planning horizon on costs and revenues
- Continue to demonstrate a feasible funding plan that achieves all Plan goals
- Avoid the need to reconsider Plan goals, costs, and funding based on a more constrained development scenario.

Based on this discussion, we recommend that the Conservancy work with members of the JPA, other permittees, and the wildlife agencies to extend the permit term.

[16] Only in the case of wetland restoration does the Plan have specific conservation goals in addition to mitigation requirements and that are costed out separately in the cost model (see HCP/NCCP, Chapter 5, Tables 5-16 and 5-17).

[17] HCP/NCCP, Appendix H, Table 1 (second memorandum).

3. COST MODEL

This chapter presents a summary of the updated cost models for the 30-year permit term. As shown in Appendix G of the HCP/NCCP separate cost models are used for the initial and maximum UDA scenarios to account for the difference in Preserve System size and other differences in Plan requirements. The two models are identical in structure. The difference in cost between the two models is primarily related to the effect of greater land acquisition and restoration requirements for the Preserve System under the maximum UDA scenario.

General Approach

The cost model was updated based on provisions in the Plan for periodic audits. The original model is documented in Appendix G of the Plan. For this audit, cost model revisions were made to the latest version of the model developed for the prior audit. The model for each scenario (initial and maximum UDA) includes multiple linked spreadsheets (see Appendix C and Appendix D of this report). Total costs for the permit term are the sum of actual costs to date (through FY 2021) and estimated remaining costs through the end of the permit term. All costs are expressed in 2021 dollars to support calculation of the mitigation fees.

Actual costs through December 31, 2021 were adjusted to 2021 dollars using changes in the Conservancy's mitigation fee schedule, thus replicating the same index used to reflect inflation in Plan costs. The Conservancy's fees are adjusted annually based on published price indices and periodically based on prior audits, as discussed in Chapter 1, *Periodic Audit Requirements of the HCP/NCCP*.[18]

Remaining costs through the end of the permit term were updated based on recent cost experience and application of appropriate inflation indices to assumptions in the prior audit cost model, as explained in more detail in the following section of this chapter.

The models provide budgets for the following nine cost categories related to Plan implementation:

1. Program administration
2. Land acquisition
3. Planning and design

[18] See also HCP/NCCP, Chapter 9, pp. 30-31 and Table 9-7, and Appendix F, Table F.1.

4. Habitat restoration/creation
5. Environmental compliance
6. Preserve management and maintenance
7. Monitoring, research, and adaptive management
8. Remedial measures
9. Contingency.

Post-permit costs are analyzed separately as part of the endowment model and are presented in the following chapter (Chapter 4).

Land Acquisition Costs

Land acquisition is the Plan's largest cost category representing about 65 percent of total costs excluding endowment costs. Substantial effort was expended during the audit to update costs to reflect current market conditions and recent Conservancy land acquisition experience. This audit uses an acquisition model developed and maintained by Conservancy staff to estimate the acres that need to be acquired to achieve the various habitat acquisition requirements of the Plan for both the initial and maximum UDA scenarios.

The Conservancy, working with East Bay Regional Park District (Park District), has been very successful in acquiring Preserve System lands since the Plan's implementation. Through 2021 (year 14) the Conservancy has acquired approximately 12,050 acres, or 40 and 50 percent of the Preserve System required under the maximum and initial UDA scenarios, respectively. These totals exclude:

- Acquired lands that cannot be credited to the Preserve System because of existing conservation easements mitigating habitat impacts that occurred prior to Plan adoption[19]
- Parts of acquired parcels that lie outside plan acquisition zones.

A database of over 100 land transactions in East Contra Costa County, all within the past ten years, was compiled from a variety of sources to estimate costs per acre for future Preserve System acquisitions. This database included Park District acquisitions (most of which were performed in partnership with the Conservancy), plus acquisitions by the Conservancy, Save Mount Diablo (local nonprofit land trust organization), and land transactions identified in the County Assessor's database. Land costs for developable parcels within the urban limit line that are part of the Conservancy's acquisition strategy were

[19] Unless those pre-Plan impacts were also counted against the Plan's permit limits.

updated based on current housing values. Detailed data on the transactions used to update the cost model land cost factors are provided in Appendix B.

As shown in **Table B.2** in Appendix B estimated land costs per acre have generally increased since 2017. Since then, prices for the largest parcels outside the urban limit line have increased about 40 percent, while the prices for mid-sized parcels (40 to 120 acres) remain unchanged. Prices for parcels under 40 acres have increased 20 to 25 percent. Inside the urban limit line, where a small fraction of the acquisition will occur and where prices more closely track changes in the housing market, estimated land costs have increased about 25 percent.

Consistent with changes made in prior audits, due diligence costs are estimated based on a flat three percent charge on land acquisition costs. Pre-acquisition surveys are a Conservancy staff cost. There is no contingency applied to land acquisition costs. Total remaining land acquisition costs to meet Preserve System requirements were evenly spread across the remaining 16-year period of the 30-year permit term.

Habitat Restoration/Creation Costs

Habitat restoration/creation is the second largest cost category of Plan implementation, representing about 10 percent of total costs excluding endowment costs. Unit costs (costs per acre) for restoration of specific habitats are the basis for the wetland mitigation fee. Review of restoration project costs since 2017 indicated that no extraordinary adjustments were required. All unit cost factors were update by applying the California Construction Cost Index.

Habitat restoration/creation mitigation unit costs for wetland land cover types estimated for this audit are shown in **Table 3.1**. The cost for open water is the same as the cost for ponds because the Plan calls for open water impacts to be mitigated by the creation of ponds. The table includes two costs for stream restoration, one based on stream widths of 25 feet or less, and one based on steam widths of greater than 25 feet.

Unit costs for habitat restoration/creation construction are augmented by three types of soft costs:

- Construction-related costs including restoration design, plans and specifications, bid assistance, construction oversight, post-construction maintenance, environmental compliance, pre-construction surveys, and construction monitoring
- Conservancy staff and related costs
- Contingency.

Table 3.1: Wetland Mitigation Unit Costs (2021 $)

Cost Category	Cost Factor	Riparian (per acre)	Perennial Wetland (per acre)	Seasonal Wetland (per acre)	Alkali Wetland (per acre)	Pond (per acre)	Aquatic (open water) (per acre)	Slough/ Channel (per acre)	Stream (per ln. ft.)
Construction		$51,800	$84,500	$100,800	$102,000	$112,100	$112,100	$76,800	$287
Construction-related costs									
Plans, specs., allowance for remedial measures[1]	33%	$17,094	$27,885	$33,264	$33,660	$36,993	$36,993	$25,344	$95
Bid assistance[1]	1.5%	$777	$1,268	$1,512	$1,530	$1,682	$1,682	$1,152	$4
Construction oversight[1]	10%	$5,180	$8,450	$10,080	$10,200	$11,210	$11,210	$7,680	$29
Post-construction maint.[1]	10%	$5,180	$8,450	$10,080	$10,200	$11,210	$11,210	$7,680	$29
Environmental compliance[2,3]	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$6,500	$22
Pre-construction surveys[2,4]	$1,400	$1,400	$1,400	$1,400	$1,400	$1,400	$1,400	$1,400	$5
Construction monitoring[2,4]	$3,200	$3,200	$3,200	$3,200	$3,200	$3,200	$3,200	$3,200	$11
Staff and related costs[2,5]	$4,400	$4,400	$4,400	$4,400	$4,400	$4,400	$4,400	$4,400	$15
Subtotal		$95,531	$146,053	$171,236	$173,090	$188,695	$188,695	$134,156	$495
Contingency[1]	20%	$10,360	$16,900	$20,160	$20,400	$22,420	$22,420	$15,360	$57
Total Unit Cost		$105,891	$162,953	$191,396	$193,490	$211,115	$211,115	$149,516	$553
Adjustment Factor for Streams >25 Feet Wide									1.50
Total Unit Cost (Streams >25 feet wide)									$829

[1] Percentage applied to construction costs.

[2] Stream costs per linear foot estimated based on the average percent of construction costs for the respective cost category across all the other wetland land cover types.

[3] Based on CEQA, CWA 401, CDFG 1602, and other permit costs for "small" project, divided by two (assume a two-acre project). NHPA permit unlikely to be applicable.

[4] Cost Model estimate divided by two (estimate based on a two-acre project).

[5] Midpoint of staffing costs per acre (all costs except construction and contractors) between initial and maximum UDA cost models for habitat restoration/creation cost category.

Sources: Appendices C and D (Habitat Restoration/Creation table).

Consistent with prior audits, four of the construction-related cost line items (plans and specifications, bid assistance, construction oversight, and post-construction maintenance) are estimated as a percent of construction costs based on experience with how contractors structure their bids. Soft cost percentages remain the same as in the 2017 audit.

The remaining three line items (environmental compliance, pre-construction surveys, and construction monitoring) are estimated as dollar amounts per acre. These assumptions were updated for inflation and current environmental compliance fee schedules.

Conservancy staff and related costs are updated based on current hourly costs per position and experience with allocation of staff time for habitat restoration/creation projects. This update assigns some Conservancy staffing in the environmental compliance cost category to wetland fee costs to capture actual Conservancy experience with permitting restoration/creation projects.

The contingency of 20 percent on habitat restoration/creation construction costs remains unchanged from the Plan and prior audits. The contingency applies to habitat construction costs only and not soft costs or staff costs. The contingency is higher than the five percent rate applied to other Plan implementation activities because of the high degree of cost variation and uncertainty associated with habitat restoration/creation projects.

Updates to Other Cost Categories

Cost model changes to the other seven cost categories besides land acquisition and habitat restoration/creation are summarized in the following subsections.

Program Administration

The original 2006 model estimated staff costs based on direct salary costs plus benefits, and separately estimated overhead costs (human resources, information technology, office space, etc.). With the 2013 audit, staff costs were budgeted based on a fully burdened hourly rate that includes benefits and all overhead costs and this audit maintains that approach. The staffing plan is updated to reflect experience with staff allocation by function and the ability to rely on fractions of a full-time employee. Other overhead costs such as travel, insurance, legal, and financial analysis and audits that are not included in staff hourly rates are updated based on actual costs and projected needs.

Planning and Design

Costs include Conservancy staff and overhead and contractor services. Costs are based on current Conservancy budgeting and expectations of management planning needs over the remainder of the permit term.

Environmental Compliance

Estimates of Conservancy staff time are based on actual experience with permitting Preserve System activities. Legal services and other technical support services are included in this cost category because of the need for legal assistance and other specialized consulting services to complete regional wetland permitting activities anticipated over the next 10 years of the permit term. Contractor costs are increased based on the Employment Cost Index and permit fees are updated based on current fee schedules and calculators.

Preserve Management and Maintenance

The schedule of land under management continues to reflect the fact that the pace of acquisition exceeds actual mitigation and conservation targets when compared to impacts.[20] Costs to date are low reflecting land-banking of many acquired lands pending the level of impacts necessary to manage them as part of the Preserve System.

Future preserve management costs are based on preliminary estimates prepared by Park District staff in coordination with the Conservancy using the implementation activities outlined in the *Vasco Hills / Byron Vernal Pools Preserve Management Plan*.[21] Detailed cost categories include: invasive plant and invasive wildlife control; grazing and wildfire management; maintenance of fences, gates, roads, and trails; trash and debris removal; equipment, supplies, and infrastructure maintenance and replacement; and annual reporting. Recreation management costs and costs for security and patrol of recreational trails are not included.

This update shifts the cost of law enforcement for habitat and species protection from the program administration cost category to the preserve management cost category. Costs are based on the current contract between the Contra Costa Water District and the Contra Costa County Sheriff to provide law enforcement services at the 20,000-acre Los Vaqueros watershed.

[20] See "Acres Acquired, Managed, and Restored within HCP/NCCP Preserves for Initial/Maximum Urban Development Area" tables in Appendix C and Appendix D.

[21] *Vasco Hills / Byron Vernal Pools Preserve Management Plan* (draft), prepared by ICF for the East Contra Costa County Habitat Conservancy, November 2018.

Monitoring, Research, and Adaptive Management

Contractors are the most significant component of monitoring costs. Costs are based on review of current contracting and assumptions about how that activity will intensify over time. Monitoring activity is expected to increase with the completion of more restoration projects and with implementation of preserve management plans and associated monitoring protocols.

Remedial Measures

The total cost for remedial measures is based on (1) a percent of total cost of habitat restoration/creation costs, (2) a cost per acre for remedial measures applied to a percent of total Preserve System acres acquired, and (3) a lump sum cost for other remedial measures. No changes were made in these cost assumptions for this audit.

Contingency

Contingency costs reflect changes in other cost categories. The estimated rate remains at five percent and is applied to total Plan costs net of total land acquisition and total habitat restoration/creation costs.

Summary of Cost Model Results

Table 3.2 and **Table 3.3** summarize changes in total costs by cost category for the Plan for the initial and maximum UDA, respectively. The tables compare the results of this audit to costs estimated in the HCP/NCCP costs and the prior 2017 audit in 2021 dollars. Adjusted for inflation, total costs are in the range of seven to nine percent lower than costs in the 2017 audit and nearly equal to costs estimated in the Plan.

Though costs have remained in line with the Plan's original estimates there have been significant changes among cost categories:

- Habitat restoration/creation costs are higher because the unit cost (costs per acre) assumptions in the Plan were significantly lower than the Conservancy's actual experience.
- Ongoing costs for (1) preserve management and maintenance and (2) monitoring, research, and adaptive management are significantly lower because costs to date are lower than estimated in the Plan. As discussed in *Preserve Management and Maintenance* above and *Permit Term Extension* in Chapter 2, impacts have occurred at a much slower pace than anticipated by the Plan.

Table 3.2: Cost Model Comparison – Initial Urban Development Area (2021 $)

Cost Category	2006 Plan	2017 Fee Audit	2022 Fee Audit	2022 Audit vs. 2006 Plan		2022 Audit vs. 2017 Audit	
Program Administration	$27,590,000	$37,380,000	$35,240,000	$7,650,000	28%	($2,140,000)	(6%)
Land Acquisition	$291,330,000	$305,380,000	$304,960,000	$13,630,000	5%	($420,000)	(0%)
Planning and Design	$9,350,000	$10,960,000	$8,260,000	($1,090,000)	(12%)	($2,700,000)	(25%)
Habitat Restoration/Creation	$31,000,000	$60,960,000	$50,020,000	$19,020,000	61%	($10,940,000)	(18%)
Environmental Compliance	$3,560,000	$5,110,000	$3,650,000	$90,000	3%	($1,460,000)	(29%)
Preserve Management & Maintenance	$50,230,000	$40,690,000	$37,320,000	($12,910,000)	(26%)	($3,370,000)	(8%)
Monitoring, Research, & Adaptive Management	$28,550,000	$18,090,000	$9,760,000	($18,790,000)	(66%)	($8,330,000)	(46%)
Remedial Measures	$2,400,000	$4,320,000	$3,280,000	$880,000	37%	($1,040,000)	(24%)
Contingency	$7,630,000	$6,010,000	$4,480,000	($3,150,000)	(41%)	($1,530,000)	(25%)
Total Plan Implementation	**$451,640,000**	**$488,900,000**	**$456,970,000**	**$5,330,000**	**1%**	**($31,930,000)**	**(7%)**

Notes: HCP/NCCP and 2017 Fee Audit costs are inflated to 2021 dollars using the inflation index in Appendix F.

Sources: HCP/NCCP, Table 9-1; 2017 Audit, Table 3.2; Appendix C (Summary table).

Table 3.3: Cost Model Comparison – Maximum Urban Development Area (2021 $)

Cost Category	2006 Plan	2017 Fee Audit	2022 Fee Audit	2022 Audit vs. 2006 Plan		2022 Audit vs. 2017 Audit	
Program Administration	$27,710,000	$37,450,000	$37,990,000	$10,280,000	37%	$540,000	1%
Land Acquisition	$358,290,000	$377,110,000	$367,260,000	$8,970,000	3%	($9,850,000)	(3%)
Planning and Design	$9,470,000	$10,960,000	$8,260,000	($1,210,000)	(13%)	($2,700,000)	(25%)
Habitat Restoration/Creation	$34,800,000	$72,640,000	$60,240,000	$25,440,000	73%	($12,400,000)	(17%)
Environmental Compliance	$3,560,000	$5,110,000	$3,650,000	$90,000	3%	($1,460,000)	(29%)
Preserve Management & Maintenance	$55,400,000	$50,040,000	$42,370,000	($13,030,000)	(24%)	($7,670,000)	(15%)
Monitoring, Research, & Adaptive Management	$32,050,000	$20,890,000	$10,860,000	($21,190,000)	(66%)	($10,030,000)	(48%)
Remedial Measures	$2,580,000	$5,120,000	$3,950,000	$1,370,000	53%	($1,170,000)	(23%)
Contingency	$8,290,000	$6,860,000	$5,100,000	($3,190,000)	(38%)	($1,760,000)	(26%)
Total Plan Implementation	**$532,150,000**	**$586,180,000**	**$539,680,000**	**$7,530,000**	**1%**	**($46,500,000)**	**(9%)**

Notes: HCP/NCCP and 2017 Fee Audit costs are inflated to 2021 dollars using the inflation index in Appendix F.

Sources: HCP/NCCP, Table 9-1; 2017 Audit, Table 3.3; Appendix D (Summary table).

4. ENDOWMENT MODEL

The HCP/NCCP requires funding for post-permit term costs in perpetuity for the management and monitoring of the Preserve System.[22] Post-permit term costs would be funded by a portion of mitigation fee and other revenues transferred to an endowment over time. The endowment would grow with re-invested earnings through year 30. No withdrawals would be made from the endowment to fund HCP/NCCP during the permit term. At the end of the permit term, the endowment generates ongoing earnings sufficient to fully fund post-permit management and monitoring costs in perpetuity and adjusted for inflation.

The approach taken to estimate post-permit term costs and endowment funding is like that used in other recent Northern California regional habitat plans, including the San Joaquin Multi-Species Habitat Conservation and Open Space Plan, Santa Clara Valley Habitat Plan, the Yolo Habitat Conservation Plan, and the Placer County Conservation Program. The approach fully complies with applicable statutes regarding investment of public funds for long-term stewardship of conservation lands.[23]

Endowment Creation

The Conservancy conducted a process to select an endowment manager in 2019 and engaged the Regional Parks Foundation (Foundation) for this purpose. The Foundation is an independent nonprofit organization whose mission is to support the Park District through fundraising. The Conservancy and the Foundation entered into an endowment agreement in 2020 that specifies the responsibilities of both parties.[24]

The Foundation will manage and invest endowment funds and use its best efforts to achieve a reasonable long-term rate of return on investment consistent with the endowment model assumptions discussed below (see *Investment Earnings* in this chapter). Before the HCP/NCCP permits expire, a separate agreement will be negotiated between the Conservancy and the Foundation to establish the terms and conditions for distribution of funds from the endowment for preserve management and monitoring in perpetuity. For endowment management services, the Conservancy will pay the

[22] HCP/NCCP, Chapter 9, pp. 9-40 to 9-42 and Table 9-9.

[23] See Mitigation Lands: Nonprofit Organizations (*California Government Code*, section 65965-65968) and the Uniform Prudent Management of Institutional Funds Act (*Probate Code*, section 18501 et seq.).

[24] *East Contra Costa County HCP/NCCP Endowment Agreement*, October 2020.

Foundation a management fee of 0.55 percent of assets on deposits up to $10 million and 0.50 percent of assets on deposits above $10 million.

Post-permit Term Costs

Annual post-permit funding needs from the endowment were developed based on guidance provided in Chapter 9 of the HCP/NCCP. Total post-permit term costs were estimated based on a percent of annual costs in the final five-year period of the plan (years 26-30) for the following cost categories:

- 40 percent (maximum UDA) to 44 percent (initial UDA) of program administration costs
- 100 percent of preserve management and monitoring costs
- 50 percent of monitoring, research, and adaptive management costs

Endowment Funding

Four revenue sources build the endowment fund balance through year 30:

1. An opening balance as of December 31, 2021
2. Revenues from mitigation fees and other mitigation payments from development projects
3. Lease revenues from private activities on preserve lands
4. Re-invested earnings from endowment investments.

These funding sources are discussed in the subsections that follow.

Opening Fund Balance

The Conservancy started an endowment in 2020 with funds accumulated by:

- The California Wildlife Foundation from prior development project mitigation payments
- The Park District from revenues generated by residences, communication facilities, wind turbines, and agricultural leases on preserve lands.

See **Table F.2** in Appendix F for details.

Investment earnings on those endowment contributions has resulted in a fund balance of $3.9 million by December 31, 2021.

Development Project Revenue

Development project revenue, particularly mitigation fees generated by the HCP/NCCP, will provide the primary contributions to the endowment through the end of the permit term. Other types of development project revenue applied to the endowment include specific one-time and ongoing payments from development projects typically paid in lieu of the development fee (see **Table F.3** in Appendix F for details).

Development project revenue is critical for the endowment because many other revenue sources such as state and federal sources are restricted to land acquisition, restoration/creation, or research. Though development project revenue will fund a larger share of endowment costs, state and federal sources will fund a larger share of land acquisition costs. This approach results in each type of funding (mitigation versus conservation funding) only contributing their appropriate share of total Plan costs (see *Funding Mitigation and Conservation Goals* in Chapter 1 for more discussion).

The endowment model assumes that the Conservancy will make contributions from development fee revenue at a constant rate on an annual basis through the end of the permit term. Fee revenues will fluctuate above and below this annual average from year to year depending on development market activity. Periodic audits (such as this one) adjust the endowment funding plan as needed to ensure an adequate fund balance by the end of the permit term.

Lease Revenues

The Park District had 13 active leases on preserve lands as of the end of FY 2021 and generated $572,000 for 2021. Eight of these leases are for communication facilities that the endowment assumes will continue in perpetuity. The remaining leases are for wind turbines, residences, and agricultural uses that are assumed to expire at various intervals during the permit term based on the terms of the specific lease agreement. See **Table F.4** in Appendix F for details.

The Conservancy and the Park District entered into a lease revenue allocation agreement in 2020 that allocates revenue to the following HCP/NCCP costs:

- Land acquisition
- Preserve management
- Endowment.[25]

[25] *Lease Revenues Allocation Agreement between the East Bay Regional Park District and the East Contra Costa County Habitat Conservancy*, October 2020.

The endowment model assumes that at the end of the permit term all lease revenue will directly offset post-permit term preserve management costs.

Investment Earnings

The endowment model assumes a long-term average annual return on investment (ROI) of 7.25 percent. For comparison, other funds with similar long range investment horizons such as university endowments, pension funds, and hospital endowments, have average annual earnings objectives of six to nine percent.

Based on an ROI goal of 7.25 percent, the endowment model assumes that inflation is 3.00 percent and endowment manager fees are 1.00 percent. As shown in **Table 4.1**, this results in an annual real return on endowment fund balances of 3.25 percent. The real rate of return is also known as the "capitalization rate". Thus, the endowment can be expected to generate funding for post-permit term costs, adjusted for inflation and management fees, at a constant rate of 3.25 percent of the fund balance that is achieved by the end of the permit term in 2037.

Table 4.1: Investment Earnings

Allocation of Annual Investment Earnings on Endowment Fund Balance	Percent of Endowment Fund Balance
Average Annual Return on Investment Goal[1]	7.25%
Reinvested Earnings to Offset Inflation	3.00%
Available for Annual Distributions	4.25%
Endowment Manager Fees[2]	1.00%
Average Annual Real Rate of Return to Fund Post-Permit Term Costs	**3.25%**

[1] Total average annual investment earnings are net of investment management fees (including custodial and audit costs) and are separate from endowment manager fees (see note 2).

[2] The endowment model assumes that the Conservancy will engage an outside endowment fund manager instead of staffing this function in-house. Endowment manager fees would fund administration, accounting, and reporting costs directly associated with the Conservancy's account.

These assumptions are based on a current habitat endowment management program operated by the National Fish and Wildlife Foundation (NFWF) under agreements with the California Department of Fish and Wildlife. These programs assume a long-range real rate of return of 3.25 percent to 3.50 percent. The endowment model for this audit uses the more conservative rate of 3.25 percent. This rate is the same rate being used for endowment modeling by the Santa Clara Valley Habitat Plan, the Yolo Habitat Conservation Plan,

and the Placer County Conservation Program mentioned at the start of this chapter.

Lower investment earnings, higher inflation, or higher endowment manager fees would require increased endowment funding and higher mitigation fees. Higher investment earnings, lower inflation, or lower endowment manager fees would require less endowment funding and lower mitigation fees. Future periodic fee audits will evaluate these assumptions and adjust mitigation fees and other revenues allocated to the endowment as needed to maintain adequate funding.

Endowment Model Results

A summary of the endowment models for the initial UDA and maximum UDA scenarios is shown below in **Table 4.2**.

Table 4.2: Post-Permit Funding

	Initial UDA	Maximum UDA
Endowment Contributions (through FY 2021)	$3,548,946	$3,548,946
Investment Earnings (through FY 2021)[1]	$368,684	$368,684
Endowment Opening Balance (2022)	$3,917,630	$3,917,630
Development Project Revenue (2022-2037)[2]	$52,968,429	$64,960,541
Lease Revenue (2022-2037)[3]	$1,747,957	$1,747,957
Investment Earnings (2022-2037)[4]	$18,948,234	$22,365,352
Endowment Fund Balance (2037)	**$77,582,249**	**$92,991,480**
Annual Distribution Rate (post-permit)[4]	3.25%	3.25%
Investment Earnings (post-permit)[4]	$2,521,423	$3,022,223
Development Project Revenue (post-permit)[2]	$366,571	$366,571
Lease Revenue (post-permit)[3]	$270,605	$270,605
Annual Preserve Management Costs (post-permit)	**$3,158,600**	**$3,659,400**

[1] Earnings net of fees for endowment manager (Regional Parks Foundation) and investment management.

[2] Development project revenue primarily from Plan development fees during Plan implementation, plus several development mitigation payments that will continue in perpetuity.

[3] Lease revenue from 13 leases as of 2021 with eight assumed to continue in perpetuity.

[4] Investment earnings based on real return on investment equal to 3.25% that is net of inflation and all administrative and investment management fees.

Source: Appendix E, Tables E.1 and E.2; Appendix F, Table F.2.

See **Table E.1** and **Table E.2** in Appendix E for detailed output of the endowment model for the initial and maximum UDA scenarios, respectively.

5. WETLAND MITIGATION FEE

This chapter presents the updated wetland mitigation fee schedule and the reasonable relationship findings required by the MFA and explained in Chapter 1. Unless the applicant chooses to perform their own restoration or creation dedicated to the Preserve System, the wetland mitigation fee is applied to covered activities that generate permanent impacts on wetland land cover types whether inside or outside the UDA.[26] Wetland mitigation fees are calculated based on only the surface area of the wetland land cover type impacted, or by linear feet for stream impacts. The wetland mitigation fee is therefore typically applied to a small portion of the total impacts of a covered activity.

Updated Fee Schedule

The wetland mitigation fee is based on the unit costs (cost per acre or cost per linear foot for streams) presented in the prior chapter multiplied by a mitigation ratio established by the HCP/NCCP. The mitigation ratio represents the restoration area needed to mitigate one acre (or one linear foot in the case of streams) of impact. Most mitigation ratios are one-to-one, that is one acre of impact requires one acre of wetland restoration/creation to mitigate impacts. Several land cover types require a higher or lower mitigation ratio to adjust for the relative ability of restoration projects to mitigate the types of impacts associated with a given land cover type. The updated wetland mitigation fees based on mitigation ratios by land cover type are shown in **Table 5.1**.

Consistent with the habitat restoration/creation cost estimates explained in Chapter 3, above, the wetland mitigation fee is only related to the one-time activity of restoration or creation of wetland land cover types. The three other fees presented in the following two chapters of this report address the other Plan costs to mitigate the impacts of covered activities on wetland land cover types. These other costs include, for example, acquisition of sites for wetland, pond, and stream restoration/creation, preservation of existing wetland, pond, and stream habitat and long-term management, maintenance, and monitoring of habitat restoration/creation sites.

[26] HCP/NCCP, Chapter 9, pp. 9-23 to 9-24 and Table 9-5.

Table 5.1: Wetland Mitigation Fee Schedule

Land Cover Type	Habitat Restoration / Creation Cost		Mitigation Ratio	Wetland Mitigation Fee	
Riparian	$105,891	per acre	1:1	$105,891	per acre
Perennial Wetland	162,953	per acre	1:1	162,953	per acre
Seasonal Wetland	191,396	per acre	2:1	382,792	per acre
Alkali Wetland	193,490	per acre	2:1	386,980	per acre
Ponds	211,115	per acre	1:1	211,115	per acre
Aquatic (open water)	211,115	per acre	0.5:1	105,558	per acre
Slough / Channel	149,516	per acre	1:1	149,516	per acre
Streams (<=25 ft. wide)	553	per linear foot	1:1	553	per linear foot
Streams (>25 ft. wide)	829	per linear foot	1:1	829	per linear foot

Sources: HCP/NCCP, Tables 5-16 and 5-17; Table 3.1 (this report).

Table 5.2 compares the updated wetland mitigation fees to current fees. Wetland mitigation fees increase slightly compared to current fees because of updates to the cost model discussed in Chapter 3. The automatic annual inflation adjustment since the prior audit has largely kept the fee in line with changing Plan costs.

Table 5.2: Wetland Mitigation Fee Comparison

Land Cover Type	Fee Basis	2022 Fee Schedule	2022 Audit	Change
Riparian	per acre	$105,516	$105,891	0.4%
Perennial Wetland	per acre	$159,912	$162,953	1.9%
Seasonal Wetland	per acre	$374,220	$382,792	2.3%
Alkali Wetland	per acre	$378,310	$386,980	2.3%
Ponds	per acre	$205,924	$211,115	2.5%
Aquatic (open water)	per acre	$102,962	$105,558	2.5%
Slough / Channel	per acre	$147,029	$149,516	1.7%
Streams (<=25 ft. wide)	per linear foot	$543	$553	1.8%
Streams (>25 ft. wide)	per linear foot	$814	$829	1.8%

Sources: ECCC Habitat Conservancy, *Annual Mitigation Fee Adjustment Summary* (PDF); Table 5.1.

Estimated restoration costs and revenues associated with wetland land cover impacts are shown in **Table 5.3**. The table multiplies the wetland land cover acreage impacts from Table 2.3 by the update fee schedule in Table 5.1. The 30-year revenue estimates in the table are used in the development fee calculation presented in Chapter 6.

Table 5.3: Wetland Mitigation Fee Revenue

Land Cover Type	Wetland Mitigation Fee		Fee Revenue (2022-2037) Initial UDA	Fee Revenue (2022-2037) Maximum UDA
Riparian	$105,891	per acre	$3,040,000	$3,570,000
Perennial Wetland	$162,953	per acre	$3,610,000	$3,660,000
Seasonal Wetland	$382,792	per acre	$4,210,000	$5,810,000
Alkali Wetland	$386,980	per acre	$3,200,000	$3,550,000
Ponds	$211,115	per acre	$1,460,000	$1,670,000
Aquatic (open water)	$105,558	per acre	$1,220,000	$1,220,000
Slough / Channel	$149,516	per acre	$10,670,000	$10,670,000
Subtotal			$27,410,000	$30,150,000
Streams (<=25 ft. wide)	$553	per ln. ft.	$11,300,000	$14,220,000
Streams (>25 ft. wide)	$829	per ln. ft.	$2,290,000	$3,170,000
Total			$41,000,000	$47,540,000

	Fee Revenue (2008-2037) Initial UDA	Fee Revenue (2008-2037) Maximum UDA
Actual (2008-2021)	$1,570,000	$1,570,000
Estimated (2022-2037)	$41,000,000	$47,540,000
Total (2008-2037)	$42,570,000	$49,110,000

Notes: "UDA" is the urban development area.

Sources: Tables 2.3, 5.1, and Appendix F, Table F.5.

Mitigation Fee Act Findings

The following findings are required by the MFA and were presented in Chapter 1.

Section 66001(a)(1)

The wetland mitigation fee is intended to pay the full cost of restoration or creation of wetland land cover types, including design, implementation, post-construction monitoring, and remediation. The development fee described in the next chapter will fund acquisition of the site for the restoration or creation and the management and monitoring after the wetland is fully functioning. Restoration of oak savanna is also required by the HCP/NCCP, but the cost of this restoration is included in the development fee because it is not associated with jurisdictional wetlands and waters.

Section 66001(a)(2)

The wetland mitigation fee will fund the capital costs associated with wetland restoration/creation the mitigate related wetland impacts. Chapter 5 of the HCP/NCCP explains the conservation strategy for wetland restoration/creation, and Chapter 9 explains the costs associated with implementing the strategy.

Section 66001(a)(3)

A reasonable relationship exists between the use of wetland mitigation fee revenue and covered activities that would pay the fee. Only covered activities that have wetland impacts (impacts on species and natural communities within wetland land cover types) pay the fee, and fee revenues fund implementation of the conservation strategy designed to mitigate those impacts. Specific elements of the strategy from Chapter 5 of the HCP/NCCP that relate to the restoration or creation of wetlands, ponds, and streams include:

- Conservation methods such as:
  - Biological goals and objectives that include the restoration and creation of wetlands, ponds, and streams.
  - Mitigation of impacts on state and federal jurisdictional wetlands and waters.
- Conservation measures such as:
  - Conservation Measure 2.3. Restore Wetlands and Create Ponds
  - Conservation Measure 2.10. Restore Streams and Riparian Woodland/Scrub to Compensate for Habitat Loss and to Increase Biodiversity.

The cost model summarized in Chapter 9 and presented in detail in Appendix G of the HCP/NCCP explains the costs associated with the restoration or creation of wetlands, ponds, and streams. Updated costs are shown in Table 3.1 in Chapter 3 of this report and include:

- All costs associated with the habitat restoration/creation cost category (includes construction costs and staff-related costs)
- The share of environmental compliance costs associated with one-time costs for habitat restoration/creation

- Costs for pre-construction surveys and construction monitoring for restoration sites (costs included in the monitoring, research and adaptative management tab in the cost model).

Section 66001(a)(4)

A reasonable relationship exists between the need for the wetland mitigation fee and covered activities that would pay the fee. Chapter 3 of the HCP/NCCP explains the relationship between the 17 animal and 11 plant species covered under the HCP/NCCP and wetland land cover types (see Table 3-9 in Chapter 3 of the Plan). Chapter 4 of the Plan explains the impacts of covered activities on these animal and plant species, and more broadly on natural communities. The importance of wetland land cover types is demonstrated by:

- The eight wetland land cover types provide habitats for all 17 animal species covered under the Plan.
- Individual wetland land cover types provide habitat for at least three and, in the case of seasonal wetlands, as many as 11 covered animal species.
- Vernal pools are an essential habitat for four covered species and 11 covered plants.

Section 66001(b)

A reasonable relationship exists between the amount of the wetland mitigation fee on a specific covered activity and the proportionate share of HCP/NCCP costs based on the fee schedule shown in Table 5.1. The fee schedule reflects the type of land cover that is affected because both mitigation ratios and per acre mitigation costs vary by land cover. The total fee for a covered activity is proportional to the amount of the impact based on the number of acres of wetland or pond, or linear feet of stream affected.

6. DEVELOPMENT FEE

This chapter presents the updated development fee schedule and the reasonable relationship findings required by the MFA and presented in Chapter 1. The development fee is applied to covered activities that generate permanent impacts. The only exception are permanent impacts caused by a specified list of rural infrastructure projects that pay the rural road fee based on a multiplier applied to the development fee (see Chapter 7).[27] Applicants can dedicate land for the Preserve System or generate alternative special taxes, fees, or charges in lieu of paying the mitigation fees subject to approval by the Conservancy.

Updated Fee Schedule

The development fee is based on all covered activities funding a fair share of total HCP/NCCP implementation costs. The fair share is based on the total amount of lands dedicated to habitat preservation in Eastern Contra Costa County, both lands existing prior to the HCP/NCCP and lands added by the Preserve System through implementation of the Plan. The Plan apportioned this total land area for habitat preservation between urban development existing prior to the Plan and urban development anticipated to occur during the 30-year permit term of the Plan. The fair share of costs allocated to the development fee under the maximum UDA scenario is 52 percent as documented in Appendix H of the Plan. The Plan requires that the periodic audit use this fair share amount to update the development fee, and that the fee cannot make up for shortfalls in revenue from other local, state, and federal sources.[28]

As explained in Chapter 1, all covered activities pay the development fee unless the applicant provides their own mitigation. In cases where wetland land cover types are affected, the wetland mitigation fee is also paid. As explained in Chapter 3, the wetland mitigation fee will fund costs of habitat restoration/creation associated with impacts on wetlands, ponds, and streams. Therefore, total Plan costs subject to the fair share calculation are calculated net of wetland mitigation fee revenue. This approach avoids double-charging covered activities for the same Plan costs.

Table 6.1 shows that share of total HCP/NCCP costs allocated to the development fee. Costs are shown net of estimated wetland mitigation fee revenue drawn from Table 5.3 in the prior chapter. Development fee revenue

[27] HCP/NCCP, Chapter 9, pp. 9-17 to 9-22, Figure 9-1, Table 9-4.

[28] HCP/NCCP, Chapter 9, p. 9-31.

to date is deducted from the fair share allocated to the development fee to calculate the net revenue still required from the development fee for the remainder of the permit term. Using this approach ensures that at the end of the permit term covered activities would have paid the fair share of plan costs as determined by the nexus analysis in the Plan.

Table 6.1: Development Fee Fair Share Analysis (2021 $)

	Maximum Urban Development Area		Initial Urban Development Area	
	Formula	**Amount**	**Formula**	**Amount**
Plan Implementation Costs	*a*	$539,680,000	*q*	$456,970,000
Wetland Mitigation Fee Revenue	*b*	($49,110,000)	*p*	($42,570,000)
Endowment Contribution[1]	*c*	$70,260,000	*d*	$58,270,000
Net Cost Subject to Fair Share Allocation	*d (sum)*	$560,830,000	*m (sum)*	$472,670,000
Development Fair Share Allocation[2]	*e*	52%	*l = k / m*	43%
Development Fair Share Costs	*f = d * e*	$291,630,000	*k = m - i*	$203,470,000
Development Fee Revenue To Date	*g*	($17,450,000)	*g*	($17,450,000)
Remaining Development Fair Share Costs (2022-2037)	*h = f - g*	**$274,180,000**	***j = k + g***	**$186,020,000**
Other Plan Funding	*i = d - f*	$269,200,000	*i*	$269,200,000

Notes: This table does not show rural road fee revenue, as shown in the HCP/NCCP, Appendix H, because impacts and associated fee revenues are in addition to impacts mitigated by the development fee. Impacts from rural (outside UDA) projects and activities other than those covered by the rural road fee are included in the development fee.

[1] Endowment contributions during permit term excluding investment earnings.

[2] "Development Fair Share Allocation" factor for maximum UDA based on HCP/NCCP, Appendix H, Table 1, consistent with procedures required for periodic audit (HCP/NCCP, Chapter 9, p. 9-31). Also, consistent with the HCP/NCCP, the initial UDA Development Fair Share Allocation factor is based on holding non-fee revenue sources constant with the maximum UDA scenario. This approach reasonably assumes that other federal, state, and local funding over the permit term will not be affected by the amount of urban development area impacts.

Sources: HCP/NCCP, Appendix H, Table 1 (second memorandum); Tables 3.2, 3.3, 4.2, 5.3, and 8.1 (this report).

A range of federal, state, and local sources fund the remaining costs for HCP/NCCP implementation, including rural road fees and temporary impact fees. Fair share costs allocated to the development fee under the initial UDA scenario are calculated by holding constant total funding from these other sources. It is reasonable to assume that the level of development under the Plan would not affect the level of funding from these other sources.

The updated development fee is shown in **Table 6.2**. The fee is based on the fair share costs calculated in Table 6.1 divided by the equivalent acres of impact remaining under each scenario from Table 2.2. The bottom of Table 6.2 shows the fee per acre by zone based on the weighting factors explained in Chapter 2.

Table 6.2: Development Fee Schedule (2021 $ for 2022 Fee Schedule)

		Initial UDA	Maximum UDA	Mid-Point
Fee per Equivalent Acre (based on remaining costs & impacts, 2022-2037)				
Remaining Development Fair Share Costs		$186,020,000	$274,180,000	
Remaining Development Impacts (equivalent acres)		19,046	29,160	
Development Fee (per equivalent acre)		$9,767	$9,403	**$9,585**
Fee Schedule (per acre of impact)	*Weight*			
Zone 1	2	$19,534	$18,806	**$19,170**
Zone 2	4	$39,068	$37,612	**$38,340**
Zone 3	1	$9,767	$9,403	**$9,585**

Source: Tables 2.2 and 6.1.

Table 6.2 also shows the average fee for the initial and maximum UDA scenarios. Use of the average development fee for the two scenarios was approved by the Conservancy Board when adopting the 2013 Audit recommendations (June 27, 2013).

Consistent with the prior audits, these equivalent acres do not discount for lands within the UDA that remain undeveloped during the permit term, as was done in the Plan to calculate the original development fee. Doing so would make the nexus analysis inconsistent with allowable permit term impacts.

Comparison with Original and Current Fee

In **Table 6.3** the updated fee based on the average of the two scenarios is compared with the current adopted fee. As shown in the table, the recommended development fee is just over one percent higher than the current fee schedule. The automatic annual inflation adjustment since the prior audit has been able to keep the fee in line with changing Plan costs without any significant revision needed based on the current audit.

Mitigation Fee Act Findings

The following findings are required by the MFA and were presented in Chapter 1.

Table 6.3: Development Fee Comparison (fee per acre)

Zone	2022 Fee Schedule	2022 Audit[1]	Change
Zone 1	18,938	19,170	1.2%
Zone 2	37,876	38,340	1.2%
Zone 3	9,469	9,585	1.2%

[1] Uses average development fee of initial and maximum UDA scenarios as approved by Conservancy Board when adopting the 2013 Audit recommendations (June 27, 2013).

Sources: ECCC Habitat Conservancy, *Annual Mitigation Fee Adjustment Summary* (PDF); Table 6.2.

Section 66001(a)(1)

The development fee is intended to pay the fair share cost of the HCP/NCCP associated with permanent impacts except impacts from a specified list of rural transportation projects (see Chapter 7) and excluding habitat restoration/ creation costs for wetland land cover types funded by the wetland mitigation fee.

Section 66001(a)(2)

The development fee will fund a fair share of all HCP/NCCP costs except costs funded by the wetland mitigation fees. Chapter 5 of the Plan explains the conservation strategy for the Plan and Chapter 9 explains the costs associated with implementing the strategy.

Section 66001(a)(3)

A reasonable relationship exists between the use of development fee revenue and covered activities that would pay the fee. Chapter 5 of the HCP/NCCP explains the conservation strategy and Chapter 9 explains the costs associated with implementing the strategy.

The conservation strategy in Chapter 5 of the Plan identifies biological goals and objectives that are supported by specific conservation measures: five measures related to landscape-level conservation, nine measures related to natural community-level conservation (excluding two measures related to wetland, pond, and stream restoration/creation discussed in the prior chapter of this report), and nine measures related to species-level conservation.

The cost model summarized in Chapter 9 of the Plan and presented in detail in Appendix G of the Plan explains and estimates the costs associated with implementation. Updated costs are shown in Chapter 3 of this report and include nine cost categories necessary to implement the Plan: program

administration, land acquisition, planning and design, habitat restoration/creation, environmental compliance, preserve management and maintenance, monitoring, research, and adaptive management, remedial measures, and contingency fund. As explained in the Chapter 3 of this report costs related to wetland, pond, and stream habitat restoration/creation are not included in the development fee.

Section 66001(a)(4)

A reasonable relationship exists between the need for the development fee and covered activities that would pay the fee. Chapter 3 of the HCP/NCCP explains the relationship between the 17 animal species, 11 plant species, and associated habitats covered under the Plan and terrestrial land cover types (see Table 3-9 in Chapter 3 of the Plan). Chapter 4 of the Plan explains the impacts of covered activities by land cover type on these animal and plant species, and more broadly on their habitats and natural communities.

Section 66001(b)

A reasonable relationship exists between the amount of the development fee on a specific covered activity and the proportionate share of HCP/NCCP costs based on the fee schedule shown in Table 6.2 for three reasons:

- The fee is based on a fair share of HCP/NCCP costs as determined by the share of development occurring under the Plan compared to total development (existing plus new) under the maximum UDA scenario. As stated in the Plan: "this analysis considers the pace of open space acquisition relative to the pace of development before and after adoption of the HCP/NCCP and assigns the land acquisition requirements of the HCP/NCCP according to the premise that future development should mitigate impacts in the inventory area proportionate to its share of the overall habitat impacts in the inventory area (i.e., impacts in the past and the future)."[29]
- As explained in detail in Chapter 2, *Development Fee Zones*, the fee is adjusted for three zones that reflect the relative amount of impact from urban development on natural habitats and covered species. The mapping of the zones was completed at a level of detail sufficient to provide a reasonable relationship between all land within a specific zone and the relative weight of impacts assigned to that zone.
- The total fee for a covered activity is proportional to the amount of the impact based on the number of acres affected.

[29] HCP/NCCP, Chapter 5, p. 5-51.

7. RURAL ROAD AND TEMPORARY IMPACT FEES

This chapter presents the updated fee schedule for the rural road fee and the temporary impact fee, and the reasonable relationship findings for each fee required by the MFA and explained in Chapter 1.

Rural Road Fee

The rural road fee is applied to 18 specified rural transportation projects.[30] These projects pay a multiple of 1.00 to 2.25 of the development fee. These projects fragment habitat, create substantial barriers and hazards to wildlife movement, and generally have a greater per-acre impact than other types of development projects. The extent of these additional impacts depends on whether the proposed facility is new or expanded, on the length of the facility, on the type of habitat traversed by the road, and other factors. The fee multiple is lower if the project implements wildlife-friendly design measures.

Funding from the rural road fee is shown in **Table 7.1**.

Table 7.1: Rural Road Fee Revenue

	Year	Amount
HCP/NCCP Estimate	2006	$7,431,600
Inflation Index		0.6578
Current Estimate (2021 $)	2021	$11,300,000
Rural Road Fee Revenue To Date		($2,510,000)
Remaining Rural Road Fee Revenue		$8,790,000

Notes: Revenue estimate assumes that all wildlife-friendly design measures are implemented.

Appendix H of the HCP/NCCP also includes a revenue estimate of $1,500,000 for unspecified "rural infrastructure fees" from the development fee applied to projects and activities outside the UDA such as flood protection projects, utility projects, and related maintenance activities. Revenue from these projects and activities are included in the development fee (see Chapter 6).

Sources: HCP/NCCP, Chapter 9, Table 9-6 and Appendix H, Table 1 (second memorandum); Appendix F, Table F.1.

Mitigation Fee Act Findings

The following findings are required by the MFA and were presented in Chapter 1.

[30] HCP/NCCP, Chapter 9, pp. 9-24 to 9-25, Table 9-6.

Section 66001(a)(1)

The rural road fee is intended to pay the costs of the HCP/NCCP associated with mitigating permanent impacts from specified transportation projects outside the urban development area, excluding habitat restoration/creation costs for wetland land cover types funded by the wetland mitigation fee.

Section 66001(a)(2)

The rural road fee will fund HCP/NCCP costs to mitigate permanent impacts from specified transportation projects outside the urban development area, excluding habitat restoration/creation costs for wetland land cover types funded by the wetland mitigation fee. Chapter 5 of the Plan explains the conservation strategy for the Plan and Chapter 9 explains the costs associated with implementing the strategy.

Section 66001(a)(3)

A reasonable relationship exists between the use of rural road fee revenue and covered activities that would pay the fee. Chapter 5 of the HCP/NCCP explains the conservation strategy and Chapter 9 explains the costs associated with implementing the strategy.

The conservation strategy in Chapter 5 of the Plan identifies biological goals and objectives that are supported by specific conservation measures: five measures related to landscape-level conservation, nine measures related to natural community-level conservation (excluding two measures related to wetland, pond, and stream restoration/creation discussed in the prior chapter of this report), and nine measures related to species-level conservation.

The cost model summarized in Chapter 9 and presented in detail in Appendix G of the Plan explains the costs associated with implementation. Updated costs are shown in Chapter 3 of this report and include nine cost categories: program administration, land acquisition, planning and design, habitat restoration/creation, environmental compliance, preserve management and maintenance, monitoring, research, and adaptive management, remedial measures, and contingency fund. As explained in the prior chapter of this report costs related to habitat restoration/creation on wetland land cover types are not included in the development fee.

Section 66001(a)(4)

A reasonable relationship exists between the need for the rural road fee and covered activities that would pay the fee. Chapter 3 of the HCP/NCCP explains the relationship between the 17 animal species, 11 plant species, and

associated habitats covered under the Plan and terrestrial land cover types (see Table 3-9 in Chapter 3 of the Plan). Chapter 4 of the Plan explains the impacts of covered activities by land cover type on these animal and plant species, and more broadly on their habitats and natural communities.

Section 66001(b)

A reasonable relationship exists between the amount of the rural road fee and the proportionate share of HCP/NCCP costs for the following reasons:

- The fee is based on the development fee discussed in Chapter 6 and applied to the permanent disturbance of land associated with a specific list of transportation projects.
- The fee is adjusted by a multiplier applicable to each specified transportation project to reflect each project's level of additional effects on the fragmentation of habitat and creation of barriers and hazards to wildlife movement.
- The total fee for a covered activity is proportional to the amount of the impact based on the number of acres affected.

Temporary Impact Fee

The temporary impact fee is applied to all temporary impacts from covered activities both inside and outside the UDA. The temporary impact fee is based on the development fee described in the prior chapter and shown in the fee schedule in Table 6.2. Where applicable the fee is also based on the wetland mitigation fee described in Chapter 5 and shown in the fee schedule in Table 5.1.

As described in Chapter 2 of the HCP/NCCP there are many covered activities that are short duration or intermittent and result in temporary impacts on natural land cover types. As described in Chapter 4 of the Plan some covered activities are expected to have substantial temporary impacts on covered species due to their large footprint, linear nature, location in the inventory area, effect on local soils or hydrology, or a combination of these factors. Temporary impacts are defined as any impact on vegetation or habitat that does not result in permanent habitat removal.

Chapter 9 of the Plan provides a detailed explanation of the calculation of the temporary impact fee. Covered activities with temporary impacts pay a fee based on the development fee. In addition, covered activities with temporary impacts on wetland land cover types also pay a fee based on the wetland mitigation fee. The temporary impact fee is calculated based on the frequency of the temporary impact and habitat recovery over the 30-year permit term;

the amount of the fee is equal to the applicable development or wetland mitigation fee multiplied by the proportion of the Plan's 30-year term affected by the temporary impact.

Mitigation Fee Act Findings

The following findings are required by the MFA and were presented in Chapter 1.

Section 66001(a)(1)

The temporary impact fee is intended to pay for costs of the HCP/NCCP associated with mitigating temporary impacts.

Section 66001(a)(2)

The temporary impact fee will fund HCP/NCCP costs to mitigate temporary impacts. Chapter 5 of the Plan explains the conservation strategy for the Plan and Chapter 9 explains the costs associated with implementing the strategy.

Section 66001(a)(3)

A reasonable relationship exists between the use of temporary impact fee revenue and covered activities that would pay the fee. Chapter 5 of the HCP/NCCP explains the conservation strategy and Chapter 9 explains the costs associated with implementing the strategy.

The conservation strategy in Chapter 5 of the Plan identifies biological goals and objectives that are supported by specific conservation measures: five measures related to landscape-level conservation, 11 measures related to natural community-level conservation, and nine measures related to species-level conservation.

The cost model summarized in Chapter 9 and presented in detail in Appendix G of the Plan explains the costs associated with implementation. Updated costs are shown in Chapter 3 of this report and include nine cost categories: program administration, land acquisition, planning and design, habitat restoration/creation, environmental compliance, preserve management and maintenance, monitoring, research, and adaptive management, remedial measures, and contingency fund.

Section 66001(a)(4)

A reasonable relationship exists between the need for the temporary impact fee and covered activities that would pay the fee. Chapter 3 of the HCP/NCCP

explains the relationship between the 17 animal and 11 plant species covered under the Plan and all land cover types (see Table 3-9 in Chapter 3 of the Plan). Chapter 4 of the Plan explains the impacts of covered activities on these animal and plant species.

Section 66001(b)

A reasonable relationship exists between the amount of the temporary impact fee on a specific covered activity and the proportionate share of HCP/NCCP costs based on the fee schedules shown in Table 5.1 and Table 6.2 for three reasons:

- As explained in Chapter 5 regarding the wetland mitigation fee and Chapter 6 regarding the development fee, the fees are based only on Plan costs associated with permanent impacts. Temporary impacts are reasonably like permanent impacts when adjusted for the duration of the temporary impact, so it is reasonable to establish the temporary fee based on the wetland mitigation and development fees.
- As explained in detail in Chapter 2, *Development Fee Zones*, the fee is adjusted for three zones that reflect the relative amount of impact from urban development on natural habitats and covered species. The mapping of the zones was completed at a level of detail sufficient to provide a reasonable relationship between all land within a specific zone and the relative weight of impacts assigned to that zone.
- The total fee for a covered activity is proportional to the amount of the impact based on the number of acres affected.
- The total fee is proportional to the duration of the temporary impact.

8. FUNDING PLAN

This chapter provides an updated funding plan for the HCP/NCCP based on the HCP/NCCP cost and mitigation fee revenue analysis presented in the prior chapters. This chapter provides the remaining two findings required by the MFA and explained in Chapter 1:

- Identify all sources and amounts of funding anticipated to complete financing of improvements to be funded by the fee.
- Designate the approximate dates when funding is expected to complete financing of improvements to be funded by the fee.

Revenue Sources

The funding plan tracks total revenues to date and estimates revenue for the remaining permit term. All amounts are shown in 2021 dollars. This section reviews the assumptions used to estimate each revenue source in the funding plan for the remaining 16 years of the permit term.

Mitigation Fees

- **Development fee** revenue for the remaining permit term is based on the "Remaining Fair Share Development Costs" shown in Table 6.2. All other mitigation payment revenue associated with specific agreements between land developers and the permittees is allocated to the endowment (see Chapter 4).
- **Wetland mitigation fee** revenue for the remaining permit term is based on the amounts shown in Table 5.3.
- **Rural road fee** revenue for the remaining permit term is based on the amount shown in Table 7.1.
- **Temporary impact fee** revenue for the remaining permit term equals the prior five-year annual average.

Consistent with prior audits, mitigation fee revenues assume that total impacts allowed under the permit occur by the end of the 30-year permit term. The permit term likely will need to be extended because impacts are occurring at a slower pace than anticipated by the HCP/NCCP. The funding plan will continue to use a 30-year planning horizon for occurrence of all allowable impacts until a permit term extension is approved by the permittees and the wildlife agencies. See Chapter 2, *Permit Term Extension*, for more discussion.

Other Fees and Exactions

- **Administrative charges** are for costs associated with processing mitigation fees paid by participating special entities. Participating special entities generate impacts covered by the Plan but are not one of the permittees.[31] Revenue for the remaining permit term equals the prior five-year annual average.
- **Payments for non-covered activities** are reduced to zero over the permit term because this revenue cannot be used for impacts under the Plan and must be used for additional conservation measures.
- **Other development exactions** are primarily from participating special entities and are for conservation beyond the mitigation requirements of the Plan ("contribution to recovery"). Revenue for the remaining permit term equals the prior five-year annual average.

State and Federal Funds and Local Capital Funds

The HCP/NCCP anticipated that state and federal funds and local capital funds would be used for land acquisition to build the Preserve System. Through 2021 state and federal funds have been used nearly exclusively for land acquisition along with a limited amount of funding for activities such as the planning and design of restoration projects. Local capital funds are comprised mostly of foundation grants and land acquisition funding from the Park District. A limited amount of funding from foundation grants and other local sources has been used for research. Park District funding comes from voter-approved tax measures and lease revenues (see Chapter 4, *Lease Revenues*, and **Table F.4** in Appendix F). Over 90 percent of the funding from these sources combined through 2021 has been used for land acquisition.

The HCP/NCCP converted estimated funding from these sources into estimates of acres acquired.[32] The Plan states that state and federal funding must be measured in terms of acreage rather than dollars.[33] The audit applies this same acreage approach for measuring funding from local capital funds.

These funding sources have declined substantially in the past five years. The 10-year average for these sources combined is more than double the five-year average (see **Table F.5** in Appendix F). Funding for the remainder of the

[31] Entities not subject to the jurisdiction of the permittees under the Plan may request coverage under the Plan for covered activities. Such organizations may include, for example, school districts, water districts, other utilities or special districts, or private companies. These entities, known as participating special entities, can receive coverage under the HCP/NCCP during Plan implementation on a case-by-case basis and by paying the appropriate fees as determined by the Conservancy.

[32] HCP/NCCP, Chapter 9, pp. 9-33 and 9-36.

[33] HCP/NCCP, Chapter 9, p. 9-37.

permit term is estimated to be more than the prior five-year average and less than the 10-year average (130 and 160 percent of the five-year average for state and federal funds and local capital funds, respectively). This level of funding is estimated such that:

- The Plan remains fully funded based on total plan resources (total revenues plus FY 2021 ending fund balance) versus total plan costs
- Total funding from each source over the permit term for land acquisition, when converted to acreage based on average costs per acre, does not exceed the land acquisition estimates for each source included in the Plan.

To balance total plan revenues against total plan costs, the funding plan for this audit was able to hold funding from these sources to between 87 and 90 percent of the amount estimated in the Plan, based on acreage acquired and average cost per acre, depending on the funding source and scenario (initial or maximum UDA).

Local Operating Funds

The Plan anticipated that the Park District would be a significant funding partner not only in land acquisition but also in preserve management.[34] Indeed, the Park District holds title to all but one of the acquisitions completed through 2021 to build the Preserve System.[35] In addition to land purchase costs, the Park District has funded a share of due diligence and closing costs for land acquisitions and a share of costs for preserve management. Park District funding sources include an allocation of lease revenues on preserve lands (see **Table F.4** and **Table F.5** in Appendix F).

The Conservancy and the Park District are currently negotiating a cost sharing agreement for preserve management. Guiding principles for this agreement are the Park District fund land management at a level sufficient "to achieve its internal management standards". Other sources (such as the Conservancy) would fund "those costs related to implementing the HCP/NCCP that would not otherwise be incurred by the Park District to manage its lands."[36] Applying these principles, local operating funds from the Park District are estimated based on the Park District funding 41 percent of total preserve management costs for the remainder of the permit term. This estimate is based on a preliminary estimate provided by Conservancy and subject to negotiation between EBRPD and the Conservancy.

[34] HCP/NCCP, Chapter 9, pp. 9-33 to 9-34 and Appendix H (first memorandum).

[35] The only acquisition that is not held by the Park District is the 165-acre Viera North Peak parcel.

[36] *Implementing Agreement for the East Contra Costa County HCP/NCCP*, January 22, 2007, p. 22.

The Park District has also funded a share of due diligence and closing costs for land acquisitions. Based on funding and costs to date (through 2021), the District's funding has equaled one percent of total land acquisition costs. The funding plan assumes that the District will continue to fund these costs at this same level through the remainder of the permit term.

Future local operating funds from the Park District are shown in **Table 8.1**. Total funding is between $14 million and $17 million, depending on the scenario. Net funding after deducting lease revenues is $6 million to $8 million.

Table 8.1: Future Local Operating Funds (Park District) (2022-2037)

	Initial UDA	Maximum UDA
Preserve Management & Maintenance		
2022-2026 Costs (yrs. 15-19)	$7,430,000	$7,990,000
2027-2031 Costs (yrs. 20-24)	$9,340,000	$10,820,000
2032-2037 Costs (yrs. 25-30)	$13,900,000	$16,910,000
Total	$30,670,000	$35,720,000
Park District Share[1]	41.0%	41.0%
Park District Preserve Management Funding	$12,570,000	$14,650,000
Due Diligence & Closing (funded by Park District)[2]	$1,520,000	$2,120,000
Total Park District Funding	$14,090,000	$16,770,000
Lease Revenue Subject To Allocation Agreement[3]	($5,100,000)	($5,100,000)
Grazing Lease Revenue[4]	($2,960,000)	($3,470,000)
Net Additional Park District Funding (yrs. 15-30)	$6,030,000	$8,200,000

[1] EBRPD share based on preliminary estimate provided by Conservancy and subject to negotiation between EBRPD and the Conservancy.

[2] Equal to one percent of total future land acquisition costs. The one percent factor is based on Park District share of funding for those costs to date ($1.5 million of District funding and $139 million of land acquisition costs through 2021).

[3] The Conservancy and EBRPD have entered into a lease revenue allocation agreement that allocates revenue from leases (primarily from communication and wind power facilities) on preserve lands. The amount shown here represents the share of those revenues allocated to preserve management and maintenance costs excluding grazing leases.

[4] Based on cost model estimates of grazing management costs. Costs are assumed equal grazing lease revenue.

Sources: Appendices C and D (Summary, Land Acquisition, and Preserve Management & Maintenance tables); Appendix F, Tables F.4 and F.5.

Other Funds

Other funds include interest earnings and miscellaneous revenue. Revenue from these sources for the remaining permit term equals the prior five-year annual average.

Funding Plan Summary

Table 8.2 presents the updated funding plan under the initial and maximum UDA scenarios. Actual revenues for 2007 through 2021 are inflated to 2021 dollars and added to estimates of remaining revenues for each scenario to calculate total revenues for the 30-year permit term. The ending fund balance for 2021 is included to calculate total resources available to fund the Plan. Plan costs are drawn from Chapters 3 and 4.

Tables 8.3 and 8.4 compare the updated funding plan with the HCP/NCCP and the 2017 audit for the initial and maximum UDA scenarios, respectively, in 2021 dollars. Three revenue sources, development fees, state and federal funds, and local capital funds, continue to fund over 80 percent of the Plan. The share of total revenue provided by each of these sources continue to remain constant across the three funding plans (+/- two percent).

Table 8.2: Funding Plan (2021 dollars)

		Initial UDA		Maximum UDA	
	2007-2021	2022-2037	Total	2022-2037	Total
	Actual	*Estimate*	*Estimate*	*Estimate*	*Estimate*
PLAN FUNDING					
Mitigation Fees					
Development Fee	$17,450,000	$186,020,000	$203,470,000	$274,180,000	$291,630,000
Wetland Mitigation Fee	$1,570,000	$41,000,000	$42,570,000	$47,540,000	$49,110,000
Rural Road Fee	$2,510,000	$8,790,000	$11,300,000	$8,790,000	$11,300,000
Temporary Impact Fee[2]	$3,710,000	$3,520,000	$7,230,000	$3,520,000	$7,230,000
Subtotal	$25,240,000	$239,330,000	$264,570,000	$334,030,000	$359,270,000
Other Fees & Exactions					
Administrative Charges[2]	$990,000	$1,460,000	$2,450,000	$1,460,000	$2,450,000
Non-Covered Activities[3]	$5,070,000	($5,070,000)	$0	($5,070,000)	$0
Other Mitigation Fees[2]	$4,740,000	$1,870,000	$6,610,000	$1,870,000	$6,610,000
Subtotal	$10,800,000	($1,740,000)	$9,060,000	($1,740,000)	$9,060,000
Local, State & Federal Funds					
State & Federal Funds[4]	$106,530,000	$50,150,000	$156,680,000	$50,150,000	$156,680,000
Local Capital Funds[4]	$39,110,000	$16,610,000	$55,720,000	$16,610,000	$55,720,000
Local Operating Funds	$10,270,000	$14,090,000	$24,360,000	$16,770,000	$27,040,000
Subtotal	$155,910,000	$80,850,000	$236,760,000	$83,530,000	$239,440,000
Other Funds					
Interest Earnings[2]	$540,000	$650,000	$1,190,000	$650,000	$1,190,000
Miscellaneous[2]	$30,000	$30,000	$60,000	$30,000	$60,000
Subtotal	$570,000	$680,000	$1,250,000	$680,000	$1,250,000
Total Revenue	**$192,520,000**	**$319,120,000**	**$511,640,000**	**$416,500,000**	**$609,020,000**
Fund Balance[5]	$3,960,000	$0	$3,960,000	$0	$3,960,000
Total Resources	**$196,480,000**	**$319,120,000**	**$515,600,000**	**$416,500,000**	**$612,980,000**
PLAN COSTS					
Plan Implementation (Permit Term)			$456,970,000		$539,680,000
Endowment Fund Contribution			$58,270,000		$70,260,000
Total Costs			**$515,240,000**		**$609,940,000**
Surplus / (Deficit)			**$360,000**		**$3,040,000**

[1] Total years 0-30 revenue estimated based on adjusting HCP/NCCP estimate of $8,930,000 by the inflation index for 2006.

[2] Future year estimates based on annual average actual revenue for prior five years (2017-2021), except Other Mitigation Fees prior annual average excludes extraordinary CWF 2020 endowment contribution (see Table F.4),

[3] Prior year revenue deducted from future years because funding must augment and not substitute for Plan obligations (see Chapter 9 of the Plan).

[4] Future year estimate used to balance total resources with total costs while ensuring that total revenue does not exceed HCP/NCCP estimates of preserve acquisition funded by these sources, tracked based on acres acquired and average cost per acre.

[5] As of December 31, 2021.

Sources: Tables 3.2, 3.3, 5.3, 6.1, 7.1, and 8.1, Appendix F, Table F.5, ECCC Habitat Conservancy (fund balance).

Table 8.3: Funding Plan Comparison – Initial Urban Development Area (2021 $)

	2006 Plan		2017 Fee Audit		2022 Fee Audit		2022 Audit vs. 2006 Plan		2022 Audit vs. 2017 Audit	
Mitigation Fees										
Development Fee	$179,660,000	40%	$212,450,000	38%	$203,470,000	39%	$23,810,000	13%	($8,980,000)	(4%)
Wetland Mitigation Fee	$33,810,000	7%	$51,310,000	9%	$42,570,000	8%	$8,760,000	26%	($8,740,000)	(17%)
Rural Road Fee	$13,580,000	3%	$13,570,000	2%	$11,300,000	2%	($2,280,000)	(17%)	($2,270,000)	(17%)
Temporary Impact Fee	$0	0%	$6,570,000	1%	$7,230,000	1%	$7,230,000	NA	$660,000	10%
Subtotal	$227,050,000	50%	$283,900,000	51%	$264,570,000	51%	$37,520,000	17%	($19,330,000)	(7%)
Other Fees & Exactions										
Administrative Charges	$0	0%	$1,670,000	0%	$2,450,000	0%	$2,450,000	NA	$780,000	47%
Non-Covered Activities	$0	0%	$0	0%	$0	0%	$0	NA	$0	NA
Other Mitigation Fees	$0	0%	$4,910,000	1%	$6,610,000	1%	$6,610,000	NA	$1,700,000	35%
Subtotal	$0	0%	$6,580,000	1%	$9,060,000	2%	$9,060,000	NA	$2,480,000	38%
Local, State & Federal Funds										
State & Federal Funds	$143,660,000	32%	$176,870,000	32%	$156,680,000	30%	$13,020,000	9%	($20,190,000)	(11%)
Local Capital Funds	$53,210,000	12%	$64,810,000	12%	$55,720,000	11%	$2,510,000	5%	($9,090,000)	(14%)
Local Operating Funds	$30,400,000	7%	$25,180,000	5%	$24,360,000	5%	($6,040,000)	(20%)	($820,000)	(3%)
Subtotal	$227,270,000	50%	$266,860,000	48%	$236,760,000	46%	$9,490,000	4%	($30,100,000)	(11%)
Other Funds										
Interest Earnings[1]	$0	0%	$670,000	0%	$1,190,000	0%	$1,190,000	NA	$520,000	78%
Miscellaneous[1]	$0	0%	$30,000	0%	$60,000	0%	$60,000	NA	$30,000	100%
Subtotal	$0	0%	$700,000	0%	$1,250,000	0%	$1,250,000	NA	$550,000	79%
Fund Balance	$0	0%	Not Included	0%	$3,960,000	1%	$3,960,000	NA	$3,960,000	NA
Total Funding	**$454,320,000**	100%	**$558,040,000**	100%	**$515,600,000**	100%	$61,280,000	13%	($42,440,000)	(8%)
Total Costs	**$451,640,000**		**$556,470,000**		**$515,240,000**		$63,600,000	14%	($41,230,000)	(7%)
Surplus / (Deficit)	**$2,680,000**		**$1,570,000**		**$360,000**		($2,320,000)		($1,210,000)	

Note: HCP/NCCP and 2017 Audit revenues are inflated to 2021 dollars using the inflation index in Appendix F.

Sources: HCP/NCCP, Table 9-8 and Appendix H; 2017 Fee Audit, Table 8.2, p. 51; Table 8.2 (this report).

Table 8.4: Funding Plan Comparison – Maximum Urban Development Area (2021 $)

	2006 Plan		2017 Fee Audit		2022 Fee Audit		2022 Audit vs. 2006 Plan		2022 Audit vs. 2017 Audit	
Mitigation Fees										
Development Fee	$258,010,000	48%	$317,110,000	47%	$291,630,000	48%	$33,620,000	13%	($25,480,000)	(8%)
Wetland Mitigation Fee	$36,500,000	7%	$59,240,000	9%	$49,110,000	8%	$12,610,000	35%	($10,130,000)	(17%)
Rural Road Fee	$13,580,000	3%	$13,570,000	2%	$11,300,000	2%	($2,280,000)	(17%)	($2,270,000)	(17%)
Temporary Impact Fee	$0	0%	$6,570,000	1%	$7,230,000	1%	$7,230,000	NA	$660,000	10%
Subtotal	$308,090,000	58%	$396,490,000	59%	$359,270,000	59%	$51,180,000	17%	($37,220,000)	(9%)
Other Fees & Exactions										
Administrative Charges	$0	0%	$1,670,000	0%	$2,450,000	0%	$2,450,000	NA	$780,000	47%
Non-Covered Activities	$0	0%	$0	0%	$0	0%	$0	NA	$0	NA
Other Mitigation Fees	$0	0%	$4,910,000	1%	$6,610,000	1%	$6,610,000	NA	$1,700,000	35%
Subtotal	$0	0%	$6,580,000	1%	$9,060,000	1%	$9,060,000	NA	$2,480,000	38%
Local, State & Federal Funds										
State & Federal Funds	$143,660,000	27%	$176,870,000	26%	$156,680,000	26%	$13,020,000	9%	($20,190,000)	(11%)
Local Capital Funds	$53,210,000	10%	$64,810,000	10%	$55,720,000	9%	$2,510,000	5%	($9,090,000)	(14%)
Local Operating Funds	$30,400,000	6%	$25,180,000	4%	$27,040,000	4%	($3,360,000)	(11%)	$1,860,000	7%
Subtotal	$227,270,000	42%	$266,860,000	40%	$239,440,000	39%	$12,170,000	5%	($27,420,000)	(10%)
Other Funds										
Interest Earnings[1]	$0	0%	$670,000	0%	$1,190,000	0%	$1,190,000	NA	$520,000	78%
Miscellaneous[1]	$0	0%	$30,000	0%	$60,000	0%	$60,000	NA	$30,000	100%
Subtotal	$0	0%	$700,000	0%	$1,250,000	0%	$1,250,000	NA	$550,000	79%
Fund Balance	$0	0%	Not Included	0%	$3,960,000	1%	$3,960,000	NA	$3,960,000	NA
Total Funding	**$535,360,000**	100%	**$670,630,000**	100%	**$612,980,000**	100%	$77,620,000	14%	($57,650,000)	(9%)
Total Costs	**$532,140,000**		**$669,060,000**		**$609,940,000**		$77,800,000	15%	($59,120,000)	(9%)
Surplus / (Deficit)	**$3,220,000**		**$1,570,000**		**$3,040,000**		($180,000)		$1,470,000	

Note: HCP/NCCP and 2017 Audit revenues are inflated to 2021 dollars using the inflation index in Appendix F.

Sources: HCP/NCCP, Table 9-8 and Appendix H; 2017 Fee Audit, Table 8.3, p. 52; Table 8.2 (this report).

APPENDIX A: DEVELOPMENT IMPACTS

The following tables provide detail for impacts from covered activities for 2008 through 2021 of the HCP/NCCP.

Table A.1 provides detail for permanent land conversion impacts

Table A.2 provides detail for wetland impacts.

Temporary impacts are not shown because they do not affect audit calculations of the development fees.

Table A.1: Permanent Land Conversion Impacts (2008-2021) *(acres)*

Fiscal Year	Project / Description	Zone 1	Zone 2	Zone 3	Outside UDA[1]
2009	CCC LP07-2033: Verizon Wireless Martin Cell Tower Project				1.39
2009	CCC LP09-2002: US Coast Guard/SBA Cell Tower Project				1.158
2009	PSE: State Route 4 Bypass, Segment 4, Phase 2	24.69	23.81		
2010	PSE: CalTrans SR4 Median Buffer & Shoulder Widening Project				7.34
2010	CCC PWD: Vasco Road Safety Improvements				6.201
2010	CCC LP09-2033: Horizon Cell Tower Project				1.19
2010	PSE: eBart Phase 1 Project	0.3			
2011	CCC LP10-2070: Morgan Territory Rd Telecommunications Facility Project				0.901
2011	CCC LP09-2037: Camino Diablo Vasco Telecommunications Facility Project				2.35
2011	CCC LP10-2082: J4 Byron Hot Springs Communications Facility				0.8
2011	CCC PWD: Balfour Rd Culvert Repair Project				0.01
2011	CCC PWD: Byron Hwy Shoulder Widening Project-Phase 1				0.44
2011	CCC PWD: Vasco Camino Diablo Intersection				1.94
2011	PSE: ConocoPhillips Line 200 Repair & Anode		0.003		
2011	City of Oakley: Stonewood III-Unit #1 Sub #9183	2.21			
2011	City of Pittsburg: Trash Capture Demonstration Project	0.02			
2011	City of Brentwood: New Meetinghouse Brentwood			3.4	
2012	CCC PWD: Deer Valley Road Safety Improvement Project				0.53
2012	CCC PWD: Marsh Creek Should Widening near Round Valley Regional Preserve Project				2.79
2012	CCC BIG12-0004598: EBRIX Los Vaqueros Communication Facility				0.026
2012	CCC LP10-2009: Clayton Regency Mobile Home Park Emergency H2O Pipeline Extension				0.5

Table A.1: Permanent Land Conversion Impacts (2008-2021) *(acres) (continued)*

Fiscal Year	Project / Description	Zone 1	Zone 2	Zone 3	Outside UDA[1]
2012	EBRPD Round Valley Pedestrian Bridge Project				0.15
2012	City of Oakley: iPark Oakley Project	9.14			
2012	PSE: eBart Phase II Extension	37.91			
2012	PSE: eBart Phase II Extension-1st & 2nd Amend	2.56			
2012	Upper Sand Creek Detention Basin Expansion		6.89		
2013	City of Brentwood: AutoZone Store 4136	0.9			
2013	City of Oakley: Emerson Ranch	138.25			
2013	CCC: Clayton Regency Mobile Home Park Stormdrain Outfall				0.2
2013	PSE: SR160/SR4 Bypass Phase II Connectors	18.01			
2013	PSE: Chevron Pipeline KLM Site 1357 Repair		0.007		
2014	City of Brentwood: Ferro/Ronconi	42.23			
2014	CCC PWD: Pacifica Ave Sidewalk	0.204			
2014	CCC PWD: Marsh Creek Bridge Scour Repair				0.003
2014	CCC PWD: Marsh Creek 142 Wingwall Repair				0.009
2014	CCC PWD: Deer Valley Road Shoulder Widening				1.77
2014	CCC PWD: Marsh Creek Detention Center Bridge Replacement				0.18
2014	CCC PWD: Marsh Creek Road Safety Improvements				1.3
2014	CCC LP13-2097: Verizon Wireless Bethel Island	0.036			
2014	CCC LP13-2111: AT&T Co-location Marsh Creek Monopine				0.000226
2014	CCC LP13-2069: Marsh Creek Cell Tower				0.019
2015	City of Brentwood: Bella Fiore	13.5			
2015	City of Brentwood: Celebration Preschool	0.87			
2015	City of Brentwood: Mangini	9.77			
2015	CCC LP14-2044: Mariner's Discovery Church	3.49			
2015	City of Oakley PW: Marsh Creek Pedestrian Bridge	0.02			
2015	City of Brentwood: Mission Grove	15.6			
2015	City of Brentwood: Palmilla Phase I	20.64			
2015	Duane Martin Jr. Vasco Caves				0.1
2015	City of Pittsburg: Greystone Place			4.9	
2015	Hess Water Trough Installation				0.01
2015	City of Brentwood PW: John Muir Parkway-Phase II	0.33	2.36		
2015	Vaquero Farms S. Wetland Creation & Repair				0.01
2015	CCC PWD: Vasco Road Embankment Repair				0.02
2015	CCC PWD: Marsh Creek Safety Improvement Project (Fed. No. HRRL-5928 (095))		0.76		
2016	City of Brentwood: Maffeo	9.1			
2016	City of Brentwood: Palmilla Phase II	38.7			
2016	City of Brentwood: Sparrow at Marsh Creek	6.71			
2016	City of Brentwood: Cornerstone Church	4.51			
2016	City of Brentwood: Elite (Pacific Union) Self Storage	4			
2016	City of Oakley: Verizon Wireless Empire Oakley Road	0.33			

Table A.1: Permanent Land Conversion Impacts (2008-2021) *(acres) (continued)*

Fiscal Year	Project / Description	Zone 1	Zone 2	Zone 3	Outside UDA[1]
2016	City of Pittsburg: Sonic Drive-In Project			1.22	
2016	City of Brentwood: Tractor Supply Project			2.8	
2016	City of Pittsburg: Delta Gateway Pad No. 12	1.8			
2016	CCC PWD: Port Chicago Hwy-Willow Pass Sidewalk Improvements	0.156		0.143	
2016	CCC PWD: Canal Road Sidewalk and Bike Lanes Project	0.4709			
2016	CCC LP15-2029: Timber Rd Communication Facility				0.05
2016	CCC TP12-0026: Moita Road Improvement Project		0.36		0.9
2016	PSE: Oakley Generating Station (Original-3rd Amendment) Project	16.72	[see footnote 2]		
2016	PSE: SR4/Balfour & First Amendment	29.58	[see footnote 2]		
2017	Canal Road Bridge Replacement Project	0.01			
2017	Morgan Territory Road Slide Repair and Temporary Access Road Alignment				0.03
2017	Palermo Subdivision	18.84			
2017	Sellers Pointe Subdivision	13.82			
2017	Verna Way			1.96	
2017	Oakley Recreation Center	4.294			
2017	Gilbert Property Phase I	51.91			
2017	Oakley Gateway	3.63			
2017	iPark Oakley Phase 2: Executive RV and Boat Storage	0.67			
2017	PG&E Walnut Crossover Rebuild Project				0.1
2018	Kirker Pass Road Northbound Truck Climbing Lane - Inside				3.12
2018	Marsh Creek Road Bridge #141 Replacement Project				0.09
2018	Sciortino Ranch Development	51.94			
2018	Bella Verde Development	6.1			
2018	Tri-City Plaza - Parcel D			0.87	
2018	Shops at Lone Tree (Center Pointe Commercial Development)	7.64			
2018	City of Brentwood Recycled Water Project - Phase 1	0.9			
2018	Cypress Self Storage Project	3.24			
2018	Bay Point Family Apartments (DP15-3023)			7.61	
2018	Shell Pipeline AC Mitigation Site at Valve 158				0.03
2018	Empire Ave Development - Hovnanian Homes Project	8			
2018	30 Technology Court	1.46			
2018	PG&E RMSCC15-303 Project				0.48
2018	Gilbert Property Phase 2	70.626			
2019	Marsh Creek Road Traffic Safety Improvements Project				0.00015
2019	Alicante (The Village at Main)	20.06			
2019	The Vines at Oakley	9.9			
2019	Liberty Residential Subdivision	4.24			
2019	Praxair Pittsburg Cylinder Storage Facility - Phase 1			0.16	

Table A.1: Permanent Land Conversion Impacts (2008-2021) *(acres) (continued)*

Fiscal Year	Project / Description	Zone 1	Zone 2	Zone 3	Outside UDA[1]
2019	Praxair Pittsburg Cylinder Storage Facility - Phase			4.93	
2019	eBART Phase II Extension - 4th Amendment	0.21			
2019	EBRPD FEMA Pond Repair Projects 2019				0.002
2020	Quick Quack Car Wash and 7-11	2.64			
2020	Brentwood Goddard School	0.86			
2020	The Groves	19.47			
2020	Silvergate Condominium Community	8.35			
2020	City of Brentwood Recycled Water Project Phase 2 - Non-Potable Water Distribution System	0.17			
2020	Oakley Logistics Center	66.046			
2020	Acacia Development	12.56			
2020	Twin Oaks Senior Residence			6.06	
2020	Diablo Energy Storage	10.41			
2020	Tuscany Meadows		168.86		
2020	Department of Water Resources Old Banks Landfill Cap Project				6.49
2020	CCTA Mokelumne Trail Bicycle/Pedestrian Overcrossing Project	1.85			
2021	Tuscany Estates Project- at the Baldocchi Property	23.26			
2021	Mt. Diablo Resource Recovery Park	10.26			
2021	Diablo Meadows Residential Development		8.28		
2021	Byron Highway Solar Project				34.13
2021	Byron Highway/Byer Road Safety Improvements Project				0.18
2021	Rotten Robbie Brentwood	2.11			
2021	Amber Lane Apartments	13.91			
2021	Orchard Trails (Walnut Villas)	27.88			
2021	Zip Thru Car Wash	1.42			
	Total	931.44	211.33	34.05	76.94

Notes: Only includes impacts subject to permit limits.

"PSE" is participating special entity. "CCC" is Contra Costa County.

[1] Includes covered activities outside the urban development area (UDA) that pay either the zones 1 or 2 fee. Includes rural road projects as shown in Table 9-6 of the 2006 Plan.

[2] These covered activities occurred over multiple years. Total impacts and last year of impacts are shown here.

Sources: ECCC Habitat Conservancy.

Table A.2: Permanent Wetland Impacts, 2008 Through 2021

Fiscal Year	Project / Description	Wetlands								Streams	
		Total	Riparian/ Woodland	Permanent Wetland	Seasonal Wetland	Alkali Wetland	Pond	Aquatic	Slough	≤ 25 ft	> 25 ft
		(acres)								(linear feet)	
2008	CCC PWD: Marsh Creek Emergency Bridge Repair Project										0.3096
2009	PSE: State Route 4 Bypass, Segment 4, Phase 2	**0.19**	0.19								
2010	PSE: CalTrans SR4 Median Buffer & Shoulder Widening Project	**0.41**	0.05		0.29				0.07		6
2010	CCC PWD: Vasco Road Safety Improvements	**0.007**		0.006	0.001					110	22
2011	CCC PWD: Balfour Rd Culvert Repair Project										12
2011	CCC PWD: Byron Hwy Shoulder Widening Project-Phase 1										47
2011	City of Pittsburg: Trash Capture Demonstration Project	**0.02**		0.02							
2012	CCC PWD: Deer Valley Road Safety Improvement Project	**0.13**				0.13					
2012	CCC PWD: Marsh Creek Should Widening near Round Valley Regional Preserve Project	**0.064**			0.064					29	
2012	Upper Sand Creek Detention Basin Expansion	**0.17**	0.11	0.04	0.02					295	
2013	CCC: Clayton Regency Mobile Home Park Stormdrain Outfall	**0.1**	0.1								
2013	PSE: Chevron Pipeline KLM Site 1357 Repair	**0.007**				0.007					
2014	CCC PWD: Pacifica Ave Sidewalk	**0.044**	0.044								36
2014	CCC PWD: Marsh Creek Bridge Scour Repair	**0.003**	0.003								23
2014	CCC PWD: Marsh Creek 142 Wingwall Repair	**0.009**	0.009								
2014	CCC PWD: Deer Valley Road Shoulder Widening	**0.1**					0.1				
2014	CCC PWD: Marsh Creek Detention Center Bridge Replacement	**0.132**	0.132								60

Table A.2: Permanent Wetland Impacts, 2008 Through 2021 *(continued)*

Fiscal Year	Project / Description	Wetlands								Streams	
		Total	Riparian/ Woodland	Permanent Wetland	Seasonal Wetland	Alkali Wetland	Pond	Aquatic	Slough	≤ 25 ft	> 25 ft
2014	CCC PWD: Marsh Creek Road Safety Improvements									148	
2015	City of Oakley PW: Marsh Creek Pedestrian Bridge										15
2015	City of Brentwood: Palmilla Phase I										25
2015	CCC PWD: Marsh Creek Safety Improvement Project (Fed. No. HRRL-5928 (095)	**0.02**	0.02							29	
2016	CCC PWD: Canal Road Sidewalk and Bike Lanes Project	**0.0039**	0.0034		0.0005					21	
2016	CCC TP12-0026: Moita Road Improvement									45	
2016	PSE: SR4/Balfour & First Amendment	**0.42**	0.42								
2017	CCC PWD: Garin Ranch Basin and Heron Park Basin Improvements	**0.469**						0.469			
2017	City of Oakley: Gilbert Property Phase I	**0.703**			0.126				0.577		
2018	CCC PWD: Kirker Pass Road Northbound Truck Climbing Lane	**0.046**	0.046								
2018	CCC PWD: Morgan Territory Road Bridges 4.30 and 4.40 Scour Repair	**0.002**	0.002								65
2018	CCC PWD: Marsh Creek Road Bridge #141 Replacement	**0.16**	0.16								93
2018	City of Oakley: Gilbert Property Phase 2	**0.124**			0.124						
2019	EBRPD FEMA Pond Repair Projects 2019									8	
2020	City of Oakley: Oakley Logistics Center	**0.984**			0.984						
	Total	**4.32**	1.29	0.07	1.61	0.14	0.10	0.47	0.65	685.00	404.31

Notes: Only includes impacts subject to permit limits.
"PSE" is participating special entity. "CCC" is Contra Costa County.
Wetland impacts are included in land conversion impacts (Table A.1). Wetland impacts are subject to the additional wetland fee.

Sources: ECCC Habitat Conservancy.

APPENDIX B: LAND ACQUISITION COST ANALYSIS

The following tables provide detail for the land acquisition cost analysis update.

Table B.1

REMAINING LAND ACQUISITION BY COST CATEGORY, Acres and Estimated Total Cost
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

		Initial Urban Development Area				Maximum Urban Development Area			
Acquisition Cost Category	**Parcel Size**	**Acres**	**% of Total**	**Estimated Cost**	**% of Total**	**Acres**	**% of Total**	**Estimated Cost**	**% of Total**
OUTSIDE THE URBAN LIMIT LINE									
1	120 + acres	9,389	70%	$85,441,820	56%	13,778	72%	$125,376,779	59%
2	40 - 120 acres	1,822	14%	20,445,821	13%	3,074	16%	34,461,669	16%
3	10 - 40 acres	322	2%	8,852,800	6%	459	2%	12,612,600	6%
4	5 - 10 acres	15	0%	726,620	0%	33	0%	1,538,498	1%
5	< 5 acres	-	0%	-	0%	4	0%	288,420	0%
6	ALL, steep slopes	480	4%	2,016,000	1%	489	3%	2,055,480	1%
INSIDE THE URBAN LIMIT LINE		1,342	10%	34,513,035	23%	1,385	7%	35,559,843	17%
TOTAL		**13,371**	**100%**	**$151,996,096**	**100%**	**19,222**	**100%**	**$211,893,289**	**100%**

Note: includes acres that may be acquired outside the Inventory Area and outside Acquistion Analysis zones that do not count towards preserve targets but are part of larger preserve parcels.

Source: East Contra Costa County Habitat Conservancy and Insight Data & Economic Analysis

Table B.2

LAND ACQUISITION COST FACTOR
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

OUTSIDE THE URBAN LIMIT LINE — **Per Acre Land Value Factor**

Acquisition Cost Category	Parcel Size	Slope Characteristics (percent of parcel)	2003 Valuation	2005 Valuation	2006 Valuation	2012 Valuation	2017 Valuation	2022 Valuation	Change from 2017
1	120 + acres	< 26%	$3,500	$4,800	$5,600	$5,300	$6,400	$9,100	42%
2	40 - 120 acres	< 26%	$6,000	$8,200	$9,600	$7,500	$11,200	$11,200	0%
3	10 - 40 acres	< 26%	$20,000	$27,400	$31,900	$18,600	$22,000	$27,500	25%
4	5 - 10 acres	< 26%	$35,000	$48,000	$56,000	$49,000	$38,000	$47,000	24%
5	< 5 acres	< 26%	$50,000	$68,600	$80,000	$70,000	$55,000	$66,000	20%
6	ALL	> 26%	$3,000	$3,300	$3,800	$4,200	$4,500	$4,200	-7%

INSIDE THE URBAN LIMIT LINE — **Per Acre Land Value Factor**

Acquisition Cost Category	Currently Designated for Development (Yes/No)	Slope Characteristics (percent of parcel)	2003 Valuation	2005 Valuation	2006 Valuation	2012 Valuation	2017 Valuation	2022 Valuation	Change from 2017
7	No	<15%	$14,500	$18,300	$21,300	**$11,000**	**$19,000**	**$24,000**	26%
8	No	15-26%	$10,100	$12,700	$14,800	**$6,600**	**$11,400**	**$14,400**	26%
9	No	>26%	$3,600	$4,500	$5,200	**$2,800**	**$4,800**	**$6,000**	25%
10	Yes	<15%	$45,000	$56,800	$66,200	**$35,000**	**$60,000**	**$74,000**	23%
11	Yes	15-26%	$31,500	$39,760	$46,400	**$21,000**	**$36,000**	**$44,400**	23%
12	Yes	>26%	$11,300	$14,263	$16,600	**$8,800**	**$15,000**	**$18,500**	23%
INSIDE THE URBAN LIMIT LINE - BYRON AIRPORT									
13	na	na	$8,000	$8,800	$10,300	$6,200	$10,700	**$13,200**	23%

Note: The 2022 land cost factor for the Byron Airport Area is based on the $8,000 per acre value estimated in 2003, adjusted by the 2022 percentage change from values originally estimated in 2003 for Cost Category 10--about 65 percent.

Source: East Contra Costa County Habitat Conservancy and Insight Data & Economic Analysis

Table B.3

LAND ACQUISITION ANALYSIS - Price per acre for parcels > 120 acres (nominal dollars)
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

Transaction ID	Project/Property Name	Year of Sale	Acres	Purchase Price/Market Value	Price/Value per acre
EBRPD/ECCC Habitat Conservancy Land Acquisitions in the last 10 years					
19	Vaquero Farms Central	2012	319.9	$1,855,700	$5,800
23	Thomas North	2012	135.0	$863,900	$6,400
26	Smith	2014	960.0	$5,376,000	$5,600
27	Roddy Ranch (part)	2014	994.5	$13,500,000	$13,575
28	Viera/Perley	2015	260.0	$1,950,000	$7,500
30	Nunn	2016	646.0	$6,072,000	$9,400
32	Coelho	2016	199.4	$1,495,750	$7,500
34	Viera North Peak	2017	165.0	$1,080,000	$6,545
36	Casey	2017	320.0	$2,400,000	$7,500
37	Roddy Ranch Golf Course	2018	230.0	$1,955,000	$8,500
Weighted Average					**$8,641**
Save Mount Diablo					
SMD 23	Curry Canyon Ranch	2013	1,080.5	$7,173,800	$6,639
Comparables from 2017 - 2021 Appraisals					
Marciel Road, San Ramon		2016	181.32	$1,250,000	$6,894
Patterson Pass Road, unincorporated Alameda Co.		2014	155.76	$1,200,000	$7,704
Bollinger Canyon Road, Moraga		2014	251.00	$1,824,840	$7,270
Chadbourne Road, Brentwood Road		2014	640.00	$4,500,000	$7,031
Off Marsh Creek Road, Antioch		2015	400.00	$3,140,000	$7,850
Christensen Road, Livermore		2014	188.77	$950,000	$5,033
Byron Hot Springs Road, Byron		2014	205.55	$2,450,000	$11,919
Tesla Road, Livermore		2016	158.40	$455,000	$2,872
Altamont Pass Road, Livermore[1]		2010	139.83	$1,294,500	$9,258
Morgan Territory Road, San Ramon		2017	343.82	$2,063,000	$6,000
Contra Costa County Assessor's Data - Agricultural land use, unimproved or improvements less than 5 percent of value)					
Assessor 1	Brentwood	2018	1,566.25	$20,000,000	$12,769
Assessor 2	Knightsen	2017	411.56	$3,900,000	$9,476
Assessor 3	Antioch	2021	400.00	$2,720,000	$6,800
Assessor 4	Byron	2019	291.82	$1,400,000	$4,797
Assessor 5	Byron	2020	251.31	$3,945,000	$15,698
Assessor 6	Knightsen	2017	141.53	$2,820,000	$19,925
Assessor 7	Byron	2020	135.96	$3,711,500	$27,298
Overall Weighted Average					**$9,070**
				Land Cost Factor for 2022 Update:	**$9,100**

Notes:

1. This is a relatively old sale but is included as a comparable because it was an abandoned golf course in an "agricultural" area in the same region, purchased for mitigation.

Sources: East Contra Costa Habitat Conservancy, Save Mount Diablo, Contra Costa County Assessor, and Insight Data & Economic Analysis

Table B.4

LAND ACQUISITION ANALYSIS - Price per acre for parcels > 40 - 120 acres (nominal dollars)
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

Transaction ID	Project/Property Name	Year of Sale	Acres	Purchase Price/Market Value	Price/Value per acre
EBRPD/ECCC Habitat Conservancy Land Acquisitions in the last 10 years					
20	Galvin	2012	61.7	$370,000	$5,999
25	Adrienne Galvin	2013	112.0	$884,400	$7,900
31	Hanson Hills	2016	76.5	$730,000	$9,547
33	Campos	2017	80.0	$520,000	$6,500
38	Poppi/Halstead (Lucas)	2018	72.0	$725,000	$10,071
39	Olesen/Duke	2019	120.0	$1,080,000	$9,000
42	Civic Rancho Meadows	2021	80.0	$1,500,000	$18,750
Weighted Average					**$23,229**
Save Mount Diablo					
SMD 20	Highland Springs	2012	105.0	$495,000	$4,714
SMD 22	Marsh Creek 8	2013	51.1	$690,684	$13,506
Comparables from 2017 - 2021 Appraisals					
Altamont Pass Road, unincorporated Alameda Co.		2015	110.70	$262,500	$2,371
North Vasco Road, unincorporated Alameda Co.		2014	79.02	$550,000	$6,960
N Bruns Road, Byron Highway, Byron		2016	68.76	$760,000	$11,053
Morgan Territory Road/Highland Springs, Livermore		2012	105.00	$495,000	$4,714
Marsh Creek Road, Clayton		2015	76.46	$690,000	$9,024
Wirthman Lane, Clayton		2015	41.04	$470,000	$11,452
Crane Ridge Road, unincorporated Alameda Co.		2014	60.00	$500,000	$8,333
Ruess Road, unincorporated Alameda Co.		2017	100.21	$900,000	$8,981
Deer Valley Road, Brentwood		2016	50.25	$375,000	$7,463
Deer Valley Road, Brentwood		2017	50.25	$490,000	$9,751
Whispering Pines Road, Clayton		2017	95.41	$800,000	$8,385
Alhambra Valley Road, Martinez		2020	48.48	$1,154,000	$23,804
Franklin Canyon Road, Martinez		2019	118.00	$1,225,000	$10,381
Marsh Creek Road, Clayton		2019	50.81	$1,650,000	$32,474
Contra Costa County Assessor's Data - Agricultural land use, unimproved or improvements less than 5 percent of value)					
Assessor 8	Byron	2020	115.34	$2,700,000	$23,409
Assessor 9	Byron	2021	87.37	$1,589,500	$18,193
Assessor 10	Byron	2020	70.45	$1,450,000	$20,582
Assessor 11	Byron	2021	65.61	$1,100,000	$16,766
Overall Weighted Average					**$11,228**
				Land Cost Factor for 2022 Update:	**$11,200**

Sources: East Contra Costa Habitat Conservancy, Save Mount Diablo, Contra Costa County Assessor, and Insight Data & Economic Analysis

Table B.5

LAND ACQUISITION ANALYSIS - Price per acre for parcels 10 - 40 acres (nominal dollars)
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

Transaction ID	Project/Property Name	Year of Sale	Acres	Purchase Price/Market Value	Price/Value per acre
EBRPD/ECCC Habitat Conservancy Land Acquisitions in the last 10 years					
21	Moss Rock	2012	20.5	$410,000	$20,010
22	Fan	2012	21.0	$220,000	$10,476
35	Roddy Home Ranch	2017	40.0	$1,536,000	$38,400
Weighted Average					**$26,580**
Comparables from 2017 - 2021 Appraisals					
	Byron Hwy, Brentwood	2016	14.45	$490,000	$33,910
	Marsh Creek Road, Clayton	2014	20.30	$625,000	$30,788
	Crow Canyon Road, unincorporated Alameda Co.	2015	22.86	$650,000	$28,434
	Knightsen Avenue, Oakley	2017	10.00	$500,000	$50,000
	Willow Way, Byron	2017	16.77	$599,000	$35,719
	Marsh Creek Road, Clayton	2017	17.00	$220,000	$12,941
	Camino Diablo, Byron	2017	18.27	$875,000	$47,893
	Altamont Pass Road, unincorporated Alameda Co.	2018	36.24	$295,000	$8,140
	Bragdon Way, Clayton	2018	38.54	$558,000	$14,478
	Deer Valley Road & Balfour Road, Antioch	2018	40.00	$680,000	$17,000
	Sunset Road, Knightsen	2019	10.04	$425,000	$42,331
	Kellogg Creek Road, Byron	2020	13.66	$525,000	$38,433
	Briones Valley Road, Brentwood	2020	25.55	$600,000	$23,483
	Silver Hills Drive, Byron	2019	10.00	$425,000	$42,500
	Morgan Territory Road, Clayton	2020	28.73	$650,000	$22,624
Contra Costa County Assessor's Data - Agricultural and Vacant Rural land use, unimproved or improvements less than 5 percent of value)					
Assessor 12	Brentwood	2020	38.80	$850,000	$21,907
Assessor 13	Clayton	2019	21.78	$500,000	$22,957
Assessor 14	Brentwood	2021	13.22	$530,000	$40,091
Assessor 15	Byron	2021	12.78	$400,000	$31,299
Assessor 16	Knightsen	2021	11.35	$600,000	$52,863
Assessor 17	Livermore	2020	10.64	$349,000	$32,801
Assessor 18	Brentwood	2017	10.00	$550,000	$55,000
Assessor 19	Knightsen	2018	10.00	$252,500	$25,250
Assessor 20	Knightsen	2018	10.00	$302,500	$30,250
Assessor 21	Knightsen	2020	10.00	$399,000	$39,900
Assessor 22	Brentwood	2021	10.00	$425,000	$42,500
Overall Weighted Average					**$27,452**
				Land Cost Factor for 2022 Update:	**$27,500**

Sources: East Contra Costa Habitat Conservancy, Contra Costa County Assessor, and Insight Data & Economic Analysis

Table B.6

LAND ACQUISITION ANALYSIS - Price per acre for parcels 5 - 10 acres (nominal dollars)
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

Transaction ID	Project/Property Name	Year of Sale	Acres	Purchase Price/Market Value	Price/Value per acre
EBRPD/ECCC Habitat Conservancy Land Acquisitions in the last 10 years (none in this size category)					
Comparables from 2017 - 2021 Appraisals					
Bragdon Way, Clayton		2015	6.42	$295,000	$45,950
Bragdon Way, Clayton		2015	5.01	$220,000	$43,912
Leon Drive, Clayton		2017	5.32	$360,000	$67,669
Morgan Territory Road, Clayton		2016	5.00	$350,000	$70,000
Contra Costa County Assessor's Data - Rural land use, unimproved or improvements less than 5 percent of value)					
Assessor 23	Byron	2020	9.99	$200,000	$20,020
Assessor 24	Knightsen	2018	9.88	$370,000	$37,449
Assessor 25	Knightsen	2018	9.88	$370,000	$37,449
Assessor 26	Knightsen	2018	9.84	$370,000	$37,602
Assessor 27	Brentwood	2019	9.60	$475,000	$49,479
Assessor 28	Knightsen	2018	9.51	$460,000	$48,370
Assessor 29	Brentwood	2020	8.21	$75,000	$9,135
Assessor 30	Brentwood	2018	5.00	$400,000	$80,000
Assessor 31	Brentwood	2018	5.00	$350,000	$70,000
Assessor 32	Brentwood	2018	5.00	$350,000	$70,000
Assessor 33	Brentwood	2021	5.00	$480,000	$96,000
Overall Weighted Average					**$47,165**
				Land Cost Factor for 2022 Update:	**$47,000**

Sources: East Contra Costa Habitat Conservancy, Contra Costa County Assessor, and Insight Data & Economic Analysis

Table B.7

LAND ACQUISITION ANALYSIS - Price per acre for parcels less than 5 acres (nominal dollars)
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

Transaction ID	Project/Property Name	Year of Sale	Acres	Purchase Price/Market Value	Price/Value per acre
EBRPD/ECCC Habitat Conservancy Land Acquisitions in the last 10 years					
24	Alaimo	2013	2.31	$185,000	$80,087
29	Clayton Radio LLC	2015	2.02	$75,000	$37,129
40	Bloching	2020	3.25	$210,000	$64,615
Comparables from 2017 - 2021 Appraisals					
	Bollinger Canyon Road, Moraga	2018	4.00	$225,000	$56,250
Overall Weighted Average					**$60,017**
				Land Cost Factor for 2022 Update:	**$66,000**

Note: Only a small number of parcels less than 5 acres might be acquired as part of the acquisition strategy to fill gaps between larger parcels. Following the rationale presented in "NCCP/HCP Land Cost Data", Technical Memorandum to John Kopchik, prepared by Economic & Planning Systems, August 3, 2006 and included in Appendix G: HCP/NCCP Cost Data, the value assumption is based on a per-acre premium above the average value for the 5 - 10 acre parcels ($47,000 for this 2022 update). In the 2006 analysis, the premium was about 40 percent. This 2022 analysis assumes a similar premium, resulting in the $66,000 per acre land cost factor for parcels less than five acres.

Sources: East Contra Costa Habitat Conservancy and Insight Data & Economic Analysis

Table B.8

LAND ACQUISITION ANALYSIS - Basis for price per acre calculation for parcels inside the Urban Limit Line
EAST CONTRA COSTA COUNTY HCP/NCCP
2022 Update

Item	Value		Source
Average Sales Price (placeholder estimate) Per Single Family Unit	$680,000	a	New Home Sales 2021 Antioch, Brentwood, Oakley, and Pittsburg
Units per acre (gross)	5.0	b	Average Lot Size of 7,000 sqft and net to gross ratio of 80 percent
Total Development Value	$3,385,234	c=a*b	Calculated
Raw Entitled Land Value as % of Development Value	9.0%	d	Based on standard 10 percent ratio, adjusted down slightly based on real estate broker conversations
Raw Entitled Land Value	$304,671	e=c*d	Calculated
Discount Rate	12%	f	Average land speculator discount rate
Category 10 - 12.5 years to entitlement/ development	$73,893	g=e/(1+f)^12.5	Calculated
Category 7 - 22.5 years to entitlement/ development	$23,792	h=e/(1+f)^22.5	Calculated

Note: This table updates the cost factors in the calculations for this land cost factor as established in the August 3, 2006 Technical Memorandum from Economic & Planning Systems, "NCCP/HCP Land Cost Data". The average sales price for new single family units is updated to reflect current market conditions.

This table calculates the average values for cost categories 7 and 10, Following the methodology established in 2006, the values for categories 8 and 11 are discounted 40 percent from the value for a level site and the values for categories 9 and 12 are discounted 75 percent from the average for the level site.

Sources: "Annual New Home Sale Data for Selected Contra Costa County Cities ," Contra Costa Association of REALTORS® MLS (CCAR); Insight Data & Economic Analysis

APPENDIX C: INITIAL UDA COST MODEL UPDATE

The following tables provide comprehensive documentation for the cost model update based on estimated impacts for the initial urban development area.

East Contra Costa County HCP/NCCP
2022 Update
Implementation Cost Data and Assumptions with Initial Urban Development Area

Summary of East Contra Costa HCP Implementation Costs for Initial Urban Development Area

2022 Update

(2021 dollars rounded to the nearest $10,000)

Total Costs

	Implementation Period (Years)					
Cost Category	0	1-14	15-19	20-24	25-30	**Total (2021)**
Program Administration	$220,000	$14,590,000	$6,660,000	$6,260,000	$7,500,000	$35,240,000
Land Acquisition: acquisition and site improvements	$0	$139,240,000	$48,440,000	$48,440,000	$58,060,000	$294,180,000
Land Acquisition: due diligence, transaction costs	$250,000	$4,390,000	$1,920,000	$1,920,000	$2,300,000	$10,780,000
Planning and Design	$0	$4,550,000	$1,450,000	$1,450,000	$820,000	$8,260,000
Habitat Restoration/Creation	$0	$7,050,000	$13,430,000	$13,430,000	$16,110,000	$50,020,000
Environmental Compliance	$0	$1,410,000	$1,220,000	$1,020,000	$0	$3,650,000
Preserve Management and Maintenance	$0	$6,650,000	$7,430,000	$9,340,000	$13,900,000	$37,320,000
Monitoring, Research, and Adaptive Management	$0	$2,200,000	$1,710,000	$2,340,000	$3,520,000	$9,760,000
Remedial Measures	$0	$0	$260,000	$210,000	$2,810,000	$3,280,000
Contingency	$0	$0	$1,280,000	$1,370,000	$1,840,000	$4,480,000
Total	**$470,000**	**$180,080,000**	**$83,800,000**	**$85,780,000**	**$106,860,000**	**$456,970,000**

Summary of East Contra Costa HCP Implementation Costs for Initial Urban Development Area

2022 Update

(2021 dollars not rounded)

Total Costs

	Implementation Period (Years)					
Cost Category	0	1-14	15-19	20-24	25-30	**Total**
Program Administration	$223,698	$14,594,336	$6,661,370	$6,261,370	$7,495,644	$35,236,418
Land Acquisition: acquisition and site improvements	$0	$139,241,000	$48,437,737	$48,437,737	$58,059,276	$294,175,751
Land Acquisition: due diligence, transaction costs	$253,166	$4,387,960	$1,919,403	$1,919,403	$2,303,284	$10,783,217
Planning and Design	$0	$4,550,853	$1,445,840	$1,445,840	$821,365	$8,263,898
Habitat Restoration/Creation	$0	$7,051,220	$13,427,192	$13,427,192	$16,112,631	$50,018,236
Environmental Compliance	$0	$1,411,927	$1,221,348	$1,021,348	$0	$3,654,623
Preserve Management and Maintenance	$0	$6,648,120	$7,429,960	$9,336,250	$13,902,207	$37,316,537
Monitoring, Research, and Adaptive Management	$0	$2,195,918	$1,710,132	$2,335,132	$3,520,011	$9,761,193
Remedial Measures	$0	$0	$263,044	$208,177	$2,805,500	$3,276,720
Contingency	$0	$0	$1,276,931	$1,370,752	$1,835,652	$4,483,335
Total	**$476,864**	**$180,081,334**	**$83,792,958**	**$85,763,202**	**$106,855,569**	**$456,969,927**

NOTE: Original unit cost estimates for the 2006 HCP/NCCP were in 2005 dollars, inflated to 2006 dollars for use in the plan document.

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUURS49BSA0
Not Seasonally Adjusted
Series Title: All items in San Francisco-Oakland-Hayward, CA, all
Area: San Francisco-Oakland-Hayward, CA
Item: All items
Base Period: 1982-84=100
Years: 2005 to 2022

Data extracted on: August 2, 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2	2021 dollars
2005		201.2		202.5		201.2		203.0		205.9		203.4	202.7	201.5	203.9	0.6545
2006		207.1		208.9		209.1		210.7		211.0		210.4	209.2	207.9	210.6	0.6754
2007		213.688		215.842		216.123		216.240		217.949		218.485	216.048	214.736	217.361	0.6976
2008		219.612		222.074		225.181		225.411		225.824		218.528	222.767	221.730	223.804	0.7193
2009		222.166		223.854		225.692		225.801		226.051		224.239	224.395	223.305	225.484	0.7245
2010		226.145		227.697		228.110		227.954		228.107		227.658	227.469	226.994	227.944	0.7344
2011		229.981		234.121		233.646		234.608		235.331		234.327	233.390	232.082	234.698	0.7535
2012		236.880		238.985		239.806		241.170		242.834		239.533	239.650	238.099	241.201	0.7738
2013		242.677		244.675		245.935		246.072		246.617		245.711	245.023	243.894	246.152	0.7911
2014		248.615		251.495		253.317		253.354		254.503		252.273	251.985	250.507	253.463	0.8136
2015		254.910		257.622		259.117		259.917		261.019		260.289	258.572	256.723	260.421	0.8349
2016		262.600		264.565		266.041		267.853		270.306		269.483	266.344	263.911	268.777	0.8599
2017		271.626		274.589		275.304		275.893		277.570		277.414	274.924	273.306	276.542	0.8877
2018		281.308		283.422		286.062		287.664		289.673		289.896	285.550	282.666	288.435	0.9220
2019		291.227		294.801		295.259		295.490		298.443		297.007	295.004	293.150	296.859	0.9525
2020		299.690		298.074		300.032		300.182		301.736		302.948	300.084	299.109	301.059	0.9689
2021		304.387		309.419		309.497		311.167		313.265		315.805	**309.721**	306.724	312.718	1.0000
2022		320.195		324.878		330.539								323.408		

Employment Cost Index (NAICS)
Original Data Value

Data extracted on: August 2, 2022 (8:36:09 PM)

Series Id: CIU2010000120000I
Not seasonally adjusted
Series Title: Total compensation for Private industry workers in Professional and related, Index
Ownership: Private industry workers
Component: Total compensation
Occupation: Professional and related occupations
Industry: All workers
Subcategory: All workers
Area: United States (National)
Periodicity: Current dollar index number
Years: 2005 to 2016

Year	Qtr1	Qtr2	Qtr3	Qtr4	2021 dollars
2005	98.0	98.8	99.5	100.0	0.6974
2006	101.0	101.8	103.1	103.9	0.7245
2007	104.9	105.9	106.7	107.3	0.7483
2008	108.3	109.0	109.9	110.3	0.7692
2009	111.0	111.1	111.4	111.4	0.7768
2010	112.2	112.6	113.3	113.5	0.7915
2011	114.6	115.1	115.4	115.7	0.8068
2012	116.8	117.3	117.7	118.2	0.8243
2013	118.9	119.5	120.2	120.5	0.8403
2014	121.0	121.9	122.5	122.9	0.8570
2015	123.7	124.1	124.5	124.9	0.8710
2016	125.7	126.2	126.7	126.7	0.8835
2017	127.8	128.7	129.1	129.6	0.9038
2018	130.8	131.6	132.3	132.8	0.9261
2019	133.7	134.4	135.1	135.6	0.9456
2020	136.8	137.0	137.8	138.4	0.9651
2021	139.7	140.5	142.2	143.4	1.0000

California Construction Cost Index, Department of General Services

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	2021 dollars		
2006	4620	4603	4597	4600	4599	4593	4609	4616	4619	4867	4891	4877	4,674	0.60878		
2007	4869	4868	4871	4872	4886	4842	4849	4851	4942	4943	4978	4981	4,896	0.63766		
2008	4983	4983	4999	5004	5023	5065	5135	5142	5194	5393	5375	5322	5,135	0.66876		
2009	5309	5295	5298	5296	5288	5276	5263	5265	5264	5259	5259	5262	5,278	0.68739		
2010	5260	5262	5268	5270	5378	5394	5401	5401	5381	5591	5599	5596	5,400	0.70331		
2011	5592	5624	5627	5636	5637	5643	5654	5667	5668	5675	5680	5680	5,649	0.73568		
2012	5683	5683	5738	5740	5755	5754	5750	5778	5777	5780	5779	5768	5,749	0.74872		
2013	5774	5782	5777	5786	5796	5802	5804	5801	5802	5911	5903	5901	5,820	0.75799	1.24%	
2014	5898	5896	5953	5956	5957	5961	5959	5959	5959	5969	5981	5977	5,952	0.77520	2.27%	
2015	6073	6077	6069	6062	6069	6055	6055	6055	6113	6114	6109	6108	6,080	0.79185	2.15%	
2016	6106	6132	6248	6249	6240	6238	6245	6244	6267	6343	6344	6373	6,252	0.81432	2.84%	8.49%
2017	6373	6373	6373	6461	6455	6470	6474	6620	6620	6596	6596	6596	6,501	0.84664	3.97%	
2018	6596	6596	6596	6596	6596	6598	6643	6613	6674	6679	6679	6684	6,629	0.86339	1.98%	
2019	6684	6700	6616	6841	6852	6854	6854	6823	6814	6851	6895	6924	6,809	0.88681	2.71%	
2020	6995	6945	6947	6955	6958	7041	6984	6988	7036	7120	7123	7120	7,018	0.91399	3.06%	
2021	7090	7102	7130	7150	7712	7746	7892	8122	7900	8080	8141	8072	7,678	1.00000	9.41%	21.14%

The California Construction Cost index is developed based upon Building Cost Index (BCI) cost indices for San Francisco and Los Angeles produced by Engineering News Record (ENR) and reported in the second issue each month for the previous month. This table is updated at the end of each month.

The ENR BCI reports cost trends for specific construction trade labor and materials in the California marketplace.

Accessed 8/2/2022

https://www.dgs.ca.gov/RESD/Resources/Page-Content/Real-Estate-Services-Division-Resources-List-Folder/DGS-California-Construction-Cost-Index-CCCI

Legend

red numbers are assumptions or data entered directly into the worksheet

blue numbers are links from other worksheets in the workbook

black numbers are calculations based on the above numbers

Cost factors are colored coded by primary source considered:

EBRPD (for HCP)
CCWD (for HCP)
Average of CCWD/EBRPD
ECCC Habitat Conservancy
J&S and EPS (for HCP)
AECOM, 2012
Updated by Insight Data & Economic Analysis, 2022
Updated with input from H.T. Harvey, 2017
Other estimated factors
Actual costs start-up and years 1 - 14
Estimate of EBRPD contributions to operational costs, start up and years 1-14
Summary actuals supercede model detail

Acres Acquired, Managed, and Restored within HCP/NCCP Preserves for Initial Urban Development Area
2022 Update

	Initial UDA	Source
Total acres acquired/managed	24,250	(Table 5-9: mid-point of range)

Acres Acquired and Managed by Time Period

	Implementation Period (Years)					
	0	1-14	15-19	20-24	25-30 (6-year period)	Total
Total preserve acres acquired per period	-	12,050	3,813	3,813	4,575	24,250
Total preserve acres managed, cumulative	-	12,050	15,862	19,675	24,250	24,250

Assumptions:

Actual acquisition accounted for in years 1-5, 6-9 and 10 - 14; the net remaining requirement is allocated evenly over the remaining 16 years of the permit term.

Management and monitoring on acquired land has not kept pace with actual acquisition.

14,463.76	Total acres acquired through 2021
1,681.1	Already conserved acres (no credit acres) on parcels acquired through 2021 (Annual Report Table 8a)
732.93	Other acres (outside acquisition zones) not credited to preserve system through 2021
12,049.7	Total acres acquired and credited toward preserve system

Land Cover Type Restored/Created by Time Period

	Implementation Period (Years)					
Land Cover Type (acres except where noted)	0	1-14	15-19	20-24	25-30 (6-year period)	Total
oak savanna	-	-	13.1	13.1	15.8	42.0
riparian woodland/scrub	-	5.40	13.9	13.9	16.7	50.0
perennial wetland (jurisdictional boundary)	-	0.16	10.0	10.0	12.0	32.2
seasonal wetland (jurisdictional boundary)	-	10.70	10.8	10.8	12.9	45.2
alkali wetland (jurisdictional boundary)	-	2.40	6.1	6.1	7.3	21.8
slough/channel	-	-	22.5	22.5	27.0	72.0
open water	-	-	-	-	-	-
ponds	-	0.61	6.4	6.4	7.6	21.0
streams (miles)	-	2.16	0.8	0.8	0.9	4.6
Total (acres)	-	**20.58**	**83.3**	**83.3**	**99.9**	**287.0**

Assumptions:

Total restoration requirements based on assumptions in the HCP/NCCP. Actual restoration will depend on actual impacts to these features.

Actual restoration accounted for in years 1-14; the net remaining requirement is allocated evenly over the next 16 years of the permit term.

For total acre calculation, streams are assumed to be 5 feet wide

30% % of perennial, seasonal or alkali wetland complex acreage assumed to be jurisdictional wetland; for compens

USED IN WETLAND FEE CALCULATION

Defining sites:	average acres/site or linear feet/site (streams)	% requiring substantial soil disturbance
riparian/woodland scrub sites by acreage conversion:	3	20%
wetlands and pond sites by acreage conversion	2.0	80%
stream sites by linear feet conversion:	1,000	90%

Restoration sites that require significant soil disturbance by land-cover type *USED IN WETLAND FEE CALCULATION*

	Implementation Period (Years)					
Land Cover Type Restoration Sites	0	1-14	15-19	20-24	25-30 (6-year period)	Total
riparian woodland/scrub	-	0.4	0.9	0.9	1.1	3.3
perennial wetland	-	0.1	4.0	4.0	4.8	12.9
seasonal wetland	-	4.3	4.3	4.3	5.2	18.1
alkali wetland	-	1.0	2.4	2.4	2.9	8.7
ponds	-	-	9.0	9.0	10.8	28.8
streams (miles/acres converted to sites)	-	10.2	3.6	3.6	4.4	21.9
Total sites for monitoring cost estimate	-	15.9	24.3	24.3	29.2	93.7

Assumptions:

Average acres/site and percent of sites requiring substantial soil disturbance calculated in table above.

Seasonal, perennial, and alkali wetland acreages in Tables 5-16 and 5-17 are for wetland complexes; for cost estimates and revenue projections the wetted acres of these complexes are assumed to be 30% of the total acres.

Summary of HCP/NCCP Personnel (Conservancy Staffing)
2022 Update

	2022 UPDATE STAFFING				POST PERMIT STAFFING
	Number of FTEs				Number of FTEs
UPDATE STAFFING	0-14	15-19	20-24	25-30	
Administrative staffing		no change			
Principal Planner		0.70	0.70	0.70	0.50
Senior Planner		0.70	0.70	0.70	0.25
Principal GIS Planner		0.05	0.05	0.05	0.05
Associate Planner		0.70	0.70	0.70	0.25
Assistant Planner		0.80	0.80	0.80	0.25
Planning Technician		0.35	0.35	0.35	0.10
Accountant		0.40	0.40	0.40	0.20
Admin – Secretary		Included in overhead rates			-
IT Support Staff					-
Total		3.70	3.70	3.70	1.60
Land acquisition staffing		no change			
Principal Planner		0.05	0.05	0.05	-
Senior Planner		0.20	0.20	0.20	-
Principal GIS Planner		0.05	0.05	0.05	-
Total		0.30	0.30	0.30	-
Management planning and design staffing		lower in last 5 years			
Principal Planner		0.10	0.10	0.05	-
Principal GIS Planner		0.05	0.05	0.05	-
Senior Planner		0.05	0.05	0.02	-
Associate Planner		0.05	0.05	0.02	-
Total		0.25	0.25	0.14	-
Habitat restoration and creation staffing		no change			
Principal Planner		0.05	0.05	0.05	-
Associate Planner		0.10	0.10	0.10	-
Total		0.15	0.15	0.15	-
Environmental compliance staffing		no change except 0 in last period			
Principal Planner		0.02	0.02	-	-
Senior Planner		0.05	0.05	-	-
Associate Planner - wetland fees		0.05	0.05	-	-
Assistant Planner - wetland fees		0.10	0.10	-	-
Total		0.22	0.22	-	-
Preserve management and maintenance staffing		higher in last 5 years			
Principal Planner		0.05	0.05	0.07	0.07
Associate Planner		0.05	0.05	0.10	0.10
Assistant Planner		0.10	0.10	0.15	0.15
Preserve Maintenance Staff		included in per acre cost factors			-
Total		0.20	0.20	0.32	0.32
Monitoring and research staffing		higher in last 5 years			
Principal Planner		0.03	0.03	0.08	0.05
Associate Planner		0.05	0.05	0.08	0.05
Total		0.08	0.08	0.16	0.10
Overall Staffing Plan					
Principal Planner		1.00	1.00	1.00	0.62
Senior Planner		1.00	1.00	0.92	0.25
Principal GIS Planner		0.15	0.15	0.15	0.05
Associate Planner		1.00	1.00	1.00	0.40
Assistant Planner		1.00	1.00	0.95	0.40
Planning Technician		0.35	0.35	0.35	0.10
Accountant		0.40	0.40	0.40	0.20
Admin – Secretary		Included in overhead rates			-
IT Support Staff					-
Preserve Maintenance Staff		included in per acre cost factors			-
Total		**4.90**	**4.90**	**4.77**	**2.02**

HCP/NCCP Program Administration for Initial Urban Development Area

2022 Update

(2021 dollars)

All Costs	Cost by Implementation Period (Years)							Total
	0	1-5	6-9	10-14	15-19	20-24	25-30	
Staff and overhead					$5,156,370	$5,156,370	$6,187,644	
Contractor assistance with administration					$400,000	$400,000	$480,000	
Other administrative costs					$55,000	$55,000	$66,000	
Vehicle / mileage allowance					$7,500	$7,500	$9,000	
Travel					$37,500	$37,500	$45,000	
Insurance					$115,000	$115,000	$138,000	
Legal assistance					$575,000	$250,000	$300,000	
Other permitting costs					$15,000	$15,000	$15,000	
Financial analysis assistance					$150,000	$75,000	$75,000	
Financial audit (annual)					$100,000	$100,000	$120,000	
Public relations and outreach					$50,000	$50,000	$60,000	
Total	**$223,698**	**$4,671,472**	**$3,168,141**	**$6,754,723**	**$6,661,370**	**$6,261,370**	**$7,495,644**	**$35,236,418**

Conservancy Staff and Overhead

Position	Hourly Cost per FTE with Overhead & Support	Number of FTEs				
		0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.70	0.70	0.70
Senior Planner and support	$156			0.70	0.70	0.70
Prinicipal GIS Planner and support	$222			0.05	0.05	0.05
Associate Planner and support	$132			0.70	0.70	0.70
Assistant Planner and support	$109			0.80	0.80	0.80
Planning Technician and support	$119			0.35	0.35	0.35
Accountant and support	$157			0.40	0.40	0.40
Total FTEs				3.70	3.70	3.70
Total cost per year				$1,031,274	$1,031,274	$1,031,274
Total cost per period				$5,156,370	$5,156,370	$6,187,644

Notes/Assumptions:

Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Contractor Assistance with Administration

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$400,000	$400,000	$480,000

Assumption:

$80,000	annual contractor cost per 2022 budget: for assistance with database, annual report, and permitting

Other Administrative Costs

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Memberships			$50,000	$50,000	$60,000
Miscellaneous equipment and supplies			$5,000	$5,000	$6,000
Cost per period			$55,000	$55,000	$66,000

Assumption:

$10,000	annual cost for Institute for Ecological Health (state and national), Bay Area Open Space Council, and East County Water Management Agency, based on actual Conservancy experience through 2021
$1,000	annual cost based on actual Conservancy experience through 2021

Vehicle / Mileage Allowance

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$7,500	$7,500	$9,000

Assumption:

$1,500	annual cost based on actual Conservancy experience through 2021

Travel

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$37,500	$37,500	$45,000

Assumption:

$7,500	annual cost based on actual Conservancy experience through 2021

Insurance

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$115,000	$115,000	$138,000

Assumption:

$23,000	annual cost based on actual Conservancy experience through 2021

Legal Assistance	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$575,000	$250,000	$300,000

Assumptions:

$115,000	Annual cost for legal assistance, years 15 - 19
$50,000	Annual cost for legal assistance, after year 19

Note: The legal assistance category covers legal assistance required for program administration and (for years 6 - 10) the environmental compliance category.
Legal assistance for land acquisition included in the due diligence cost factor in the land acquisition category.
Legal assistance is also estimated for the environmental compliance category.

Other Permitting Costs	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$15,000	$15,000	$15,000

Assumptions:

$3,000	Annual cost per 2022 Budget

Financial Analysis Assistance	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$150,000	$75,000	$75,000

Assumptions:

$75,000	Cost per period for financial analysis assistance
$15,000	Annual cost years 15 - 19 for assistance with endowment and EBRPD cost sharing agreement

Financial analyst review will occur periodically over the life of the Plan (years 3, 6, 10, 15, 20 and 25).
Note: The financial analysis assistance category covers the periodic assistance of a financial analyst to review the program's cost/revenue balance, ensure that charges are adjusted in line with changing land costs and ensure compliance with State requirements on collection of fees.

Annual Financial Audit	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$100,000	$100,000	$120,000

Assumptions:

$20,000	Cost per year for financial audit services based on Conservancy experience through 2021

Annual financial audit of the Conservancy's financial statements by an independent auditor are required by the JPA agreement and Government Code.

Public Relations/Outreach	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Total cost per year			$10,000	$10,000	$10,000
Cost per period			$50,000	$50,000	$60,000

HCP/NCCP Land Acquisition for Initial Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)					
All Costs	0	1-14	15-19	20-24	25-30	**Total**
Acquisition	$0	$139,241,000	$47,498,780	$47,498,780	$56,998,536	$291,237,096
Site improvements	$0	$0	$938,957	$938,957	$1,060,740	$2,938,655
Staff and overhead	na	na	$494,440	$494,440	$593,328	$1,582,208
Due diligence	$253,166	$4,387,960	$1,424,963	$1,424,963	$1,709,956	$9,201,009
Total	**$253,166**	**$143,628,960**	**$50,357,141**	**$50,357,141**	**$60,362,560**	**$304,958,967**

Acquisition Cost over 30-year Program, Actuals year 1 - 14 + Projections Years 15 - 30 (2021 dollars)

	Cost by Implementation Period (Years)						Estimated
Acquisition Analysis Zone	0	1-14	15-19	20-24	25-30 (6-year period)	**Total**	**Remainder 15-30**
Zone 1	$0	$12,711,000	$4,470,888	$4,470,888	$5,365,065	$27,017,841	$14,306,841
Zone 2	$0	$52,222,000	$19,210,120	$19,210,120	$23,052,144	$113,694,384	$61,472,384
Zone 3	$0	$3,553,000	$356,768	$356,768	$428,121	$4,694,656	$1,141,656
Zone 4	$0	$10,748,000	$13,557,880	$13,557,880	$16,269,455	$54,133,214	$43,385,214
Zone 5	$0	$42,738,000	$7,909,303	$7,909,303	$9,491,163	$68,047,769	$25,309,769
Zone 6 (incl. within ULL along Marsh Creek)	$0	$8,523,000	$1,444,275	$1,444,275	$1,733,130	$13,144,680	$4,621,680
Outside Inventory Area	$0	$0	$546,523	$546,523	$655,828	$1,748,873	$1,748,873
Outside Acquisition Zones	$0	$8,746,000	$3,024	$3,024	$3,629	$8,755,677	$9,677
Total	**$0**	**$139,241,000**	**$47,498,780**	**$47,498,780**	**$56,998,536**	**$291,237,096**	**$151,996,096**
Assumptions:		48%					52%

Actual acquisition cost through year 14, in 2021 dollars. Updated 2021 land cost factors by cost category applied to remaining acquisition targets. Total remaining cost allocated evenly over remaining 16 years of the permit term.

See Appendix G and description of separate land cost model in Chapter 9.

Conservancy Staff and Overhead

	Hourly Cost per FTE with	Number of FTEs				
Position	Overhead & Support	0	1-14	15-19	20-24	25-30 (6-year period)
Principal Planner and support	$206			0.05	0.05	0.05
Senior Planner and support	$156			0.20	0.20	0.20
Principal GIS Planner and support	$222			0.05	0.05	0.05
Total FTEs				0.30	0.30	0.30
Total cost per year				$98,888	$98,888	$98,888
Total cost per period				$494,440	$494,440	$593,328

Notes/Assumptions:

Actual staff costs for years 0 - 14 are included in the due diligence actuals below.

Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Due Diligence

Covers costs for appraisals, preliminary title report, escrow and other closing costs, boundary surveys, legal services, environmental and Phase 1 site assessment.
The 2006 cost model used more detailed unit costs. The result of applying those cost factors in the 2006 model was that due diligence represented about 4% of land acquisition costs.

For the 2012, 2016, and 2022 updates the model is simplified to assume due diligence costs (not including Conservancy staff costs) at 3% of land acquisition costs, roughly consistent with the experience of the Conservancy and EBRPD through 2021, during which time more than 50 percent of the preserve system goals for land acquisition took place. For years 10-30, Conservancy staff time costs are separately estimated and included in Program Staff line item above.

	Cost by Implementation Period (Years)							
	0	1-5	6-9	10-14	15-19	20-24	25-30 (6-year period)	**Total**
Due Diligence	$253,166	$2,296,923	$1,479,004	$612,033	$1,424,963	$1,424,963	$1,709,956	$9,201,009

Assumptions:

3.0%	Due diligence costs as a percentage of land acquisition cost.

Planning Surveys (Pre-Acquisition)

Based on Conservancy and EBRPD experience to date, initial property evaluation and planning is included in staff and consultant time.
Most significant field biological work is done post acquisition and is included as a monitoring cost.

Site Improvements

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30 (6-year period)
Demolition of old facilities			$75,152	$75,152	$90,183
Repair of boundary fence			$330,043	$330,043	$330,043
Repair and replacement of gates			$251,631	$251,631	$301,957
Signs (boundary, landbank, etc.)			$156,316	$156,316	$187,579
Other security (e.g., boarding up barns)			$125,815	$125,815	$150,978
Total			$938,957	$938,957	$1,060,740

Assumptions:

Most demolition to date is a condition of the transaction and assigned to the seller. Other site improvement costs included in EBRPD operations and maintenance costs to date.

$9,856	Demolition of old facilities per 500 acres
$6,600	Repair and replacement of gates per 100 acres
$4,100	Signs (boundary, landbank, etc.) per 100 acres
$3,300	Other security (e.g., boarding up barns) per 100 acres
120	Estimated number of parcels acquired years 15 - 30 assuming 100 acres per parcel
15,000	Average parcel boundary length in linear feet (from GIS analysis, grouping adjacent parcels with the same landowner)
$6.11	Average cost per linear foot for boundary fence repair
15%	Proportion of boundary fence that needs repair

HCP/NCCP Management Planning and Design for Initial Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Staff and overhead					$433,340	$433,340	$306,365	
Travel					$12,500	$12,500	$15,000	
Contractors					$1,000,000	$1,000,000	$500,000	
Total	**$0**	**$1,772,511**	**$938,155**	**$1,840,187**	**$1,445,840**	**$1,445,840**	**$821,365**	**$8,263,898**

Conservancy Staff and Overhead

	Hourly Cost per FTE with Overhead &	Number of FTEs				
Position	Support	0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.10	0.10	0.05
Prinicipal GIS Planner and support	$222			0.05	0.05	0.05
Senior Planner and support	$156			0.05	0.05	0.02
Associate Planner and support	$132			0.05	0.05	0.02
Total FTEs				0.25	0.25	0.14
Total cost per year				$86,668	$86,668	$51,061
Total cost per period				$433,340	$433,340	$306,365

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies, .

1,880 hours per year

Travel

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Total cost per period			$12,500	$12,500	$15,000

Assumption:

$2,500 annual cost based on Conservancy 2022 budget

Contractors

	Contract value per period				
Contractor category	0	1-14	15-19	20-24	25-30
Management planning			$1,000,000	$1,000,000	$500,000
Total per period			$1,000,000	$1,000,000	$500,000

Assumptions:

Restoration planning and designs included in habitat restoration/creation cost category.

$1,000,000	per-period budget for management planning, through year 24
$500,000	per-period budget for management planning, years 25 - 30

The management planning and design staff and contractors will conduct the following activities:

Management plans for cropland/pasture preserves
Management plans for natural area preserves
Grazing plans
Mapping work for management plans
Exotic plant control program (for the entire preserve system)
Fire management/control plan (for the entire preserve system)

HCP/NCCP Habitat Restoration/Creation (including planning and design) for Initial Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Restoration/Creation Construction Cost					$8,539,671	$8,539,671	$10,247,606	
Staff and overhead					$220,900	$220,900	$265,080	
Travel					$12,500	$12,500	$15,000	
Contractors					$4,654,121	$4,654,121	$5,584,945	
Total	**$0**	**$3,424,071**	**$2,063,773**	**$1,563,376**	**$13,427,192**	**$13,427,192**	**$16,112,631**	**$50,018,236**
			creation/restoration per acre		*$102,574*	*$102,574*	*$102,574*	

Land Cover Type Restored/Created

	Implementation Period (Years)					
Land Cover Type (acres)	0	1-14	15-19	20-24	25-30	Total
oak savanna	-	-	13.1	13.1	15.8	42.0
riparian woodland/scrub	-	5.4	13.9	13.9	16.7	50.0
perennial wetland	-	0.2	10.0	10.0	12.0	32.2
seasonal wetland	-	10.7	10.8	10.8	12.9	45.2
alkali wetland	-	2.4	6.1	6.1	7.3	21.8
slough/channel	-	-	22.5	22.5	27.0	72.0
open water	-	-	-	-	-	-
ponds	-	0.6	6.4	6.4	7.6	21.0
streams (miles)	-	2.2	0.8	0.8	0.9	4.6
Total (acres)	-	20.6	83.3	83.3	99.9	287.0

Cost of Restoration/Creation Construction

			Cost by Implementation Period (Years)				
Land Cover Type	Units	Cost per unit	0	1-14	15-19	20-24	25-30
oak savanna	acres	$18,420			$290,119	$290,119	$348,143
riparian woodland/scrub	acres	$51,822			$866,717	$866,717	$1,040,060
perennial wetland	acres	$84,544			$1,015,797	$1,015,797	$1,218,956
seasonal wetland	acres	$100,838			$1,304,598	$1,304,598	$1,565,518
alkali wetland	acres	$102,041			$742,345	$742,345	$890,814
slough/channel	acres	$76,798			$2,073,533	$2,073,533	$2,488,240
open water	acres	$112,058			$0	$0	$0
ponds	acres	$112,058			$856,821	$856,821	$1,028,185
streams	linear feet	$287			$1,389,742	$1,389,742	$1,667,690
	Total				$8,539,671	$8,539,671	$10,247,606

2017 update:
Revised cost per unit for oak savanna to $15K based on review/input from H.T. Harvey
Revised cost per LF for stream restoration by eliminating the low cost outlier from the list of example projects. Also did not reduce unit cost by applying a 10% discount to be more conservative.

Assumptions:

Construction costs are highly variable and depend mostly on the amount, depth, and linear extent of earthwork expected, and whether water control structure are required. Plant propagation, seeding, and watering also included.

For 2017 and 2022 updates, unit costs increased based on change in the California Construction Cost Index published by the State of California Department of General Services. Available at: https://www.dgs.ca.gov/RESD/Resources/Page-Content/Real-Estate-Services-Division-Resources-List-Folder/DGS-California-Construction-Cost-Index-CCCI

20%	Contingency factor for restoration projects; assumed higher than the standard contingency because of the higher degree of uncertainty in this portion of the conservation program.

Conservancy Staff and Overhead

Position	Hourly Cost per FTE with Overhead & Support	Number of FTEs 0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.05	0.05	0.05
Associate Planner and support	$132			0.10	0.10	0.10
Total FTEs				0.15	0.15	0.15
Total cost per year				$44,180	$44,180	$44,180
Total cost per period				$220,900	$220,900	$265,080

1,880 hours per year

Habitat Conservancy staff select sites, hire and oversee consultants for plans, specifcations, and implementation.

Cost includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

Travel

	Cost by Implementation Period (Years) 0	1-14	15-19	20-24	25-30
Total cost per period			$12,500	$12,500	$15,000

Assumption:

$2,500 annual cost based on Conservancy 2022 budget

Contractors for restoration planning, design, construction oversight, and post-construction maintenance

Contractor category	Cost by Implementation Period (Years) 0	1-14	15-19	20-24	25-30
Design, plans, specifications, and engineering			$2,818,092	$2,818,092	$3,381,710
Bid assistance			$128,095	$128,095	$153,714
Construction oversight			$853,967	$853,967	$1,024,761
Post-construction maintenance			$853,967	$853,967	$1,024,761
Cost per period			$4,654,121	$4,654,121	$5,584,945

Assumptions:

33% percent of total construction cost required to complete restoration design and plans, specifications, engineering and provide allowance for remedial me

1.50% percent of total construction cost required for bid assistance

10% percent of total construction cost required for construction oversight

10% percent of total construction cost required for post construction maintenance

Restoration plans and designs of all types included in habitat restoration/creation cost category.

Design, plan, specification, and engineering work, bid assistance, and construction oversight will be conducted in the period in which construction takes place.

Two years of post-construction maintenance will be conducted in the period after construction takes place to maintain irrigation systems, conducting weeding, etc. Management costs after success criteria are met are included in development fee paid for same site (wetland mitigation fee is in addition).

Monitoring of restoration sites covered in the Monitoring cost category.

HCP/NCCP Environmental Compliance for Initial Urban Development Area
2022 Update
(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Staff and overhead					$276,548	$276,548	$0	
Legal assistance					$250,000	$50,000	$0	
NEPA/CEQA					$558,300	$558,300	$0	
CWA 404					$0	$0	$0	
CWA 401					$11,000	$11,000	$0	
CDFG 1602					$23,500	$23,500	$0	
NHPA					$60,200	$60,200	$0	
Other					$41,800	$41,800	$0	
Total	**$0**	**$887,562**	**$194,053**	**$330,312**	**$1,221,348**	**$1,021,348**	**$0**	**$3,654,623**

Note: Detail is not intended to be prescriptive; it is used as a means to generate an overall environmental compliance cost estimate.

Conservancy Staff and Overhead

	Hourly Cost per FTE with	Number of FTEs						
Position	Overhead & Support	0	1-14	15-19	20-24	25-30		
Principal Planner and support	$206			0.02	0.02	-		
Senior Planner and support	$156			0.05	0.05	-		
Associate Planner and support	$132			0.05	0.05	-	include in wetland fee	
Assistant Planner and support	$109			0.10	0.10	-	calculation	
Total FTEs				0.22	0.22	-		
Total cost per year				$55,310	$55,310	$0	$32,900	$32,900
Total cost per period				$276,548	$276,548	$0	$164,500	$164,500

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Legal Assistance and Technical Support for Coordinated Regional Wetland Permitting

	Cost by Implementation Period (Years)					
	0	1-14	15-19	20-24	25-30	Total
Cost per period			$250,000	$50,000	$0	$300,000

Assumptions:

$25,000	Annual cost for legal assistance with wetland permitting, years 15 - 20
$25,000	Annual cost for technical support with wetland permitting, years 15 - 20

Number of Projects Requiring Environmental Compliance

		Number					
Project size	Size Range	0	10-14	15-19	20-24	25-30	**Total over Permit Term**
Small/simple	up to 10 acres or up to 0.1 stream miles			4	4	-	20
Medium/more complex	10.1-50 acres or 0.1-0.5 stream miles			4	4	-	20
Large/most complex	over 50 acres or 0.5 stream miles			2	2	-	10
Total projects remainder of permit term				10	10	-	20

Assumptions:

Details are not prescriptive but are a reasonable means of generating an overall cost for the environmental cost category.

Of the total of approximately 50 projects that would require environmental compliance, 1/5 would require compliance in each 5-year period between years 1 and 25.

Environmental Compliance Cost per Project Size and Compliance Category (2021 dollars)

Project size	Size Range	Estimate Project Cost within DFG jurisdiction		Project Impacts to Wetlands for CWA 401		Compliance Category					
				Minimum	Maximum	CEQA	CWA 404	CWA 401	CDFG 1602	NHPA	Other
Small/simple	up to 10 acres or up to 0.1 stream miles	$ 2,000	$ 25,000	0.001	0.01	$7,346	$0	$968	$1,130	$3,673	$3,482
Medium/more complex	10.1-50 acres or 0.1-0.5 stream miles	$ 25,001	$ 100,000	0.0121	0.07	$58,767	$0	$1,130	$2,425	$5,142	$4,179
Large/most complex	over 50 acres or 0.5 stream miles	$ 100,001	$500,000 or more	0.073	0.30	$146,918	$0	$1,291	$4,654	$12,488	$5,572

Assumptions:

Details are not prescriptive but are a reasonable means of generating an overall cost for the environmental cost category.

Assumed wetland impact determined by AECOM based experience with typical projects that would be expected to be implemented by the Conservancy. For example wetland restoration/creation projects, stream restoration projects, adaptive management measures for existing wetland features and facilities improvements. In general, it is expected that impacts to wetlands and streams would be avoided if at all possible. Of the stream length indicated, assumed only 10% of that length would be impacted and an average stream width of 10 feet.

For NEPA/CEQA, 401/404 and 1602 compliance, varying costs have more to do with project complexity than with project size.
Clean Water Act 401 and 1602 permits will be done on a per-project basis
Cultural compliance permits will be done on a per-project basis.

Contra Costa Conservancy staff will prepare permit applications and notification for the 401, 404 and 1600 applications, thereby resulting in no consultant cost for permit preparation. This table also assumes that the permits for Water Quality Certification (CWA 401) and Streambed Alteration Agreement (DFG 1602) will not be secured under programmatic or Master permit processes.

Permitted projects would be completed within the time limit allotted for the permits; no extensions or re-application would be required.
The "other" compliance category could include county grading permits, road encroachment permits, or other local approvals.

NEPA/CEQA

Depending on the level of detail that is provided for specific projects, they may or may not be able to be covered under the HCP EIR/EIS.
For those without sufficient detail, additional environmental documentation may need to be prepared.
It is likely that the majority of those would be in the form of mitigated negative declarations.
Because it is difficult to provide a cost estimate for a project without knowing details such as location, size, etc., the following are some rough numbers based on level of controversy:
Small scale non-controversial projects = Cat Excl/Cat Exemp
Medium scale more controversial projects = IS MND/EA FONSI
Larger scale more controversial projects = EIR/EIS
All land acquisitions would be a categorical exemption under CEQA as well as under NEPA, when NEPA applies.

401/404

The cost of conducting wetland delineations is not included under CWA 404/401 compliance; it is expected that delineation would be covered under land acquisition costs.
Each project implemented under the HCP will qualify for compliance under the USACE 404 regional permit program for the inventory area; there is no fee for 404 permit applications.
Tasks associated with Section 402 compliance are not included in this cost estimate.

CWA 401 fee cost estimate assumes all projects qualify for flat fees in Category D Ecological Restoration and Enhancement Projects, as allowed under State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State, adopted by the State Water Board on April 2, 2019. FY 21/22 Water Quality Certification Dredge and Fill Application Fee Calculator (Effective 11/8/21) Available: http://www.waterboards.ca.gov/water_issues/programs/cwa401/

NHPA

Archaeological surveys can be conducted at an intensive level at a rate of 40 acres per person per day.
No more than one cultural resource will be identified per 40 acres or part thereof.
This scope of work and cost estimate does not include tasks necessary for significance evaluations and resolution of adverse effects.

CDFG 1602

DFG 1602 costs are estimated based on the assumed cost of project activities within DFW jurisdiction per Fish and Game Code Sections 1600-1616, and the fee schedule corresponding to the project costs. Average cost based on mean of minimum and maximum fee amounts for standard agreements. California Department of Fish and Wildlife Lake and Streambed Alteration Agreements and Fees, Effective January 1, 2022. Available: https://wildlife.ca.gov/Conservation/Environmental-Review/LSA#55227743-fees

HCP/NCCP Preserve Management and Maintenance for Initial Urban Development Area

2022 Update

(2021 dollars)

	Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Program staff and overhead					$261,320	$261,320	$495,982	
Invasive Plant Control					$1,433,728	$1,814,986	$2,681,245	
Invasive Wildlife Control					$286,746	$362,997	$536,249	
Grazing Management					$716,864	$907,493	$1,340,622	
Wildfire Management					$1,218,669	$1,542,738	$2,279,058	
Security					$215,059	$272,248	$402,187	
Roads and Trails					$215,059	$272,248	$402,187	
Maintenance and Support					$286,746	$362,997	$536,249	
Annual Reporting					$71,686	$90,749	$134,062	
Law Enforcement					$1,075,296	$1,361,240	$2,010,934	
Administrative and General Expense					$1,648,787	$2,087,234	$3,083,432	
Total	**$0**	**$548,525**	**$2,478,883**	**$3,620,712**	**$7,429,960**	**$9,336,250**	**$13,902,207**	**$37,316,537**

NOTE: Costs for years 1 - 14 include expenditures by the East Bay Regional Park District (EBRPD) on land maintenance activities on Conservancy properties (staff costs, maintenance supplies, maintenance services from inception throught 2021). Details provided by the EBRPD and East Contra Costa County Habitat Conservancy.

Conservancy Staff and Overhead

	FTE with Overhead &	Number of FTEs						
Position	Support	0	1-5	6-9	10-14	15-19	20-24	25-30
Principal Planner and Support	$206					0.05	0.05	0.07
Associate Planner and support	$132					0.05	0.05	0.10
Assistant Planner and support	$109					0.10	0.10	0.15
Total FTEs						0.20	0.20	0.32
Total cost per year						$52,264	$52,264	$82,664
Total cost per period						$261,320	$261,320	$495,982

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year, excluding vacation

HCP/NCCP Preserve Management and Maintenance for Initial Urban Development Area

2022 Update

(2021 dollars)

Preserve Acres Managed

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Total preserve acres acquired per period		12,050	3,813	3,813	4,575
Acres acquired and managed by end of period		12,050	15,862	19,675	24,250

Assumptions:

Total costs related to habitat and species protection on preserve system lands whether or not costs incurred by EBRPD or Conservancy.

All work (except law enforcement) performed by EBRPD staff including Park Rangers, Supervisors, Stewardship staff, Heavy Equipment Operators, and Fire Department. Law enforcement cost assumes contract with Contra Costa County Sheriff.

Costs per acre (except law enforcement) based on estimates prepared by EBRPD staff for implementation of the Vasco Hills / Byron Vernal Pools Preserve Management Plan prepared for the Conservancy (2018 draft).

Cost estimates assume preserve system land is acquired and managed in equal annual increments over the remainder of the implementation period and that cost increases incrementally as acreage under management increases.

Invasive Plant Control

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$1,433,728	$1,814,986	$2,681,245

Assumptions:

$20 annual cost per acre for invasive plant control

Patrol, work planning, cultural, manual, mechanical, chemical control.

Invasive Wildlife Control

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$286,746	$362,997	$536,249

Assumptions:

$4 annual cost per acre for invasive wildlife control

Observation, recording, and controlling bullfrog, fish, and feral mammals.

Grazing Management

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$716,864	$907,493	$1,340,622

Assumptions:

$10 annual cost per acre for grazing management

Data collection, administration, infrastructure repair, permitting, grazing management, reporting.

Wildfire Management

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$1,218,669	$1,542,738	$2,279,058

Assumptions:

$17 annual cost per acre for wildfire management

Fire suppression planning and wildfire management; fuels coordinator. Fuel reduction included in invasive plant control cost category.

HCP/NCCP Preserve Management and Maintenance for Initial Urban Development Area
2022 Update
(2021 dollars)

Security

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$215,059	$272,248	$402,187

Assumptions:

$3 annual cost per acre for security maintenance and repair

Gate and fence installation, inspection, and repairs.

Roads & Trails

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$215,059	$272,248	$402,187

Assumptions:

$3 annual cost per acre for roads and trails maintenance and repair

Road grading, maintenance, and tree and brush removal.

On-going Maintenance and Support

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$286,746	$362,997	$536,249

Assumptions:

$4 annual cost per acre for on-going maintenance and support

Equipment maintenance, service yard, (including support). Trash and debris removal from non-recreation areas.

Annual Reporting

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$71,686	$90,749	$134,062

Assumptions:

$1 annual cost per acre for annual management reporting

Internal EBRPD reporting (Red Book) and Annual Report to ECCCHC.

Law Enforcement

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$1,075,296	$1,361,240	$2,010,934

Assumptions:

$15 annual cost per acre for law enforcement

Law enforcement primarily for habitat and species protection. Based on annual cost of Contra Costa County Sheriff contract to provide law enforcement services to the Contra Costa Water District Los Vaqueros Watershed (18,500 acres of protected watershed lands and 1,900 acres reservoir). Includes a level of cost related to public access commensurate with the level of service required at the Los Vaqueros Watershed.

Administrative and General Expense

	Implementation Period				
	0	1-14	15-19	20-24	25-30 (6-year period)
Cost per period			$1,648,787	$2,087,234	$3,083,432

Assumptions:

$23 annual cost per acre for administrative and general expense

Covers the following General and Administrative Expenses: fuel, tools, equipment, and other supplies used in the course of preserve land management and services (utility fees, contractors, and other costs) incurred in the course of reserve land management. Also covers internal services costs for equipment replacement and infrastructure renovation and replacement. **Does not include indirect and direct EBRPD overhead costs.**

HCP/NCCP Monitoring, Research, and Adaptive Management for Initial Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Staff and overhead					$120,132	$120,132	$305,011	
Contractors					$875,000	$1,500,000	$2,400,000	
Directed research					$500,000	$500,000	$600,000	
Adaptive management					$215,000	$215,000	$215,000	
Total	**$0**	**$654,741**	**$604,793**	**$936,384**	**$1,710,132**	**$2,335,132**	**$3,520,011**	**$9,761,193**

Conservancy Staff and Overhead

	Hourly Cost per FTE with Overhead &	Number of FTEs				
Position	Support	0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.03	0.03	0.08
Associate Planner and support	$132			0.05	0.05	0.08
Total FTEs				0.08	0.08	0.16
Total cost per year				$24,026	$24,026	$50,835
Total cost per period				$120,132	$120,132	$305,011

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Contractors

	Contract value per period				
	0	1-14	15-19	20-24	25-30
Monitoring contractors			$875,000	$1,500,000	$2,400,000
Total per period			$875,000	$1,500,000	$2,400,000

	Metrics for gross annual budget estimate==>	Preserve Acres (end of period)	Restored Acres (per period)	Rough annual cost per preserve acre
$175,000	annual budget for monitoring contractors, years 15-19	15,862	83	$11
$300,000	annual budget for monitoring contractors, years 20-24	19,675	83	$15
$400,000	annual budget for monitoring contractors, years 25-30	24,250	100	$16

Assumptions:

Contractor activities include field data collection, analysis, and reporting. Costs include travel.

Some preserve covered activities and conservation measures require pre-construction surveys and construction monitoring. This work will be done by contractors. Contractors will conduct pre-construction surveys prior to construction as well as construction monitoring periodically during the construction period. All covered activities require compliance with HCP/NCCP pre-construction avoidance and minimization measures.

Note that planning, preconstruction surveys and construction monitoring for covered activities outside of preserves will be paid for by developers. These costs are not included here.

Species-response monitoring is covered in the restoration category when contractors will monitor restoration, creation, and enhancement sites during the 5-year period following the restoration activity.

Post-acquisition biological inventories will build on planning surveys. Inventory will include mapping of weeds and invasive plants.

Status and trends monitoring will occur after preserve land is purchased through year 30. Status and trend monitoring will build on planning surveys and post-acquisition inventories, when appropriate.

Directed Research

	0	1-14	15-19	20-24	25-30
Average cost per year to fund directed research			$100,000	$100,000	$100,000
Total cost per period			$500,000	$500,000	$600,000

Adaptive Management

	0	1-14	15-19	20-24	25-30
Average Independent Conservation Assessment Team cost per period			$36,000	$36,000	$36,000
Average Science Advisors cost per period			$179,000	$179,000	$179,000
Total cost per period			$215,000	$215,000	$215,000

Assumptions:

Adaptive management experiments are covered under the monitoring staff and directed research categories.

As of this 2022 update, this type of periodic scientific review is conducted by the Conservancy's on-call biologist contractors.

The Conservancy convened a Science Advisory Panel in year 10 and plans to do the same in year 20.

The Conservancy's Preserve Monitoring Plan remains in the draft stage.

The following assumptions generate a scientific review budget to inform adaptive management:

An Independent Conservation Assessment Team meets once every 4 years and has:

5	members
$7,200	stipend per member per 5-year period

Science Advisors Panel consists of:

10	members
$17,900	stipend per member per 5-year period

Remedial Measures for Initial Urban Development Area

2022 Update

(2021 dollars)

	Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	**Total**
Remedial measures	$0	$0	$0	$0	$263,044	$208,177	$2,805,500	$3,276,720
Total	**$0**	**$0**	**$0**	**$0**	**$263,044**	**$208,177**	**$2,805,500**	**$3,276,720**

Note: Actual costs are included in habitat restoration/creation and preserve management cost categories.

Remedial Measures

	0	1-5	6-9	10-14	15-19	20-24	25-30
Cost of created/restored habitat per period			$2,063,773	$1,563,376	$8,539,671	$8,539,671	$10,247,606
Cost for remedial measures for created/restored habitat per period					$206,377	$156,338	$2,732,695
Area of new preserve not including created/restored habitat per period	-	7,578	3,488	962	3,729	3,729	4,475
Cost for remedial measures for preserves per period					$6,666	$1,839	$22,805
Cost for other remedial measures per period					$50,000	$50,000	$50,000
Total cost per period					$263,044	$208,177	$2,805,500

Assumptions:	
2%	Percent of annual preserve management and maintenance cost assumed to be needed for preserve remedial actions.
10%	Percent of created/restored habitat for which remedial measures will be required.
$96	Cost per acre for preserve management and maintenance in years 26-30.
63%	Percent of land acquisition in years 1 - 14 occurring in years 1 - 5
29%	Percent of land acquisition in years 1 - 14 occurring in years 6 - 9
8%	Percent of land acquisition in years 1 - 14 occurring in years 10 - 14

Remedial actions are assumed to occur in the **second** 5-year period after habitat is created/restored or preserve land is purchased, with the exception of remedial actions for habitat created/restored in years 20-30. The cost for these remedial actions is included in years 25-30 so that it can be captured in this cost estimate.

The remedial cost for preserve lands is assumed to be a percentage of the cost per acre for preserve management and maintenance in years 25-30, and is assumed to be needed once, in the **second** 5-year period after the preserve land is purchased. The costs for preserves areas acquired in years 20 - 30 is included in years 26-30 so that it can be captured in this cost estimate.

The cost for other remedial measures includes the costs for restoration or maintenance of preserve areas because of other changed circumstances, such as wildfire.

Contingency for Initial Urban Development Area

2022 Update

(2021 dollars)

	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Total cost of program excluding land acquisition/site improvements and habitat restoration/creation construction costs	$0	$0	$0	$0	$25,538,618	$27,415,041	$36,713,036	$89,666,695
Contingency fund	**$0**	**$0**	**$0**	**$0**	**$1,276,931**	**$1,370,752**	**$1,835,652**	**$4,483,335**

Assumptions:

5.0%	Percent of total program funding needed for contingency

Post-Permit Costs for Initial Urban Development Area

2022 Update

(2021 dollars)

Post-Permit Costs

Cost Category	Annual Costs	Assumptions
Total Cost		
Program Administration	$548,300	Reduced staffing and no legal and financial contractor costs
Land Acquisition: due diligence, transaction costs	$0	Acquisition complete during permit term
Planning and Design	$0	Planning and design work complete during permit term
Habitat Restoration/Creation	$0	Restoration/creation projects constructed during permit term
Environmental Compliance	$0	Not required, post permit
Preserve Management and Maintenance	$2,317,000	Assume 100 percent of annual average costs in years 25 - 30
Monitoring, Research, and Adaptive Management	$293,300	Assume 50 percent of annual average costs in years 25 - 30
Remedial Measures	$0	Not required, post permit
Contingency	$0	Not required, post permit
Total	**$3,158,600**	

Total preserve system acres	**24,250**
Annual average cost per acre managed	**$130**
Percent of average annual cost years 25 - 30	**18%**

APPENDIX D: MAXIMUM UDA COST MODEL UPDATE

The following tables provide comprehensive documentation for the cost model update based on estimated impacts for the maximum urban development area.

East Contra Costa County HCP/NCCP
2022 Update
Implementation Cost Data and Assumptions with Maximum Urban Development Area

Summary of East Contra Costa HCP Implementation Costs for Maximum Urban Development Area

2022 Update

(2021 dollars rounded to the nearest $10,000)

Total Costs

	Implementation Period (Years)					
Cost Category	0	1-14	15-19	20-24	25-30	**Total (2021)**
Program Administration	$220,000	$17,350,000	$6,660,000	$6,260,000	$7,500,000	$37,990,000
Land Acquisition: acquisition and site improvements	$0	$139,240,000	$67,360,000	$67,360,000	$80,710,000	$354,680,000
Land Acquisition: due diligence, transaction costs	$250,000	$4,390,000	$2,480,000	$2,480,000	$2,980,000	$12,580,000
Planning and Design	$0	$4,550,000	$1,450,000	$1,450,000	$820,000	$8,260,000
Habitat Restoration/Creation	$0	$7,050,000	$16,620,000	$16,620,000	$19,950,000	$60,240,000
Environmental Compliance	$0	$1,410,000	$1,220,000	$1,020,000	$0	$3,650,000
Preserve Management and Maintenance	$0	$6,650,000	$7,990,000	$10,820,000	$16,910,000	$42,370,000
Monitoring, Research, and Adaptive Management	$0	$2,200,000	$1,840,000	$2,710,000	$4,120,000	$10,860,000
Remedial Measures	$0	$0	$260,000	$210,000	$3,480,000	$3,950,000
Contingency	$0	$0	$1,400,000	$1,550,000	$2,150,000	$5,100,000
Total	**$470,000**	**$182,840,000**	**$107,280,000**	**$110,480,000**	**$138,620,000**	**$539,680,000**

Summary of East Contra Costa HCP Implementation Costs for Maximum Urban Development Area

2022 Update

(2021 dollars not rounded)

Total Costs

	Implementation Period (Years)					
Cost Category	0	1-14	15-19	20-24	25-30	**Total**
Program Administration	$223,698	$17,346,583	$6,661,370	$6,261,370	$7,498,644	$37,991,665
Land Acquisition: acquisition and site improvements	$0	$139,241,000	$67,361,587	$67,361,587	$80,711,223	$354,675,397
Land Acquisition: due diligence, transaction costs	$253,166	$4,387,960	$2,480,940	$2,480,940	$2,977,127	$12,580,133
Planning and Design	$0	$4,550,853	$1,445,840	$1,445,840	$821,365	$8,263,898
Habitat Restoration/Creation	$0	$7,051,220	$16,620,916	$16,620,916	$19,945,099	$60,238,151
Environmental Compliance	$0	$1,411,927	$1,221,348	$1,021,348	$0	$3,654,623
Preserve Management and Maintenance	$0	$6,648,120	$7,987,773	$10,823,750	$16,914,392	$42,374,035
Monitoring, Research, and Adaptive Management	$0	$2,195,918	$1,835,132	$2,710,132	$4,120,011	$10,861,193
Remedial Measures	$0	$0	$262,890	$208,134	$3,477,304	$3,948,328
Contingency	$0	$0	$1,395,470	$1,548,281	$2,151,289	$5,095,040
Total	**$476,864**	**$182,833,581**	**$107,273,265**	**$110,482,298**	**$138,616,454**	**$539,682,462**

NOTE: Original unit cost estimates for the 2006 HCP/NCCP were in 2005 dollars, inflated to 2006 dollars for use in the plan document.

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUURS49BSA0
Not Seasonally Adjusted
Series Title: All items in San Francisco-Oakland-Hayward, CA, all urban consumers, not seasonally adjusted

Area: San Francisco-Oakland-Hayward, CA
Item: All items
Base Period: 1982-84=100
Years: 2005 to 2022

Data extracted on: March 29, 2017 (8:35:58 PM)
Data extracted on: August 2, 2022

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	HALF1	HALF2	2021 dollars
2005		201.2		202.5		201.2		203.0		205.9		203.4	202.7	201.5	203.9	0.6545
2006		207.1		208.9		209.1		210.7		211.0		210.4	209.2	207.9	210.6	0.6754
2007		213.688		215.842		216.123		216.240		217.949		218.485	216.048	214.736	217.361	0.6976
2008		219.612		222.074		225.181		225.411		225.824		218.528	222.767	221.730	223.804	0.7193
2009		222.166		223.854		225.692		225.801		226.051		224.239	224.395	223.305	225.484	0.7245
2010		226.145		227.697		228.110		227.954		228.107		227.658	227.469	226.994	227.944	0.7344
2011		229.981		234.121		233.646		234.608		235.331		234.327	233.390	232.082	234.698	0.7535
2012		236.880		238.985		239.806		241.170		242.834		239.533	239.650	238.099	241.201	0.7738
2013		242.677		244.675		245.935		246.072		246.617		245.711	245.023	243.894	246.152	0.7911
2014		248.615		251.495		253.317		253.354		254.503		252.273	251.985	250.507	253.463	0.8136
2015		254.910		257.622		259.117		259.917		261.019		260.289	258.572	256.723	260.421	0.8349
2016		262.600		264.565		266.041		267.853		270.306		269.483	266.344	263.911	268.777	0.8599
2017		271.626		274.589		275.304		275.893		277.570		277.414	274.924	273.306	276.542	0.8877
2018		281.308		283.422		286.062		287.664		289.673		289.896	285.550	282.666	288.435	0.9220
2019		291.227		294.801		295.259		295.490		298.443		297.007	295.004	293.150	296.859	0.9525
2020		299.690		298.074		300.032		300.182		301.736		302.948	300.084	299.109	301.059	0.9689
2021		304.387		309.419		309.497		311.167		313.265		315.805	**309.721**	306.724	312.718	1.0000
2022		320.195		324.878		330.539								323.408		

Employment Cost Index (NAICS)
Original Data Value

Data extracted on: August 2, 2022 (8:36:09 PM)

Series Id: CIU2010000120000I
Not seasonally adjusted
Series Title: Total compensation for Private industry workers in Professional and related, Index

Ownership: Private industry workers
Component: Total compensation
Occupation: Professional and related occupations
Industry: All workers
Subcategory: All workers
Area: United States (National)
Periodicity: Index number
Years: 2005 to 2016

Year	Qtr1	Qtr2	Qtr3	Qtr4	2021 dollars
2005	98.0	98.8	99.5	100.0	0.6974
2006	101.0	101.8	103.1	103.9	0.7245
2007	104.9	105.9	106.7	107.3	0.7483
2008	108.3	109.0	109.9	110.3	0.7692
2009	111.0	111.1	111.4	111.4	0.7768
2010	112.2	112.6	113.3	113.5	0.7915
2011	114.6	115.1	115.4	115.7	0.8068
2012	116.8	117.3	117.7	118.2	0.8243
2013	118.9	119.5	120.2	120.5	0.8403
2014	121.0	121.9	122.5	122.9	0.8570
2015	123.7	124.1	124.5	124.9	0.8710
2016	125.7	126.2	126.7	126.7	0.8835
2017	127.8	128.7	129.1	129.6	0.9038
2018	130.8	131.6	132.3	132.8	0.9261
2019	133.7	134.4	135.1	135.6	0.9456
2020	136.8	137.0	137.8	138.4	0.9651
2021	139.7	140.5	142.2	143.4	1.0000

California Construction Cost Index, Department of General Services

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	2021 dollars		
2006	4620	4603	4597	4600	4599	4593	4609	4616	4619	4867	4891	4877	4,674	0.60878		
2007	4869	4868	4871	4872	4886	4842	4849	4851	4942	4943	4978	4981	4,896	0.63766		
2008	4983	4983	4999	5004	5023	5065	5135	5142	5194	5393	5375	5322	5,135	0.66876		
2009	5309	5295	5298	5296	5288	5276	5263	5265	5264	5259	5259	5262	5,278	0.68739		
2010	5260	5262	5268	5270	5378	5394	5401	5401	5381	5591	5599	5596	5,400	0.70331		
2011	5592	5624	5627	5636	5637	5643	5654	5667	5668	5675	5680	5680	5,649	0.73568		
2012	5683	5683	5738	5740	5755	5754	5750	5778	5777	5780	5779	5768	5,749	0.74872		
2013	5774	5782	5777	5786	5796	5802	5804	5801	5802	5911	5903	5901	5,820	0.75799	1.24%	
2014	5898	5896	5953	5956	5957	5961	5959	5959	5959	5969	5981	5977	5,952	0.77520	2.27%	
2015	6073	6077	6069	6062	6069	6055	6055	6055	6113	6114	6109	6108	6,080	0.79185	2.15%	
2016	6106	6132	6248	6249	6240	6238	6245	6244	6267	6343	6344	6373	6,252	0.81432	2.84%	8.49%
2017	6373	6373	6373	6461	6455	6470	6474	6620	6620	6596	6596	6596	6,501	0.84664	3.97%	
2018	6596	6596	6596	6596	6596	6598	6643	6613	6674	6679	6679	6684	6,629	0.86339	1.98%	
2019	6684	6700	6616	6841	6852	6854	6854	6823	6814	6851	6895	6924	6,809	0.88681	2.71%	
2020	6995	6945	6947	6955	6958	7041	6984	6988	7036	7120	7123	7120	7,018	0.91399	3.06%	
2021	7090	7102	7130	7150	7712	7746	7892	8122	7900	8080	8141	8072	7,678	1.00000	9.41%	21.14%

The California Construction Cost index is developed based upon Building Cost Index (BCI) cost indices for San Francisco and Los Angeles produced by Engineering News Record (ENR) and reported in the second issue each month for the previous month. This table is updated at the end of each month.

The ENR BCI reports cost trends for specific construction trade labor and materials in the California marketplace.

Accessed 8/2/2022

https://www.dgs.ca.gov/RESD/Resources/Page-Content/Real-Estate-Services-Division-Resources-List-Folder/DGS-California-Construction-Cost-Index-CCCI

Legend

red numbers are assumptions or data entered directly into the worksheet
blue numbers are links from other worksheets in the workbook
black numbers are calculations based on the above numbers

Cost factors are colored coded by primary source considered:

EBRPD (for HCP)
CCWD (for HCP)
Average of CCWD/EBRPD
ECCC Habitat Conservancy
J&S and EPS (for HCP)
AECOM, 2012
Updated by Insight Data & Economic Analysis, 2022
Updated with input from H.T. Harvey, 2017
Other estimated factors
Actual costs start-up and years 1 - 14
Estimate of EBRPD contributions to operational costs, start up and years 1-14
Summary actuals supercede model detail

Acres Acquired, Managed, and Restored within HCP/NCCP Preserves for Maximum Urban Development Area
2022 Update

	Maximum UDA	Source
Total acres acquired/managed	30,200	(Table 5-9: mid-point of range)

Acres Acquired and Managed by Time Period

	Implementation Period (Years)					
	0	1-14	15-19	20-24	25-30 (6-year period)	Total
Total preserve acres acquired per period	-	12,050	5,672	5,672	6,806	30,200
Total preserve acres managed, cumulative	-	12,050	17,722	23,394	30,200	30,200

Assumptions:

Actual acquisition accounted for in years 1-5, 6-9 and 10 - 14; the net remaining requirement is allocated evenly over the remaining 16 years of the permit term.

Management and monitoring on acquired land has not kept pace with actual acquisition.

14,463.76	Total acres acquired through 2021 (Annual Report Table 8a)
1,681.1	Already conserved acres (no credit acres) on parcels acquired through 2021 (Annual Report Table 8a)
732.93	Other acres (outside acquisition zones) not credited to preserve system through 2021
12,049.7	Total acres acquired and credited toward preserve system

Land Cover Type Restored/Created by Time Period

	Implementation Period (Years)					
Land Cover Type (acres except where noted)	0	1-14	15-19	20-24	25-30 (6-year period)	Total
oak savanna	-	-	51.6	51.6	61.9	165.0
riparian woodland/scrub	-	5.40	15.5	15.5	18.6	55.0
perennial wetland (jurisdictional boundary)	-	0.16	10.1	10.1	12.1	32.5
seasonal wetland (jurisdictional boundary)	-	10.70	13.4	13.4	16.1	53.6
alkali wetland (jurisdictional boundary)	-	2.40	6.6	6.6	8.0	23.6
slough/channel	-	-	22.5	22.5	27.0	72.0
open water	-	-	-	-	-	-
ponds	-	0.61	6.7	6.7	8.0	22.0
streams (miles)	-	2.16	1.1	1.1	1.4	5.8
Total (acres)	-	**20.58**	**127.1**	**127.1**	**152.5**	**427.2**

Assumptions:

Total restoration requirements based on assumptions in the HCP/NCCP. Actual restoration will depend on actual impacts to these features.

Actual restoration accounted for in years 1-14; the net remaining requirement is allocated evenly over the next 16 years of the permit term.

For total acre calculation, streams are assumed to be 5 feet wide

30%	% of perennial, seasonal or alkali wetland complex acreage assumed to be jurisdictional wetland; for compensatory restor

USED IN WETLAND FEE CALCULATION

Defining sites:	average acres/site or linear feet/site (streams)	% requiring substantial soil disturbance
riparian/woodland scrub sites by acreage conversion:	3	20%
wetlands and pond sites by acreage conversion	2.0	80%
stream sites by linear feet conversion:	1,000	90%

Restoration sites that require significant soil disturbance by land-cover type *USED IN WETLAND FEE CALCULATION*

	Implementation Period (Years)					
Land Cover Type Restoration Sites	0	1-14	15-19	20-24	25-30 (6-year period)	Total
riparian woodland/scrub	-	0.4	1.0	1.0	1.2	3.7
perennial wetland	-	0.1	4.0	4.0	4.9	13.0
seasonal wetland	-	4.3	5.4	5.4	6.4	21.4
alkali wetland	-	1.0	2.7	2.7	3.2	9.4
ponds	-	-	9.0	9.0	10.8	28.8
streams (miles/acres converted to sites)	-	10.2	5.4	5.4	6.5	27.6
Total sites for monitoring cost estimate	-	15.9	27.5	27.5	33.0	103.9

Assumptions:

Average acres/site and percent of sites requiring substantial soil disturbance calculated in table above.

Seasonal, perennial, and alkali wetland acreages in Tables 5-16 and 5-17 are for wetland complexes; for cost estimates and revenue projections the wetted acres of these complexes are assumed to be 30% of the total acres.

Summary of HCP/NCCP Personnel (Conservancy Staffing)
2022 Update

	2022 UPDATE STAFFING				POST PERMIT STAFFING
	Number of FTEs				Number of FTEs
UPDATE STAFFING	0-14	15-19	20-24	25-30	
Administrative staffing		no change			
Principal Planner		0.70	0.70	0.70	0.50
Senior Planner		0.70	0.70	0.70	0.25
Principal GIS Planner		0.05	0.05	0.05	0.05
Associate Planner		0.70	0.70	0.70	0.25
Assistant Planner		0.80	0.80	0.80	0.25
Planning Technician		0.35	0.35	0.35	0.10
Accountant		0.40	0.40	0.40	0.20
Admin – Secretary		Included in overhead rates			-
IT Support Staff					-
Total		3.70	3.70	3.70	1.60
Land acquisition staffing		no change			
Principal Planner		0.05	0.05	0.05	-
Senior Planner		0.20	0.20	0.20	-
Principal GIS Planner		0.05	0.05	0.05	-
Total		0.30	0.30	0.30	-
Management planning and design staffing		lower in last 5 years			
Principal Planner		0.10	0.10	0.05	-
Principal GIS Planner		0.05	0.05	0.05	-
Senior Planner		0.05	0.05	0.02	-
Associate Planner		0.05	0.05	0.02	-
Total		0.25	0.25	0.14	-
Habitat restoration and creation staffing		no change			
Principal Planner		0.05	0.05	0.05	-
Associate Planner		0.10	0.10	0.10	-
Total		0.15	0.15	0.15	-
Environmental compliance staffing		no change except 0 in last period			
Principal Planner		0.02	0.02	-	-
Senior Planner		0.05	0.05	-	-
Associate Planner - wetland fees		0.05	0.05	-	-
Assistant Planner - wetland fees		0.10	0.10	-	-
Total		0.22	0.22	-	-
Preserve management and maintenance staffing		higher in last 5 years			
Principal Planner		0.05	0.05	0.07	0.07
Associate Planner		0.05	0.05	0.10	0.10
Assistant Planner		0.10	0.10	0.15	0.15
Preserve Maintenance Staff		included in per acre cost factors			-
Total		0.20	0.20	0.32	0.32
Monitoring and research staffing		higher in last 5 years			
Principal Planner		0.03	0.03	0.08	0.05
Associate Planner		0.05	0.05	0.08	0.05
Total		0.08	0.08	0.16	0.10
Overall Staffing Plan					
Principal Planner		1.00	1.00	1.000	0.62
Senior Planner		1.00	1.00	0.92	0.25
Principal GIS Planner		0.15	0.15	0.15	0.05
Associate Planner		1.00	1.00	1.00	0.40
Assistant Planner		1.00	1.00	0.95	0.40
Planning Technician		0.35	0.35	0.35	0.10
Accountant		0.40	0.40	0.40	0.20
Admin – Secretary		Included in overhead rates			-
IT Support Staff					-
Preserve Maintenance Staff		included in per acre cost factors			-
Total		**4.90**	**4.90**	**4.77**	**2.02**

HCP/NCCP Program Administration and Permitting for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	**Total**
Staff and overhead					$5,156,370	$5,156,370	$6,187,644	
Contractor assistance with administration					$400,000	$400,000	$480,000	
Other administrative costs					$55,000	$55,000	$66,000	
Vehicle / mileage allowance					$7,500	$7,500	$9,000	
Travel					$37,500	$37,500	$45,000	
Insurance					$115,000	$115,000	$138,000	
Legal assistance					$575,000	$250,000	$300,000	
Other permitting costs					$15,000	$15,000	$18,000	
Financial analysis assistance					$150,000	$75,000	$75,000	
Financial audit (annual)					$100,000	$100,000	$120,000	
Public relations and outreach					$50,000	$50,000	$60,000	
Total	**$223,698**	**$4,671,472**	**$4,866,552**	**$7,808,559**	**$6,661,370**	**$6,261,370**	**$7,498,644**	**$37,991,665**

Conservancy Staff and Overhead

		Number of FTEs				
Position	Hourly Cost per FTE with Overhead & Support	0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.70	0.70	0.70
Senior Planner and support	$156			0.70	0.70	0.70
Prinicipal GIS Planner and support	$222			0.05	0.05	0.05
Associate Planner and support	$132			0.70	0.70	0.70
Assistant Planner and support	$109			0.80	0.80	0.80
Planning Technician and support	$119			0.35	0.35	0.35
Accountant and support	$157			0.40	0.40	0.40
	Total FTEs			3.70	3.70	3.70
	Total cost per year			$1,031,274	$1,031,274	$1,031,274
	Total cost per period			$5,156,370	$5,156,370	$6,187,644

Notes/Assumptions:

Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Contractor Assistance with Administration	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$400,000	$400,000	$480,000

Assumption:

$80,000	annual contractor cost per 2022 budget: for assistance with database, annual report, and permitting

Other Administrative Costs	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Memberships			$50,000	$50,000	$60,000
Miscellaneous equipment and supplies			$5,000	$5,000	$6,000
Cost per period			$55,000	$55,000	$66,000

Assumption:

$10,000	annual cost for Institute for Ecological Health (state and national), Bay Area Open Space Council, and East County Water Management Agency, based on actual Conservancy experience through 2021
$1,000	annual cost based on actual Conservancy experience through 2021

Vehicle / Mileage Allowance	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$7,500	$7,500	$9,000

Assumption:

$1,500	annual cost based on actual Conservancy experience through 2021

Travel	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$37,500	$37,500	$45,000

Assumption:

$7,500	annual cost based on actual Conservancy experience through 2021

Insurance	**Cost by Implementation Period (Years)**				
	0	1-14	15-19	20-24	25-30
Cost per period			$115,000	$115,000	$138,000

Assumption:

$23,000	annual cost based on actual Conservancy experience through 2021

Legal Assistance	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$575,000	$250,000	$300,000

Assumptions:

$115,000	Annual cost for legal assistance, years 15 - 19
$50,000	Annual cost for legal assistance, after year 19

Note: The legal assistance category covers legal assistance required for program administration and (for years 6 - 10) the environmental compliance category.
Legal assistance for land acquisition included in the due diligence cost factor in the land acquisition category.
Legal assistance is also estimated for the environmental compliance category.

Other Permitting Costs	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$15,000	$15,000	$18,000

Assumptions:

$3,000	Annual cost per 2022 Budget

Financial Analysis Assistance	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$150,000	$75,000	$75,000

Assumptions:

$75,000	Cost per period for financial analysis assistance
$15,000	Annual cost years 15 - 19 for assistance with endowment and EBRPD cost sharing agreement

Financial analyst review will occur periodically over the life of the Plan (years 3, 6, 10, 15, 20 and 25).
Note: The financial analysis assistance category covers the periodic assistance of a financial analyst to review the program's cost/revenue balance, ensure that charges are adjusted in line with changing land costs and ensure compliance with State requirements on collection of fees.

Annual Financial Audit	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$100,000	$100,000	$120,000

Assumptions:

$20,000	Cost per year for financial audit services based on Conservancy experience through 2021

Annual financial audit of the Conservancy's financial statements by an independent auditor are required by the JPA agreement and Government Code.

Public Relations/Outreach	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Total cost per year			$10,000	$10,000	$10,000
Cost per period			$50,000	$50,000	$60,000

HCP/NCCP Land Acquisition for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)					
All Costs	0	1-14	15-19	20-24	25-30	**Total**
Land Acquisition	$0	$139,241,000	$66,216,653	$66,216,653	$79,459,983	$351,134,289
Site improvements	$0	$0	$1,144,934	$1,144,934	$1,251,240	$3,541,108
Staff and overhead	na	na	$494,440	$494,440	$593,328	$1,582,208
Due diligence	$253,166	$4,387,960	$1,986,500	$1,986,500	$2,383,799	$10,997,925
Total	**$253,166**	**$165,742**	**$69,842,527**	**$69,842,527**	**$83,688,351**	**$223,792,311**

Acquisition Cost over 30-year Program, Actuals year 1 - 14 + Projections Years 15 - 30 (2021 dollars)

	Cost by Implementation Period (Years)						Estimated
Acquisition Analysis Zone	0	1-14	15-19	20-24	25-30	**Total**	**Remainder 15-30**
Zone 1	$0	$12,711,000	$5,405,441	$5,405,441	$6,486,530	$30,008,413	$17,297,413
Zone 2	$0	$52,222,000	$20,527,038	$20,527,038	$24,632,446	$117,908,522	$65,686,522
Zone 3	$0	$3,553,000	$356,768	$356,768	$428,121	$4,694,656	$1,141,656
Zone 4	$0	$10,748,000	$21,381,668	$21,381,668	$25,658,001	$79,169,336	$68,421,336
Zone 5	$0	$42,738,000	$13,737,272	$13,737,272	$16,484,726	$86,697,269	$43,959,269
Zone 6 (incl. within ULL along Marsh Creek)	$0	$8,523,000	$3,742,794	$3,742,794	$4,491,353	$20,499,940	$11,976,940
Outside Inventory Area	$0		$550,443	$550,443	$660,532	$1,761,417	$1,761,417
Outside Acquisition Zones	$0	$8,746,000	$515,230	$515,230	$618,276	$10,394,735	$1,648,735
Total	**$0**	**$139,241,000**	**$66,216,653**	**$66,216,653**	**$79,459,983**	**$351,134,289**	**$211,893,289**
Assumptions:			40%				60%

Actual acquisition cost through year 14, in 2021 dollars. Updated 2021 land cost factors by cost category applied to remaining acquisition targets. Total remaining cost allocated evenly over remaining 16 years of the permit term.

See Appendix G and description of separate land cost model in Chapter 9.

Conservancy Staff and Overhead

		Number of FTEs				
Position	Hourly Cost per FTE with Overhead & Support	0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.05	0.05	0.05
Senior Planner and support	$156			0.20	0.20	0.20
Prinicipal GIS Planner and support	$222			0.05	0.05	0.05
Total FTEs				0.30	0.30	0.30
Total cost per year				$98,888	$98,888	$98,888
Total cost per period				$494,440	$494,440	$593,328

Notes/Assumptions:

Actual staff costs for years 0 - 9 are included in the due diligence actuals below.

Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Due Diligence

Covers costs for appraisals, preliminary title report, escrow and other closing costs, boundary surveys, legal services, environmental and Phase 1 site assessment.
The 2006 cost model used more detailed unit costs. The result of applying those cost factors in the 2006 model was that due diligence represented about 4% of land acquisition costs.

For the 2012, 2016, and 2022 updates the model is simplified to assume due diligence costs (not including Conservancy staff costs) at 3% of land acquisition costs, roughly consistent with the experience of the Conservancy and EBRPD through 2021, during which time more than 50 percent of the preserve system goals for land acquisition took place. For years 10-30, Conservancy staff time costs are separately estimated and included in Program Staff line item above.

	Cost by Implementation Period (Years)							
	0	1-5	6-9	10-14	15-19	20-24	25-30	**Total**
Due Diligence	$253,166	$2,296,923	$1,479,004	$612,033	$1,986,500	$1,986,500	$2,383,799	$10,997,925

Assumptions:

3.0%	Due diligence costs as a percentage of land acquisition cost.

Planning Surveys (Pre-Acquisition)

Based on Conservancy and EBRPD experience to date, initial property evaluation and planning is included in staff and consultant time.
Most significant field biological work is done post acquisition and is included as a monitoring cost.

Site Improvements

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Demolition of old facilities			$111,803	$111,803	$134,164
Repair of boundary fence			$495,065	$495,065	$495,065
Repair and replacement of gates			$118,341	$118,341	$118,341
Signs (boundary, landbank, etc.)			$232,550	$232,550	$279,060
Other security (e.g., boarding up barns)			$187,175	$187,175	$224,610
Total			$1,144,934	$1,144,934	$1,251,240

Assumptions:

Most demolition to date is a condition of the transaction and assigned to the seller. Other site improvement costs included in EBRPD operations and maintenance costs to date.

$9,856	Demolition of old facilities per 500 acres
$6,600	Repair and replacement of gates per 100 acres
$4,100	Signs (boundary, landbank, etc.) per 100 acres
$3,300	Other security (e.g., boarding up barns) per 100 acres
180	Estimated number of parcels acquired years 15 - 30 assuming 100 acres per parcel
15,000	Average parcel boundary length in linear feet (from GIS analysis, grouping adjacent parcels with the same landowner)
$6.11	Average cost per linear foot for boundary fence repair
15%	Proportion of boundary fence that needs repair

HCP/NCCP Management Planning and Design for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Program staff and overhead					$433,340	$433,340	$306,365	
Travel					$12,500	$12,500	$15,000	
Contractors					$1,000,000	$1,000,000	$500,000	
Total	**$0**	**$1,772,511**	**$938,155**	**$1,840,187**	**$1,445,840**	**$1,445,840**	**$821,365**	**$8,263,898**

Conservancy Staff and Overhead

		Number of FTEs				
Position	Hourly Cost per FTE with Overhead & Support	0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.10	0.10	0.05
Prinicipal GIS Planner and support	$222			0.05	0.05	0.05
Senior Planner and support	$156			0.05	0.05	0.02
Associate Planner and support	$132			0.05	0.05	0.02
	Total FTEs			0.25	0.25	0.14
	Total cost per year			$86,668	$86,668	$51,061
	Total cost per period			$433,340	$433,340	$306,365

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies, .

1,880 hours per year

Travel

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Total cost per period			$12,500	$12,500	$15,000

Assumption:

$2,500 annual cost based on Conservancy 2022 budget

Contractors

	Contract value per period				
Contractor category	0	1-14	15-19	20-24	25-30
Management planning			$1,000,000	$1,000,000	$500,000
Total per period			$1,000,000	$1,000,000	$500,000

Assumptions:

Restoration planning and designs included in habitat restoration/creation cost category.

$1,000,000	per-period budget for management planning, through year 24
$500,000	per-period budget for management planning, years 25 - 30

The management planning and design staff and contractors will conduct the following activities:

Management plans for cropland/pasture preserves
Management plans for natural area preserves
Grazing plans
Mapping work for management plans
Exotic plant control program (for the entire preserve system)
Fire management/control plan (for the entire preserve system)

HCP/NCCP Habitat Restoration/Creation (including planning and design) for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Creation/Restoration					$10,606,806	$10,606,806	$12,728,168	
Staff and overhead					$220,900	$220,900	$265,080	
Travel					$12,500	$12,500	$15,000	
Contractors					$5,780,709	$5,780,709	$6,936,851	
Total	**$0**	**$3,424,071**	**$2,063,773**	**$1,563,376**	**$16,620,916**	**$16,620,916**	**$19,945,099**	**$60,238,151**

Land Cover Type Restored/Created

	Implementation Period (Years)					
Land Cover Type (acres)	0	1-14	15-19	20-24	25-30	Total
oak savanna	-	-	51.6	51.6	61.9	165.0
riparian woodland/scrub	-	5.4	15.5	15.5	18.6	55.0
perennial wetland	-	0.2	10.1	10.1	12.1	32.5
seasonal wetland	-	10.7	13.4	13.4	16.1	53.6
alkali wetland	-	2.4	6.6	6.6	8.0	23.6
slough/channel	-	-	22.5	22.5	27.0	72.0
open water	-	-	-	-	-	-
ponds	-	0.6	6.7	6.7	8.0	22.0
streams (miles)	-	2.2	1.1	1.1	1.4	5.8
Total (acres)	-	20.6	127.1	127.1	152.5	427.2

Cost of Restoration/Creation Construction

			Cost by Implementation Period (Years)				
Land Cover Type	Units	Cost per unit	0	1-14	15-19	20-24	25-30
oak savanna	acres	$18,420			$1,139,755	$1,139,755	$1,367,706
riparian woodland/scrub	acres	$51,822			$963,882	$963,882	$1,156,659
perennial wetland	acres	$84,544			$1,025,308	$1,025,308	$1,230,370
seasonal wetland	acres	$100,838			$1,622,239	$1,622,239	$1,946,687
alkali wetland	acres	$102,041			$811,222	$811,222	$973,467
slough/channel	acres	$76,798			$2,073,533	$2,073,533	$2,488,240
open water	acres	$112,058			$0	$0	$0
ponds	acres	$112,058			$898,842	$898,842	$1,078,611
streams	linear feet	$287			$2,072,024	$2,072,024	$2,486,429
	Total				$10,606,806	$10,606,806	$12,728,168

2017 update:
Revised cost per unit for oak savanna to $15K based on review/input from H.T. Harvey
Revised cost per LF for stream restoration by eliminating the low cost outlier from the list of example projects. Also did not reduce unit cost by applying a 10% discount to be more conservative.

Assumptions:

Construction costs are highly variable and depend mostly on the amount, depth, and linear extent of earthwork expected, and whether water control structure are required. Plant propagation, seeding, and watering also included.

For 2017 and 2022 updates, unit costs increased based on change in the California Construction Cost Index published by the State of California Department of General Services. Available at: https://www.dgs.ca.gov/RESD/Resources/Page-Content/Real-Estate-Services-Division-Resources-List-Folder/DGS-California-Construction-Cost-Index-CCCI

20%	Contingency factor for restoration projects; assumed higher than the standard contingency because of the higher degree of uncertainty in this portion of the conservation program.

Conservancy Staff and Overhead

Position	Hourly Cost per FTE with Overhead & Support	Number of FTEs				
		0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.05	0.05	0.05
Associate Planner and support	$132			0.10	0.10	0.10
Total FTEs				0.15	0.15	0.15
Total cost per year				$44,180	$44,180	$44,180
Total cost per period				$220,900	$220,900	$265,080

1,880	hours per year

Assumptions:

Habitat Conservancy staff select sites, hire and oversee consultants for plans, specifcations, and implementation.

Cost includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

Travel

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Total cost per period			$12,500	$12,500	$15,000

Assumption:

$2,500	annual cost based on Conservancy 2022 budget

Contractors for restoration planning, design, construction oversight, and post-construction maintenance

Contractor category	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Design, plans, specifications, and engineering			$3,500,246	$3,500,246	$4,200,295
Bid assistance			$159,102	$159,102	$190,923
Construction oversight			$1,060,681	$1,060,681	$1,272,817
Post-construction maintenance			$1,060,681	$1,060,681	$1,272,817
Cost per period			$5,780,709	$5,780,709	$6,936,851

Assumptions:

33%	percent of total construction cost required to complete restoration design and plans, specifications, engineering and provide allowance for remedial measures
1.50%	percent of total construction cost required for bid assistance
10%	percent of total construction cost required for construction oversight
10%	percent of total construction cost required for post construction maintenance

Restoration plans and designs of all types included in habitat restoration/creation cost category.

Design, plan, specification, and engineering work, bid assistance, and construction oversight will be conducted in the period in which construction takes place.

Two years of post-construction maintenance will be conducted in the period after construction takes place to maintain irrigation systems, conducting weeding, etc. Management costs after success criteria are met is included in development fee paid for same site (wetland mitigation fee is in addition).

Monitoring of restoration sites covered in the Monitoring cost category.

HCP/NCCP Environmental Compliance for Maximum Urban Development Area
2022 Update
(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Staff and overhead					$276,548	$276,548	$0	
Legal assistance					$250,000	$50,000	$0	
NEPA/CEQA					$558,300	$558,300	$0	
CWA 404					$0	$0	$0	
CWA 401					$11,000	$11,000	$0	
CDFG 1602					$23,500	$23,500	$0	
NHPA					$60,200	$60,200	$0	
Other					$41,800	$41,800	$0	
Total	**$0**	**$887,562**	**$194,053**	**$330,312**	**$1,221,348**	**$1,021,348**	**$0**	**$3,654,623**

Note: Detail is not intended to be prescriptive; it is used as a means to generate an overall environmental compliance cost estimate.

Conservancy Staff and Overhead

	Hourly Cost per FTE with	Number of FTEs						
Position	Overhead & Support	0	1-14	15-19	20-24	25-30		
Principal Planner and support	$206			0.02	0.02	-		
Senior Planner and support	$156			0.05	0.05	-		
Associate Planner and support	$132			0.05	0.05	-	include in wetland fee	
Assistant Planner and support	$109			0.10	0.10	-	calculation	
	Total FTEs			0.22	0.22	-		
	Total cost per year			$55,310	$55,310	$0	$32,900	$32,900
	Total cost per period			$276,548	$276,548	$0	$164,500	$164,500

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880	hours per year

Legal Assistance and Technical Support for Coordinated Regional Wetland Permitting

	Cost by Implementation Period (Years)				
	0	1-14	15-19	20-24	25-30
Cost per period			$250,000	$50,000	$0

Assumptions:

$25,000	Annual cost for legal assistance with wetland permitting, years 15 - 20
$25,000	Annual cost for technical support with wetland permitting, years 15 - 20

Number of Projects Requiring Environmental Compliance

		Number					
Project size	Size Range	0	1-14	15-19	20-24	25-30	**Total over Permit Term**
Small/simple	up to 10 acres or up to 0.1 stream miles			4	4	-	20
Medium/more complex	10.1-50 acres or 0.1-0.5 stream miles			4	4	-	20
Large/most complex	over 50 acres or 0.5 stream miles			2	2	-	10
	Total projects remainder of permit term			10	10	-	20

Assumptions:

Details are not prescriptive but are a reasonable means of generating an overall cost for the environmental cost category.

Of the total of approximately 50 projects that would require environmental compliance, 1/5 would require compliance in each 5-year period between years 1 and 25.

Environmental Compliance Cost per Project Size and Compliance Category (2021 dollars)

Project size	Size Range	Estimate Project Cost within DFG jurisdiction		Project Impacts to Wetlands for CWA 401		Compliance Category					
				Minimum	Maximum	CEQA	CWA 404	CWA 401	CDFG 1602	NHPA	Other
Small/simple	up to 10 acres or up to 0.1 stream miles	$ 2,000	$ 25,000	0.001	0.01	$7,346	$0	$968	$1,130	$3,673	$3,482
Medium/more complex	10.1-50 acres or 0.1-0.5 stream miles	$ 25,001	$ 100,000	0.0121	0.07	$58,767	$0	$1,130	$2,425	$5,142	$4,179
Large/most complex	over 50 acres or 0.5 stream miles	$ 100,001	$500,000 or more	0.073	0.30	$146,918	$0	$1,291	$4,654	$12,488	$5,572

Assumptions:

Details are not prescriptive but are a reasonable means of generating an overall cost for the environmental cost category.

Assumed wetland impact determined by AECOM based experience with typical projects that would be expected to be implemented by the Conservancy. For example wetland restoration/creation projects, stream restoration projects, adaptive management measures for existing wetland features and facilities improvements. In general, it is expected that impacts to wetlands and streams would be avoided if at all possible. Of the stream length indicated, assumed only 10% of that length would be impacted and an average stream width of 10 feet.

For NEPA/CEQA, 401/404 and 1602 compliance, varying costs have more to do with project complexity than with project size.
Clean Water Act 401 and 1602 permits will be done on a per-project basis
Cultural compliance permits will be done on a per-project basis.
Contra Costa Conservancy staff will prepare permit applications and notification for the 401, 404 and 1600 applications, thereby resulting in no consultant cost for permit preparation. This table also assumes that the permits for Water Quality Certification (CWA 401) and Streambed Alteration Agreement (DFG 1602) will not be secured under programmatic or Master permit processes.

Permitted projects would be completed within the time limit allotted for the permits; no extensions or re-application would be required.
The "other" compliance category could include county grading permits, road encroachment permits, or other local approvals.

NEPA/CEQA

Depending on the level of detail that is provided for specific projects, they may or may not be able to be covered under the HCP EIR/EIS.
For those without sufficient detail, additional environmental documentation may need to be prepared.
It is likely that the majority of those would be in the form of mitigated negative declarations.
Because it is difficult to provide a cost estimate for a project without knowing details such as location, size, etc., the following are some rough numbers based on level of controversy:
Small scale non-controversial projects = Cat Excl/Cat Exemp
Medium scale more controversial projects = IS MND/EA FONSI
Larger scale more controversial projects = EIR/EIS
All land acquisitions would be a categorical exemption under CEQA as well as under NEPA, when NEPA applies.

401/404

The cost of conducting wetland delineations is not included under CWA 404/401 compliance; it is expected that delineation would be covered under land acquisition costs.
Each project implemented under the HCP will qualify for compliance under the USACE 404 regional permit program for the inventory area; there is no fee for 404 permit applications.
Tasks associated with Section 402 compliance are not included in this cost estimate.

CWA 401 fee cost estimate assumes all projects qualify for flat fees in Category D Ecological Restoration and Enhancement Projects, as allowed under State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State, adopted by the State Water Board on April 2, 2019. FY 21/22 Water Quality Certification Dredge and Fill Application Fee Calculator (Effective 11/8/21) Available: http://www.waterboards.ca.gov/water_issues/programs/cwa401/

NHPA

Archaeological surveys can be conducted at an intensive level at a rate of 40 acres per person per day.
No more than one cultural resource will be identified per 40 acres or part thereof.
This scope of work and cost estimate does not include tasks necessary for significance evaluations and resolution of adverse effects.

CDFG 1602

DFG 1602 costs are estimated based on the assumed cost of project activities within DFW jurisdiction per Fish and Game Code Sections 1600-1616, and the fee schedule corresponding to the project costs. Average cost based on mean of minimum and maximum fee amounts for standard agreements. California Department of Fish and Wildlife Lake and Streambed Alteration Agreements and Fees, Effective January 1, 2022. Available: https://wildlife.ca.gov/Conservation/Environmental-Review/LSA#55227743-fees

HCP/NCCP Preserve Management and Maintenance for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Program staff and overhead					$261,320	$261,320	$495,982	
Invasive Plant Control					$1,545,290	$2,112,486	$3,283,682	
Invasive Wildlife Control					$309,058	$422,497	$656,736	
Grazing Management					$772,645	$1,056,243	$1,641,841	
Wildfire Management					$1,313,497	$1,795,613	$2,791,130	
Security					$231,794	$316,873	$492,552	
Roads and Trails					$231,794	$316,873	$492,552	
Maintenance and Support					$309,058	$422,497	$656,736	
Annual Reporting					$77,265	$105,624	$164,184	
Law Enforcement					$1,158,968	$1,584,365	$2,462,762	
Administrative and General Expense					$1,777,084	$2,429,359	$3,776,235	
Total	**$0**	**$548,525**	**$2,478,883**	**$3,620,712**	**$7,987,773**	**$10,823,750**	**$16,914,392**	**$42,374,035**

NOTE: Costs for years 1 - 14 include expenditures by the East Bay Regional Park District (EBRPD) on land maintenance activities on Conservancy properties (staff costs, maintenance supplies, maintenance services from inception throught 2021). Details provided by the EBRPD and East Contra Costa County Habitat Conservancy.

Conservancy Staff and Overhead

	Hourly Cost per FTE with Overhead &	Number of FTEs						
Position	Support	0	1-5	6-9	10-14	15-19	20-24	25-30
Principal Planner and Support	$206					0.05	0.05	0.07
Associate Planner and support	$132					0.05	0.05	0.10
Assistant Planner and support	$109					0.10	0.10	0.15
Total FTEs						0.20	0.20	0.32
Total cost per year						$52,264	$52,264	$82,664
Total cost per period						$261,320	$261,320	$495,982

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year, excluding vacation

HCP/NCCP Preserve Management and Maintenance for Maximum Urban Development Area

2022 Update

(2021 dollars)

Preserve Acres Managed

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Total preserve acres acquired per period		12,050	5,672	5,672	6,806
Acres acquired and managed by end of period		12,050	17,722	23,394	30,200

Assumptions:

Total costs related to habitat and species protection on preserve system lands whether or not costs incurred by EBRPD or Conservancy.

All work (except law enforcement) performed by EBRPD staff including Park Rangers, Supervisors, Stewardship staff, Heavy Equipment Operators, and Fire Department. Law enforcement cost assumes contract with Contra Costa County Sheriff.

Costs per acre (except law enforcement) based on estimates prepared by EBRPD staff for implementation of the Vasco Hills / Byron Vernal Pools Preserve Management Plan prepared for the Conservancy (2018 draft).

Cost estimates assume preserve system land is acquired and managed in equal annual increments over the remainder of the implementation period and that cost increases incrementally as acreage under management increases.

Invasive Plant Control

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$1,545,290	$2,112,486	$3,283,682

Assumptions:

$20 annual cost per acre for invasive plant control

Patrol, work planning, cultural, manual, mechanical, chemical control.

Invasive Wildlife Control

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$309,058	$422,497	$656,736

Assumptions:

$4 annual cost per acre for invasive wildlife control

Observation, recording, and controlling bullfrog, fish, and feral mammals.

Grazing Management

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$772,645	$1,056,243	$1,641,841

Assumptions:

$10 annual cost per acre for grazing management

Data collection, administration, infrastructure repair, permitting, grazing management, reporting.

Wildfire Management

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$1,313,497	$1,795,613	$2,791,130

Assumptions:

$17 annual cost per acre for wildfire management

Fire suppression planning and wildfire management; fuels coordinator. Fuel reduction included in invasive plant control cost category.

HCP/NCCP Preserve Management and Maintenance for Maximum Urban Development Area

2022 Update

(2021 dollars)

Security

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$231,794	$316,873	$492,552

Assumptions:

$3 annual cost per acre for security maintenance and repair

Gate and fence installation, inspection, and repairs.

Roads & Trails

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$231,794	$316,873	$492,552

Assumptions:

$3 annual cost per acre for roads and trails maintenance and repair

Road grading, maintenance, and tree and brush removal.

On-going Maintenance and Support

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$309,058	$422,497	$656,736

Assumptions:

$4 annual cost per acre for on-going maintenance and support

Equipment maintenance, service yard, (including support). Trash and debris removal from non-recreation areas.

Annual Reporting

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$77,265	$105,624	$164,184

Assumptions:

$1 annual cost per acre for annual management reporting

Internal EBRPD reporting (Red Book) and Annual Report to ECCCHC.

Law Enforcement

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$1,158,968	$1,584,365	$2,462,762

Assumptions:

$15 annual cost per acre for law enforcement

Law enforcement primarily for habitat and species protection. Based on annual cost of Contra Costa County Sheriff contract to provide law enforcement services to the Contra Costa Water District Los Vaqueros Watershed (18,500 acres of protected watershed lands and 1,900 acres reservoir). Includes a level of cost related to public access commensurate with the level of service required at the Los Vaqueros Watershed.

Administrative and General Expense

	Implementation Period				
	0	1-14	15-19	20-24	25-30
Cost per period			$1,777,084	$2,429,359	$3,776,235

Assumptions:

$23 annual cost per acre for administrative and general expense

Covers the following General and Administrative Expenses: fuel, tools, equipment, and other supplies used in the course of preserve land management and services (utility fees, contractors, and other costs) incurred in the course of reserve land management. Also covers internal services costs for equipment replacement and infrastructure renovation and replacement. **Does not include indirect and direct EBRPD overhead costs.**

HCP/NCCP Monitoring, Research, and Adaptive Management for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Cost by Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Staff and overhead					$120,132	$120,132	$305,011	
Contractors					$1,000,000	$1,875,000	$3,000,000	
Directed research					$500,000	$500,000	$600,000	
Adaptive management					$215,000	$215,000	$215,000	
Total	**$0**	**$654,741**	**$604,793**	**$936,384**	**$1,835,132**	**$2,710,132**	**$4,120,011**	**$10,861,193**

Conservancy Staff and Overhead

		Number of FTEs				
Position	Hourly Cost per FTE with Overhead & Support	0	1-14	15-19	20-24	25-30
Principal Planner and support	$206			0.03	0.03	0.08
Associate Planner and support	$132			0.05	0.05	0.08
Total FTEs				0.08	0.08	0.16
Total cost per year				$24,026	$24,026	$50,835
Total cost per period				$120,132	$120,132	$305,011

Note: Hourly cost factor includes staff salary and benefits, salaries and benefits of administrative support staff (secretaries, clerks, IT staff, etc.) and associated overhead, including space and utility costs, office furniture, equipment, and supplies.

1,880 hours per year

Contractors

	Contract value per period				
	0	1-14	15-19	20-24	25-30
Monitoring contractors			$1,000,000	$1,875,000	$3,000,000
Total per period			$1,000,000	$1,875,000	$3,000,000

	Metrics for gross annual budget estimate==>	Preserve Acres (end of period)	Restored Acres (per period)	Rough annual cost per preserve acre
$200,000	annual budget for monitoring contractors, years 15-19	17,722	127	$11
$375,000	annual budget for monitoring contractors, years 20-24	23,394	127	$16
$500,000	annual budget for monitoring contractors, years 25-30	30,200	152	$17

Assumptions:

Contractor activities include field data collection, analysis, and reporting. Costs include travel.

Some preserve covered activities and conservation measures require pre-construction surveys and construction monitoring. This work will be done by contractors. Contractors will conduct pre-construction surveys prior to construction as well as construction monitoring periodically during the construction period. All covered activities require compliance with HCP/NCCP pre-construction avoidance and minimization measures.

Note that planning, preconstruction surveys and construction monitoring for covered activities outside of preserves will be paid for by developers. These costs are not included here.

Species-response monitoring is covered in the restoration category when contractors will monitor restoration, creation, and enhancement sites during the 5-year period following the restoration activity.

Post-acquisition biological inventories will build on planning surveys. Inventory will include mapping of weeds and invasive plants.

Status and trends monitoring will occur after preserve land is purchased through year 30. Status and trend monitoring will build on planning surveys and post-acquisition inventories, when appropriate.

Directed Research

	0	1-14	15-19	20-24	25-30
Average cost per year to fund directed research			$100,000	$100,000	$100,000
Total cost per period			$500,000	$500,000	$600,000

Adaptive Management

	0	1-14	15-19	20-24	25-30
Average Independent Conservation Assessment Team cost per period			$36,000	$36,000	$36,000
Average Science Advisors cost per period			$179,000	$179,000	$179,000
Total cost per period			$215,000	$215,000	$215,000

Assumptions:

Adaptive management experiments are covered under the monitoring staff and directed research categories.

As of this 2022 update, this type of periodic scientific review is conducted by the Conservancy's on-call biologist contractors.

The Conservancy convened a Science Advisory Panel in year 10 and plans to do the same in year 20.

The Conservancy's Preserve Monitoring Plan remains in the draft stage.

The following assumptions generate a scientific review budget to inform adaptive management:

An Independent Conservation Assessment Team meets once every 4 years and has:

5	members
$7,200	stipend per member per 5-year period

Science Advisors Panel consists of:

10	members
$17,900	stipend per member per 5-year period

Remedial Measures for Maximum Urban Development Area

2022 Update

(2021 dollars)

	Implementation Period (Years)							
All Costs	0	1-5	6-9	10-14	15-19	20-24	25-30	**Total**
Remedial measures	$0	$0	$0	$0	$262,890	$208,134	$3,477,304	$3,948,328
Total	**$0**	**$0**	**$0**	**$0**	**$262,890**	**$208,134**	**$3,477,304**	**$3,948,328**

Note: Actual costs are included in habitat restoration/creation and preserve management cost categories.

Remedial Measures

	0	1-5	6-9	10-14	15-19	20-24	25-30
Cost of created/restored habitat per period			$2,063,773	$1,563,376	$10,606,806	$10,606,806	$12,728,168
Cost for remedial measures for created/restored habitat per period					$206,377	$156,338	$3,394,178
Area of new preserve not including created/restored habitat per period	-	7,578	3,488	962	5,545	5,545	6,654
Cost for remedial measures for preserves per period					$6,513	$1,797	$33,126
Cost for other remedial measures per period					$50,000	$50,000	$50,000
Total cost per period					$262,890	$208,134	$3,477,304

Assumptions:	
2%	Percent of annual preserve management and maintenance cost assumed to be needed for preserve remedial actions.
10%	Percent of created/restored habitat for which remedial measures will be required.
$93	Cost per acre for preserve management and maintenance in years 26-30.
63%	Percent of land acquisition in years 1 - 14 occurring in years 1 - 5
29%	Percent of land acquisition in years 1 - 14 occurring in years 6 - 9
8%	Percent of land acquisition in years 1 - 14 occurring in years 10 - 14

Remedial actions are assumed to occur in the **second** 5-year period after habitat is created/restored or preserve land is purchased, with the exception of remedial actions for habitat created/restored in years 20-30. The cost for these remedial actions is included in years 25-30 so that it can be captured in this cost estimate.

The remedial cost for preserve lands is assumed to be a percentage of the cost per acre for preserve management and maintenance in years 25-30, and is assumed to be needed once, in the **second** 5-year period after the preserve land is purchased. The costs for preserves areas acquired in years 20 - 30 is included in years 26-30 so that it can be captured in this cost estimate.

The cost for other remedial measures includes the costs for restoration or maintenance of preserve areas because of other changed circumstances, such as wildfire.

Contingency Fund for Maximum Urban Development Area

2022 Update

(2021 dollars)

	0	1-5	6-9	10-14	15-19	20-24	25-30	Total
Total cost of program excluding land acquisition/site improvements and habitat restoration/creation construction costs	$0	$0	$0	$0	$27,909,402	$30,965,623	$43,025,775	$101,900,800
Contingency	**$0**	**$0**	**$0**	**$0**	**$1,395,470**	**$1,548,281**	**$2,151,289**	**$5,095,040**

Assumptions:

5.0% Percent of total program funding needed for contingency

Post-Permit Costs for Initial Urban Development Area

2022 Update

(2021 dollars)

Post-Permit Costs

Cost Category	Annual Costs	Assumptions
Total Cost		
Program Administration	$497,000	Reduced staffing and no legal and financial contractor costs
Land Acquisition	$0	Acquisition complete during permit term
Planning and Design	$0	Planning and design work complete during permit term
Habitat Restoration/Creation	$0	Restoration/creation projects constructed during permit term
Environmental Compliance	$0	Not required, post permit
Preserve Management and Maintenance	$2,819,100	Assume 100 percent of annual average costs in years 25 - 30
Monitoring, Research, and Adaptive Management	$343,300	Assume 50 percent of annual average costs in years 25 - 30
Remedial Measures	$0	Not required, post permit
Contingency	$0	Not required, post permit
Total	**$3,659,400**	

Total preserve system acres	**30,200**
Annual average cost per acre managed	**$121**
Percent of average annual cost years 25 - 30	**16%**

APPENDIX E: ENDOWMENT MODEL UPDATE

Tables E.1 and **E.2** present the endowment model results for the initial and maximum UDA scenarios, respectively.

Table E.1: Endowment Fund - Initial Urban Development Area (2021 $)

Year	2022	2023	2024	2025	2026	2027	2028	2029
Permit Year	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*
Beginning Fund Balance	$3,917,630	$6,990,803	$14,798,497	$18,214,633	$21,741,794	$25,383,587	$29,176,637	$33,125,859
Development Revenue								
Mitigation Fee[1]	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400
CWF[2]	$0	$3,182,808	$0	$0	$0	$0	$0	$0
Pinn Bros./Pulte	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278
Summer Lakes	$0	$1,462,500	$0	$0	$0	$0	$0	$0
Cypress Preserve	$0	$0	$0	$0	$0	$32,898	$65,796	$98,694
Subtotal	$2,821,678	$7,466,986	$2,821,678	$2,821,678	$2,821,678	$2,854,576	$2,887,474	$2,920,372
Leases[3]	$124,172	$113,507	$113,507	$113,507	$113,507	$113,507	$113,507	$113,507
Investment Earnings[4]	$127,323	$227,201	$480,951	$591,976	$706,608	$824,967	$948,241	$1,076,590
Total Revenues	$3,073,173	$7,807,694	$3,416,136	$3,527,161	$3,641,793	$3,793,050	$3,949,222	$4,110,469
Ending Fund Balance	$6,990,803	$14,798,497	$18,214,633	$21,741,794	$25,383,587	$29,176,637	$33,125,859	$37,236,328
Year	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**
Permit Year	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
Beginning Fund Balance	$37,236,328	$41,513,286	$45,959,742	$50,583,607	$55,390,645	$60,383,685	$66,591,487	$72,014,350
Development Revenue								
Mitigation Fee[1]	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400	$2,802,400
CWF[2]	$0	$0	$0	$0	$0	$0	$0	$0
Pinn Bros./Pulte	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278
Summer Lakes	$0	$0	$0	$0	$0	$0	$0	$0
Cypress Preserve	$131,592	$164,490	$197,388	$230,286	$263,184	$1,315,672	$328,980	$347,293
Subtotal	$2,953,270	$2,986,168	$3,019,066	$3,051,964	$3,084,862	$4,137,350	$3,150,658	$3,168,971
Leases[3]	$113,507	$111,107	$111,107	$111,107	$107,982	$107,982	$107,982	$58,461
Investment Earnings[4]	$1,210,181	$1,349,182	$1,493,692	$1,643,967	$1,800,196	$1,962,470	$2,164,223	$2,340,466
Total Revenues	$4,276,958	$4,446,457	$4,623,865	$4,807,038	$4,993,040	$6,207,802	$5,422,863	$5,567,899
Ending Fund Balance	$41,513,286	$45,959,742	$50,583,607	$55,390,645	$60,383,685	$66,591,487	$72,014,350	$77,582,249

Table E.1: Endowment Fund - Initial Urban Development Area (2021 $) *(continued)*

Year *Permit Year*	Total *Year 15 - 30*	Annual *Post-Permit*
Beginning Fund Balance	$3,917,630	$77,582,249
Development Revenue		
Mitigation Fee[1]	$44,838,400	$0
CWF[2]	$3,182,808	$0
Pinn Bros./Pulte	$308,448	$19,278
Summer Lakes	$1,462,500	$0
Cypress Preserve	$3,176,273	$347,293
Subtotal	$52,968,429	$366,571
Leases[3]	$1,747,957	270,605
Investment Earnings[4]	$18,948,234	$2,521,423
Total Revenues	$73,664,619	$3,158,600
Post-Permit Costs	NA	($3,158,600)
Net Cash Flow	$73,664,619	($0)
Ending Fund Balance	$77,582,249	$77,582,249

[1] Mitigation fee calculated to result in close to $0 annual net cash flow post-permit term.

[2] Proceeds from California Wildlife Foundation (CWF) primarily associated with mitigation payments made prior to Plan implementation (in 2021 $).

[3] Based on 2021 revenue from 13 leases. Eight communication tower leases are assumed to continue in perpetuity. Five wind power, residential, and agricultural leases are assumed to expire prior to the end of the permit term.

[4] Investment earnings = Beginning Fund Balance x Annual Real Rate of Return on Investments (ROI). Real ROI equals 3.25% and is net of inflation and all administrative and investment management fees.

Sources: Regional Parks Foundation (2022 beginning fund balance); National Fish and Wildlife Foundation (rate of return on investment); Appendix C (Post-Permit Costs table); and Appendix F, Tables F.2, F.3, and F.4 (endowment contributions to date, development project revenue, and lease revenue).

Table E.2: Endowment Fund – Maximum Urban Development Area (2021 $)

Year	2022	2023	2024	2025	2026	2027	2028	2029
Permit Year	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*
Beginning Fund Balance	$3,917,630	$7,740,310	$16,321,870	$20,537,023	$24,889,168	$29,382,758	$34,055,288	$38,912,573
Development Revenue								
Mitigation Fee[1]	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907
CWF[2]	$0	$3,182,808	$0	$0	$0	$0	$0	$0
Pinn Bros./Pulte	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278
Summer Lakes	$0	$1,462,500	$0	$0	$0	$0	$0	$0
Cypress Preserve	$0	$0	$0	$0	$0	$32,898	$65,796	$98,694
Subtotal	$3,571,185	$8,216,493	$3,571,185	$3,571,185	$3,571,185	$3,604,083	$3,636,981	$3,669,879
Leases[3]	$124,172	$113,507	$113,507	$113,507	$113,507	$113,507	$113,507	$113,507
Investment Earnings[4]	$127,323	$251,560	$530,461	$667,453	$808,898	$954,940	$1,106,797	$1,264,659
Total Revenues	$3,822,680	$8,581,560	$4,215,153	$4,352,145	$4,493,590	$4,672,530	$4,857,285	$5,048,045
Ending Fund Balance	$7,740,310	$16,321,870	$20,537,023	$24,889,168	$29,382,758	$34,055,288	$38,912,573	$43,960,617
Year	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**
Permit Year	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
Beginning Fund Balance	$43,960,617	$49,205,621	$54,651,586	$60,307,443	$66,180,013	$72,273,214	$79,616,932	$86,212,630
Development Revenue								
Mitigation Fee[1]	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907	$3,551,907
CWF[2]	$0	$0	$0	$0	$0	$0	$0	$0
Pinn Bros./Pulte	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278	$19,278
Summer Lakes	$0	$0	$0	$0	$0	$0	$0	$0
Cypress Preserve	$131,592	$164,490	$197,388	$230,286	$263,184	$1,315,672	$328,980	$347,293
Subtotal	$3,702,777	$3,735,675	$3,768,573	$3,801,471	$3,834,369	$4,886,857	$3,900,165	$3,918,478
Leases[3]	$113,507	$111,107	$111,107	$111,107	$107,982	$107,982	$107,982	$58,461
Investment Earnings[4]	$1,428,720	$1,599,183	$1,776,177	$1,959,992	$2,150,850	$2,348,879	$2,587,550	$2,801,910
Total Revenues	$5,245,004	$5,445,965	$5,655,857	$5,872,570	$6,093,201	$7,343,718	$6,595,697	$6,778,850
Ending Fund Balance	$49,205,621	$54,651,586	$60,307,443	$66,180,013	$72,273,214	$79,616,932	$86,212,630	$92,991,480

Table E.2: Endowment Fund – Maximum Urban Development Area (2021 $) *(continued)*

Year *Permit Year*	Total *Year 15 - 30*	Annual *Post-Permit*
Beginning Fund Balance	$3,917,630	$92,991,480
Development Revenue		
Mitigation Fee[1]	$56,830,512	$0
CWF[2]	$3,182,808	$0
Pinn Bros./Pulte	$308,448	$19,278
Summer Lakes	$1,462,500	$0
Cypress Preserve	$3,176,273	$347,293
Subtotal	$64,960,541	$366,571
Leases[3]	$1,747,957	270,605
Investment Earnings[4]	$22,365,352	$3,022,223
Total Revenues	$89,073,850	$3,659,400
Post-Permit Costs	NA	($3,659,400)
Net Cash Flow	$89,073,850	($0)
Ending Fund Balance	$92,991,480	$92,991,479

[1] Mitigation fee calculated to result in close to $0 annual net cash flow post-permit term.

[2] Proceeds from California Wildlife Foundation (CWF) primarily associated with mitigation payments made prior to Plan implementation (in 2021 $).

[3] Based on 2021 revenue from 13 leases. Eight communication tower leases are assumed to continue in perpetuity. Five wind power, residential, and agricultural leases are assumed to expire prior to the end of the permit term.

[4] Investment earnings = Beginning Fund Balance x Annual Real Rate of Return on Investments (ROI). Real ROI equals 3.25% and is net of inflation and all administrative and investment management fees.

Sources: Regional Parks Foundation (2022 beginning fund balance); National Fish and Wildlife Foundation (rate of return on investment); Appendix D (Post-Permit Costs table); and Appendix F, Tables F.2, F.3, and F.4 (endowment contributions to date, development project revenue, and lease revenue).

APPENDIX F: REVENUE DATA

Appendix F provides detail on the revenue data used in the audit.

Table F.1 provides the index used to inflate actual costs and revenues from prior years to current (2021) dollars. The index is based on changes in the Conservancy's mitigation fee schedule, thus replicating the same index used to reflect inflation in Plan costs. The fees are adjusted annually based on published price indices and periodically based on prior.[37]

Table F.2 shows endowment contributions through fiscal year 2022.

Table F.3 shows how development project revenue paid in lieu of the development fee is estimated for the remaining permit term. This revenue is entirely allocated to the endowment.

Table F.4 shows lease revenue from activities on preserve lands using 2021 as the base year. The table shows the allocation of estimated future revenue to the endowment, land acquisition and preserve management for the remainder of the permit term based on the 2020 lease revenue allocation agreement between the Conservancy and the Park District.

Table F.5 shows actual revenue to date by source in current dollars (the year received) and inflated to 2021 dollars.

[37] HCP/NCCP, Chapter 9, pp. 30-31 and Table 9-7.

Table F.1: Inflation Index (FY 2021 = 1.00)

Plan Year	Fiscal Year Fee Adopted	Zone 1 Fee[1]	Change	Inflation Index (2021 $)[2]	Fiscal Year for Application of Inflation Index[3]	Notes
-1	2006	$11,919.00	NA	0.6294	2005	Plan completed
0	2007	$12,456.88	4.5%	0.6578	2006	JPA formed & permits issued
1	2008	$12,077.65	(3.0%)	0.6377	2007	1st full yr. of implementation
2	2009	$10,731.11	(11.1%)	0.5666	2008	
3	2010	$10,558.09	(1.6%)	0.5575	2009	
4	2011	$10,662.15	1.0%	0.5630	2010	
5	2012	$10,584.32	(0.7%)	0.5589	2011	
6	2013	$10,076.00	(4.8%)	0.5321	2012	2013 Audit
7	2014	$11,146.99	10.6%	0.5886	2013	
8	2015	$11,877.42	6.6%	0.6272	2014	
9	2016	$12,788.47	7.7%	0.6753	2015	
10	2017	$13,491.41	5.5%	0.7124	2016	2017 Audit
11	2018	$14,404.82	6.8%	0.7606	2017	
12	2019	$15,342.88	6.5%	0.8102	2018	
13	2020	$16,442.17	7.2%	0.8682	2019	
14	2021	$16,890.46	2.7%	0.8919	2020	
15	2022	$18,937.95	12.1%	1.0000	2021	2022 Audit
16	2023	$19,506.09	3.0%	1.0300	2022	Endowment model inflation rate
17	2024	$20,091.27	3.0%	1.0609	2023	Endowment model inflation rate

[1] Fees for all three zones increase by the same inflation index. Fee reflects both annual inflation adjustments and periodic adjustments based on prior audits. Fee reflects amount charged by Conservancy for participating special entities. Fees charged by other JPA members (cities and the County) varied from this schedule in certain years due to pending litigation at that time. That litigation has been settled and all JPA members now charge the same fee.

[2] Inflation index based on change in Zone 1 fee and is prescribed in Chapter 9 of the Plan using a combination of the Consumer Price Index (Bureau of Labor Statistics) and the Home Price Index (Federal Housing Finance Agency). 2023 fee and index estimated based on 3.0 percent inflation rate used in endowment model.

[3] The development fee is increased based on inflation for the prior year, so the index applies to fiscal data for the year prior to the year the fee is adopted.

Source: ECCC Habitat Conservancy, *Annual Mitigation Fee Adjustment Summary* (PDF); Table 4.1.

Table F.2: Endowment Contributions (through FY 2022)

Fiscal Year	Source	Notes	Amount (current $)	Amount (2021 $)
Through FY 2021				
	Development Fee Funds			
2020	California Wildlife Foundation	Prior Pinn Bros. special tax inception to 2020; 1st and 2nd Summer Lakes payments (see Table F.2)	$1,997,000.00	$2,239,040.25
	Local Operating Funds			
2020	Endowment share of lease revenue	Plan inception through FY 2019-20	$1,103,556.00	$1,237,309.12
2021	Endowment share of lease revenue	FY 2020-21 annual	$72,596.89	$72,596.89
	Subtotal		$1,176,152.89	$1,309,906.01
	Total		$3,173,152.89	$3,548,946.26
After FY 2021				
	Development Fee Funds			
2023	California Wildlife Foundation	Pinn Bros. special tax for 2021 and 2022; pre-Plan mitigation payments for other development projects; received by Conservancy 2022; assumed to be deposited into endowment in 2023.	$3,376,641.53	$3,182,808.49
	Local Operating Funds			
2022	Endowment share of lease revenue[1]	FY 2021-22 total annual revenue	$125,929.30	$122,261.46
	Total		$3,502,570.83	$3,305,069.95

[1] Amount is slightly different than calculated amount in Table F.3. Amount in Table F.3 used for endowment model.
Sources: ECCC Habitat Conservancy.

Table F.3: Development Project Revenue

Project (location)	Amount	Revenue Requirement	Notes
Pinn Bros. / Pulte (Brentwood)			
2016 Revenue	$14,196	0.2% fee on all property resales in perpetuity.	Project is built out; assume sales prices and therefore fee revenue increases with inflation.
2017 Revenue	$8,026		
2018 Revenue	$17,417		
2019 Revenue	$21,008		
2020 Revenue	$24,539		
2021 Revenue	$31,465		
2022 Revenue	$18,297		
7-Year Average	$19,278		
Summer Lake / Shea Homes (Oakley)		5 payments of $487,500 each paid at recording of each subdivision ($500,000 each net of 2.5% CA Wildlife Foundation fee).	1st & 2nd payments received in 2020 from CA Wildlife Foundation and deposited into endowment fund; 3rd payment received in 2022; anticipate 4th and 5th payments in 2023.
Total Obligation	$2,437,500		
Paid Through 2021 (2 payments)	$975,000		
Remaining Funding (3 payments)	$1,462,500		
Cypress Preserve (Oakley)		Special tax adjusted annually for inflation, in perpetuity; must generate $2.5 mil. (cumulative) by 2035 or pay difference.	Assume absorption of 300 units annually starting in 2027 and buildout by 2037; requires additional payment of $1.0M in 2035 to meet $2.5 mil. minimum revenue requirement.
Total Dwelling Units	$3,167		
Special Tax per Unit	$110		
Total Annual Revenue at Buildout	$347,293		

Note: Summer Lakes phases 2 and 5 of the East Cypress Corridor Specific Plan. Cypress Preserve is phases 1, 3, 4, and 6 of the same specific plan, though new units in phase 6 are not subject to the special tax.

Source: ECCC Habitat Conservancy.

Table F.4: Lease Revenue, 2022-2037 (2021 $)

Park	Property	Lessee	Lease Type	Expiration After All Renewals	Annual Revenue (2021)	Remaining Lease Years Post-2021	
						Permit Term	Post-Permit
Black Diamond	Affinito	Affinito	Residential	Terminated			
	Austin Thomas - South	PG&E	Communication	NA	$76,300	16	In perpetuity
Byron Vernal Pools	Pugh (Owens-Maness)						
	Souza III	T-Mobile	Communication	NA	$39,413	16	In perpetuity
	Souza III	Sprint	Communication	Terminated			
	Souza III	Sprint Nextel	Communication	NA	$27,345	16	In perpetuity
	Martin	CCATT	Communication	NA	$20,024	16	In perpetuity
	Martin	Crown Castle	Communication	NA	$23,531	16	In perpetuity
	Martin	T-Mobile	Communication	NA	$34,028	16	In perpetuity
	Martin	American Tower	Communication	NA	$34,364	16	In perpetuity
	Gramma's Quarter	Buena Vista-Lease #4	Wind	2033	$12,500	12	0
	Souza III	Buena Vista-Lease #8	Wind	2036	$198,083	15	0
	Martin	Martin - 14031 Vasco Rd.	Residential	2030	$6,000	9	0
	Souza II	Martin - 6400 Armstrong Rd.	Residential	Demolished			
Deer Valley	Roddy Cell Easement	CC TM PA	Communication	NA	$15,600	16	In perpetuity
	Roddy Home Ranch	Jack + Donna Roddy	Residential	Terminated			
Delta Access	Nunn	RRS Farms	Agricultural	2022	$71,100	1	0
Morgan Territory	Galvin	Galvin	Residential	2030	$6,000	9	0
Vasco Caves	Souza III	Sprint Nextel	Communication	Assigned			
Vasco Hills	Vaquero Farms, Inc.	Martin - 15500 Vasco Rd.	Residential	Terminated			
All Parks	All Properties	Interest Earnings	NA	2037	$7,986	16	0
Total					**$572,274**		

Table F.4: Lease Revenue, 2022-2037 (2021 $) *(continued)*

Park	Property	Total Revenue		Endowment Revenue		Land Acquisition		Preserve Management	
		Share[1]	Permit Term	Share[1]	Permit Term	Share[1]	Permit Term[2]	Share[1]	Permit Term
Black Diamond	Affinito								
	Austin Thomas - South	100%	$1,220,800	15%	$183,120	0%	$0	85%	$1,037,680
Byron Vernal Pools	Pugh (Owens-Maness)								
	Souza III	100%	$630,614	25%	$157,653	15%	$94,592	60%	$378,368
	Souza III								
	Souza III	100%	$437,520	25%	$109,380	15%	$65,628	60%	$262,512
	Martin	100%	$320,390	25%	$80,097	15%	$48,058	60%	$192,234
	Martin	100%	$376,489	25%	$94,122	15%	$56,473	60%	$225,894
	Martin	100%	$544,448	25%	$136,112	15%	$81,667	60%	$326,669
	Martin	100%	$549,824	25%	$137,456	15%	$82,474	60%	$329,894
	Gramma's Quarter	100%	$150,000	25%	$37,500	15%	$22,500	60%	$90,000
	Souza III	100%	$2,971,242	25%	$742,811	15%	$445,686	60%	$1,782,745
	Martin	100%	$54,000	25%	$13,500	15%	$8,100	60%	$32,400
	Souza II								
Deer Valley	Roddy Cell Easement	100%	$249,600	15%	$37,440	0%	$0	85%	$212,160
	Roddy Home Ranch								
Delta Access	Nunn	100%	$71,100	15%	$10,665	0%	$0	85%	$60,435
Morgan Territory	Galvin	100%	$54,000	15%	$8,100	0%	$0	85%	$45,900
Vasco Caves	Souza III								
Vasco Hills	Vaquero Farms, Inc.								
All Parks	All Properties	100%	$127,778	0%	$0	0%	$0	100%	$127,778
Total			**$7,757,805**		**$1,747,957**		**$905,179**		**$5,104,669**

Table F.4: Lease Revenue, 2022-2037 (2021 $) *(continued)*

Notes: Table reflects *Lease Revenues Allocation Agreement* (Agreement) between the East Bay Regional Park District (EBRPD) and the East Contra Costa County Habitat Conservancy dated October 2020.

Amount for 2022-2037 shown in 2021 dollars and assume that annual revenue increases with inflation (most but not all leases include an inflation clause).

The Agreement and therefore this table excludes grazing revenue that is assumed to only cover grazing costs with no net contribution to Plan funding.

[1] Agreement does not address allocation of interest earnings on fund balances that are assumed to be allocated 100% to land management costs.

[2] Land acquisition allocation is subject to a $2,000,000 maximum after which revenue is allocated to preserve management. An initial allocation to land acquisition of $525,875 was made when the Agreement was adopted, so with the additional estimated funding shown in this table, this maximum will not be reached during the permit term. All preserve lands must be acquired by the end of the permit term, so land acquisition lease revenue post-permit is allocated to the endowment.

Sources: East Bay Regional Park District; *Lease Revenues Allocation Agreement* between the East Bay Regional Park District and the East Contra Costa County Habitat Conservancy, October 2020.

Table F.5: Revenue By Year (through FY 2021)

Fiscal year	Inflation Index	Mitigation Fees				Other Project Fees			State & Federal Grants
		Permanent Impacts			Temporary Impact Fee	Administrative Charges	Payments For Non-covered Activities	Other Mitigation Fees	
		Development Fee[1]	Wetland Mitigation Fee	Rural Road Fee					
Current Dollars									
2005		$0	$0	$0	$0	$0	$1,140,000	$0	$0
2006		$0	$0	$0	$0	$0	$1,245,000	$0	$0
2007		$0	$0	$0	$0	$0	$475,759	$0	$273,000
2008		$0	$236	$0	$25,542	$4,150	$243,725	$0	$1,410,695
2009		$880,435	$11,774	$30,978	$518,547	$10,000	$0	$49,131	$5,536,623
2010		$0	$141,363	$282,672	$160,043	$40,000	$0	$90,037	$10,028,928
2011		$220,239	$48,552	$5,235	$83,715	$68,410	$0	$318,492	$8,745,668
2012		$235,043	$181,371	$730,055	$66,547	$59,444	$43,978	$347,138	$4,862,568
2013		$1,703,067	$4,087	$122,792	$296,551	$62,452	$0	$146,502	$1,444,339
2014		$514,563	$207,226	$70,351	$432,631	$35,448	$0	$38,298	$14,947,687
2015		$975,432	$17,564	$18,529	$59,577	$25,816	$0	$141,709	$1,809,042
2016		$794,365	$67,651	$35,818	$84,252	$8,658	$0	$20,160	$7,363,644
2017		$1,510,425	$177,711	$128,303	$258,014	$16,657	$0	$69,933	$4,853,931
2018		$1,826,485	$142,820	$0	$205,456	$210,363	$90,261	$123,432	$3,066,502
2019		$1,420,049	$3,234	$4,833	$117,713	$73,383	$0	$34,769	$821,867
2020		$2,573,363	$0	$0	$46,284	$67,573	$0	$2,172,653	$590,030
2021		$1,985,014	$0	$4,743	$320,613	$14,223	$0	$102,389	$280,900
Total		**$14,638,479**	**$1,003,590**	**$1,434,310**	**$2,675,485**	**$696,577**	**$3,238,723**	**$3,654,643**	**$66,035,424**

Table F.5: Revenue By Year (through FY 2021) *(continued)*

Fiscal year	Inflation Index	Mitigation Fees				Other Project Fees			State & Federal Grants
		Permanent Impacts			Temporary Impact Fee	Administrative Charges	Payments For Non-covered Activities	Other Mitigation Fees	
		Development Fee[1]	Wetland Mitigation Fee	Rural Road Fee					
Constant 2021 Dollars									
2005	0.6294	$0	$0	$0	$0	$0	$1,811,249	$0	$0
2006	0.6578	$0	$0	$0	$0	$0	$1,892,673	$0	$0
2007	0.6377	$0	$0	$0	$0	$0	$746,055	$0	$428,101
2008	0.5666	$0	$417	$0	$45,079	$7,324	$430,154	$0	$2,489,754
2009	0.5575	$1,579,256	$21,119	$55,565	$930,130	$17,937	$0	$88,128	$9,931,163
2010	0.5630	$0	$251,090	$502,082	$284,269	$71,048	$0	$159,923	$17,813,371
2011	0.5589	$394,058	$86,871	$9,367	$149,786	$122,401	$0	$569,855	$15,648,002
2012	0.5321	$441,726	$340,859	$1,372,026	$125,064	$111,715	$82,649	$652,392	$9,138,447
2013	0.5886	$2,893,420	$6,944	$208,618	$503,825	$106,103	$0	$248,900	$2,453,854
2014	0.6272	$820,412	$330,398	$112,167	$689,781	$56,519	$0	$61,062	$23,832,410
2015	0.6753	$1,444,442	$26,010	$27,438	$88,223	$38,229	$0	$209,846	$2,678,871
2016	0.7124	$1,115,055	$94,962	$50,278	$118,265	$12,154	$0	$28,298	$10,336,390
2017	0.7606	$1,985,834	$233,646	$168,687	$339,224	$21,900	$0	$91,945	$6,381,713
2018	0.8102	$2,254,363	$176,277	$0	$253,586	$259,643	$111,406	$152,348	$3,784,870
2019	0.8682	$1,635,624	$3,725	$5,567	$135,583	$84,523	$0	$40,047	$946,634
2020	0.8919	$2,885,259	$0	$0	$51,893	$75,763	$0	$2,435,982	$661,543
2021	1.0000	$1,985,014	$0	$4,743	$320,613	$14,223	$0	$102,389	$280,900
Total		**$17,449,450**	**$1,572,317**	**$2,511,795**	**$3,714,708**	**$985,259**	**$5,074,185**	**$4,738,727**	**$106,525,123**
Five-Year Avg. (2017-2021)[2]		$2,149,219	$82,730	$35,799	$220,180	$91,210	$22,281	$116,734	$2,411,132
10-Year Avg. (2017-2021)[2]		$1,746,115	$121,282	$194,952	$262,606	$78,077	$19,406	$178,417	$6,049,563

Table F.5: Revenue By Year (through FY 2021) *(continued)*

Fiscal year	Inflation Index	Other Local Funds					Other Revenue		Total
		Local Funds (Non-EBRPD)	Local - EBRPD				Interest Earnings	Miscellaneous	
			Land Purchase	Due Diligence & Closing	Preserve Mgt. (excl. lease rev.)	Lease Revenue			
Current Dollars									
2005		$0	$0	$0	$0	$0	$21,537	$129	$1,161,665
2006		$0	$0	$0	$0	$0	$30,610	$0	$1,275,610
2007		$1,500,000	$632,002	$131,444	$0	$0	$87,054	$11,503	$3,110,762
2008		$0	$0	$21,608	$0	$0	$36,492	$1,521	$1,743,969
2009		$880,000	$1,077,249	$65,622	$0	$0	$1,070	$0	$9,061,430
2010		$2,417,300	$4,603,901	$183,146	$0	$11,437	$0	$0	$17,958,828
2011		$0	$2,266,900	$92,500	$0	$386,357	$4,832	$248	$12,241,149
2012		$1,302,500	$649,890	$127,393	$0	$502,132	$615	$0	$9,108,673
2013		$0	$18,500	$107,555	$125,097	$521,364	$2,937	$0	$4,555,244
2014		$1,000,000	$4,098,850	$105,736	$115,536	$486,649	$6,441	$0	$22,059,416
2015		$0	$224,250	$51,344	$65,769	$469,448	$12,912	$0	$3,871,391
2016		$0	$937,275	$80,263	$80,876	$582,419	$19,905	$243	$10,075,529
2017		$28,000	$829,600	($20,195)	$94,421	$555,064	$24,377	$5,195	$8,531,436
2018		$0	$368,000	($82,515)	$75,731	$612,357	$48,760	$1,012	$6,688,664
2019		$15,000	$467,750	$50,147	$80,145	$610,781	$51,129	$693	$3,751,491
2020		$0	$105,000	$2,074	$84,283	$599,733	$30,379	$693	$6,272,064
2021		$50,003	$939,500	($88,165)	$90,784	$572,274	$16,768	$285	$4,289,332
Total		**$7,192,803**	**$17,218,667**	**$827,957**	**$812,642**	**$5,910,015**	**$395,818**	**$21,521**	**$125,756,654**

Table F.5: Revenue By Year (through FY 2021) *(continued)*

Fiscal year	Inflation Index	Other Local Funds					Other Revenue		Total
		Local Funds (Non-EBRPD)	Local - EBRPD				Interest Earnings	Miscellaneous	
			Land Purchase	Due Diligence & Closing	Preserve Mgt. (excl. lease rev.)	Lease Revenue			
Current Dollars									
2005	0.6294	$0	$0	$0	$0	$0	$34,218	$204	$1,845,671
2006	0.6578	$0	$0	$0	$0	$0	$46,534	$0	$1,939,207
2007	0.6377	$2,352,203	$991,065	$206,122	$0	$0	$136,512	$18,038	$4,878,097
2008	0.5666	$0	$0	$38,136	$0	$0	$64,406	$2,685	$3,077,955
2009	0.5575	$1,578,475	$1,932,285	$117,708	$0	$0	$1,919	$0	$16,253,687
2010	0.5630	$4,293,606	$8,177,444	$325,304	$0	$20,314	$0	$0	$31,898,450
2011	0.5589	$0	$4,056,003	$165,504	$0	$691,281	$8,645	$445	$21,902,216
2012	0.5321	$2,447,848	$1,221,368	$239,416	$0	$943,680	$1,156	$0	$17,118,348
2013	0.5886	$0	$31,431	$182,730	$212,532	$885,770	$4,990	$0	$7,739,116
2014	0.6272	$1,594,388	$6,535,156	$168,584	$184,210	$775,907	$10,269	$0	$35,171,263
2015	0.6753	$0	$332,075	$76,031	$97,392	$695,169	$19,120	$0	$5,732,847
2016	0.7124	$0	$1,315,658	$112,666	$113,526	$817,545	$27,941	$341	$14,143,079
2017	0.7606	$36,813	$1,090,718	($26,551)	$124,140	$729,771	$32,050	$6,830	$11,216,719
2018	0.8102	$0	$454,209	($101,845)	$93,472	$755,810	$60,182	$1,250	$8,255,571
2019	0.8682	$17,277	$538,758	$57,760	$92,311	$703,502	$58,891	$798	$4,320,999
2020	0.8919	$0	$117,726	$2,325	$94,498	$672,422	$34,061	$776	$7,032,250
2021	1.0000	$50,003	$939,500	($88,165)	$90,784	$572,274	$16,768	$285	$4,289,332
Total		**$12,320,610**	**$26,793,896**	**$1,563,889**	**$1,012,082**	**$7,691,172**	**$540,895**	**$31,366**	**$192,525,474**
Five-Year Avg. (2017-2021)[2]		$20,819	$628,182	($31,295)	$99,041	$686,756	$40,390	$1,988	$6,575,166
10-Year Avg. (2017-2021)[2]		$414,633	$1,257,660	$62,295	$110,287	$755,185	$26,543	$1,028	$11,278,048

[1] Development fees include fees applied to rural covered activities (outside urban development area) except rural road fees.

[2] For "Other Mitigation Fees" average excludes extraordinary endowment contribution from California Wildlife Foundation in 2020 (see Table F.2).

Sources: ECCC Habitat Conservancy.