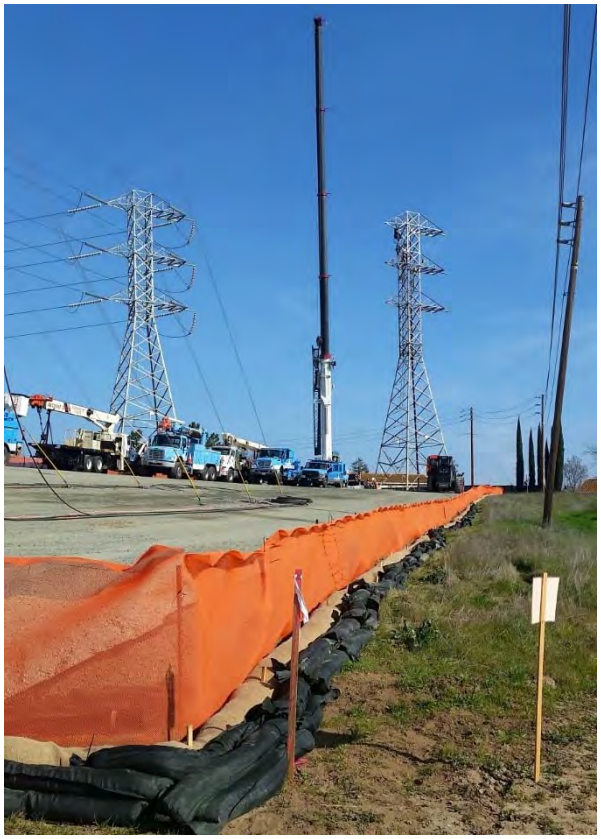
East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan Annual Report 2014



June 2015

East Contra Costa County Habitat Conservancy

Cover Photographs

Left Top: U.S. Secretary of the Interior Sally Jewell tours the Conservancy Preserve System with members of the Conservancy Governing Board and staff from the Conservancy, East Bay Regional Park District, and U.S. Fish and Wildlife Service (photo credit: East Contra Costa County Habitat Conservancy).

Left Bottom: The Lime Ridge navarretia, of which the largest known population was documented on the Conservancy Preserve System in 2014 (photo credit: Heath Bartosh, Nomad Ecology).

Right: Pacific Gas and Electric Company's Contra Costa-Moraga Reconductoring Project, 2014 (Photo provided courtesy of PG&E).

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Acronyms and Abbreviations

2013 Fee Report	*East Contra Costa County HCP/NCCP Mitigation Fee Audit and Nexus Study, Final Report*
APWRA	Altamont Pass Wind Resource Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
Conservancy	East Contra Costa County Habitat Conservancy
Corps	U.S. Army Corps of Engineers
County	Contra Costa County
County Flood Control District	Contra Costa County Flood Control and Water Conservation District
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EBRPD	East Bay Regional Park District
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
GIS	geographic information system
GPS	global positioning system
HCP	habitat conservation plan
HCP/NCCP	*East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*
HCPA	Habitat Conservation Plan Association
ILF	In-Lieu Fee
kV	kilovolt
Mitigation Rule	*Compensatory Mitigation for Losses of Aquatic Resources*
OHWM	ordinary high water mark
Plan	*East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*
Regional Water Board	Regional Water Quality Control Board
RGP	Regional General Permit
State Water Board	State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service

EXECUTIVE SUMMARY

Wildflowers blooming on the Smith Property (2014 Acquisition)
Photo credit: Heath Bartosh, Nomad Ecology

This is the sixth Annual Report for the *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan* (HCP/NCCP or Plan) prepared by the East Contra Costa County Habitat Conservancy (Conservancy). This Annual Report summarizes implementation activities undertaken between January 1, 2014, and December 31, 2014, per the conditions of the Plan and Implementing Agreement.

The HCP/NCCP proactively addresses the region's long-term conservation needs by strengthening local control over land use and providing greater flexibility in meeting other needs such as housing, transportation, and economic growth. It provides a framework for regional conservation and development. The plan provides for the protection of natural resources while streamlining the permitting process for take coverage of state and federally listed species and for mitigating impacts on sensitive habitats and resources. Permits issued by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife

(CDFW) in 2007 allow the Permittees[1] to comply with the federal Endangered Species Act (ESA) and California's Natural Community Conservation Planning Act (NCCPA). Over the 30-year permit term, impacts from urban development and rural infrastructure projects will be offset by the creation of a Preserve System managed for the benefit of 28 covered species, as well as the natural communities that they—and hundreds of other species—depend on for habitat.

Covered Activities

In 2014, 22 projects received streamlined permits through the HCP/NCCP. To date, this is the largest number of projects permitted in a year using the Plan. The covered projects include infrastructure, transportation, housing, and other economic development activities providing a range of benefits for the communities of eastern Contra Costa County. Highlights of these approved covered activities are below.

Road Infrastructure: The Marsh Creek Detention Center Bridge Replacement Project was a significant project covered under the Plan in 2014. The transportation project replaced an existing one-lane bridge that serves the Marsh Creek Detention Center in east/central Contra Costa County. The existing bridge was deemed functionally obsolete and structurally deficient by Caltrans with a sufficiency rating of 10.8 out of 100. Based on this severely low rating, it was critical that the bridge was replaced. The project consisted of construction of a single-span cast-in-place pre-stressed concrete bridge on the existing alignment.

Deer Valley Road Shoulder Widening Project (2014 Covered Project)
Photo credit: Contra Costa County Public Works

Residential Development: The Ferro/Ronconi Residential Development Project in the City of Brentwood received coverage under the Plan in 2014. This project is the outcome of a planning effort dating back to 2007 and involves the subdivision of a 42.23-acre property located at the northeast corner of Balfour Road and Griffith Lane. The homes will be accessed from three points, including a connection with McClarren Road on the north, Balfour Road on the south, and Griffith Lane on the west. A fourth point along the east boundary of the subdivision will provide for pedestrian and bicyclist access to Pippo Avenue. The project will create a total of 160 single-family detached lots, a public park, and a water quality basin.

[1] The Permittees are Contra Costa County; the cities of Brentwood, Clayton, Oakley, and Pittsburg; the East Contra Costa County Habitat Conservancy; the Contra Costa County Flood Control and Water Conservation District; and the East Bay Regional Park District.

Utility Infrastructure: Another important infrastructure project that received coverage in 2014 was Pacific Gas & Electric Company's Contra Costa–Moraga 230 kilovolt (kV) Reconductoring Project. This project, which is ongoing through 2015, is reconductoring (replacing existing conductors with new conductors) the Contra Costa–Moraga 230 kV transmission line between the Contra Costa Power Plant Substation (located near the City of Antioch) and the Moraga Substation (located in the City of Orinda), a distance of approximately 27 miles. Approximately half of the project—from the Contra Costa Power Plant Substation to Tower 56—is located within the ECCC HCP/NCCP Plan Area and received take coverage under the Plan.

Altogether, 22 projects received take coverage under the Plan in 2014, including 7 urban development projects, 12 rural infrastructure projects, 1 rural operations and maintenance project, and 2 restoration projects. These covered activities resulted in 45.77 acres of permanent impacts and 126.48 acres of temporary impacts on terrestrial land cover types, 0.27 acre of permanent impacts and 0.48 acre of temporary impacts on aquatic habitats; and 267 linear feet of permanent impacts and 249.5 linear feet of temporary impacts on streams.

As required by the HCP/NCCP, impacts resulting from covered activities are tracked by land cover type and associated watershed. Impacts on aquatic land cover types during the reporting period spanned seven watersheds—East County Delta, Kirker Creek, Lower Marsh Creek, Lower Mt. Diablo Creek, Upper Marsh Creek, Upper Mt. Diablo Creek, and Willow Creek. The Conservancy also tracks impacts to covered plant populations. There were no impacts to covered plant occurrences during the 2014 reporting period.

Land Acquisition and Stay-Ahead Provision

During the first 7 years of implementation, the Conservancy made significant progress toward the Plan's acquisition goals (see Figures ES-1 through ES-4). By the end of the reporting period, 27 properties had been acquired for the Preserve System, totaling over 12,000 acres. All acquisitions to date have been completed in partnership with the East Bay Regional Park District (EBRPD). EBRPD owns these lands, and together with the Conservancy, manages the Preserve System lands that have been acquired.

The Conservancy partnered with EBRPD in 2014 to acquire the Smith Property and Roddy Ranch, totaling 2,817 acres. These acquisitions protect significant portions of the three main valleys that connect the eastern and western extents of the Preserve System. Briones, Deer, and Horse valleys are key pieces in the Conservancy's efforts to assemble the planned Preserve System. Additional highlights of these acquisitions include the following.

- 1,608.5 acres of annual grassland were acquired during the reporting period with more than 7,090 acquired to date (43% of the annual grassland preservation requirement achieved).
- 60.2 acres of alkali grassland were acquired during the reporting period with more than 225 acquired to date (18% of the alkali grassland preservation requirement achieved).

- 77 acres of chaparral were acquired during the reporting period with more than 210 acres acquired to date (38% of the chaparral preservation requirement achieved).

The Conservancy is in compliance with the Plan's Stay-Ahead Provision. As displayed in Figure ES-1, the Conservancy has made substantial progress in the first 7 years of implementation toward many of the Plan's Year-30 conservation requirements. Conservation of all land cover types is ahead of impacts incurred (see Figures ES-1 through ES-4). The Stay-Ahead Provision only reflects land cover requirements and does not reflect geographical requirements intended to ensure Preserve System connectivity. The Conservancy is aware of both the qualitative and quantitative goals of the Plan. Figure ES-4 illustrates that the Conservancy is ahead of the average pace necessary to assemble the 30,300-acre Preserve System estimated to be required by Year 30.

Deer Valley on Roddy Ranch (2014 Acquisition)
Photo credit: East Contra Costa County Habitat Conservancy

Habitat Restoration and Creation

The Plan requires stream and wetland restoration and pond creation to compensate for impacts on streams, wetlands, and ponds by development activities covered by the Plan. Over the 30-year life of the Plan, the Conservancy anticipates restoring or creating up to 500 acres of wetlands and ponds and 6 miles of streams (this figure represents the maximum impact scenario; the ultimate impacts and restoration/creation requirements may be much less). In 2014, one new restoration project was constructed. To date, eight restoration projects have

been constructed, and each is monitored and adaptively managed. The eight restoration projects were designed to restore or create the following habitats:

- 0.04 acre of annual grassland
- 0.02 acre of alkali grassland
- 2.4 acres of alkali wetland
- 8.5 acres of seasonal wetland
- 0.2 acre of perennial wetland
- 4.0 acres of riparian woodland
- 0.4 acre of pond
- 3,666.6 feet of stream

The restoration projects constructed to date provide a range of benefits to covered species. The Hess Creek Channel Restoration Project, completed in 2014, restored and created a mosaic of new wetland and creek habitats which adds to the Conservancy's previous restoration projects in the western portion of the Preserve System.

Coordinated Wetland Permitting

The HCP/NCCP was designed to conserve not only endangered species, but also wetlands and waters that provide habitat for these species and support other natural resource functions and values. This conservation approach was intended, in part, to enable permit streamlining to extend beyond endangered species and to include regional permitting under state and federal laws for impacts on jurisdictional wetlands and waters. The interest in integrating federal and state wetland permitting into the HCP/NCCP process is the same as the articulated purpose of the Plan—to benefit streams and wetlands by conserving these resources in a more coordinated and comprehensive fashion on a regional scale and to provide an integrated, coordinated approach to permitting in lieu of the often inefficient and costly project-by-project approach.

Discussion with U.S. Army Corps of Engineers (Corps), U.S. Environmental Protection Agency (EPA), State Water Resources Control Board (State Water Board), the Regional Water Quality Control Boards (Regional Water Boards), CDFW, and USFWS regarding this parallel approach to compliance with wetlands regulations started in 2002 during the early stages of developing the HCP/NCCP. Coordinating wetlands regulation with HCPs is difficult in part because there is no precedent.

Important milestones reached to date are summarized below.

- On May 4, 2012, the Corps issued a Regional General Permit (RGP) related to the HCP/NCCP. The RGP is designed to streamline wetland permitting in the HCP/NCCP Plan Area by coordinating the avoidance, minimization, and mitigation measures in the Plan with the Corps' wetland permitting requirements. Currently, the RGP only relates to Clean Water Act Section 404 permits, but discussions are ongoing with the

State Water Board and Regional Water Boards to coordinate their requirements with the RGP and HCP/NCCP.

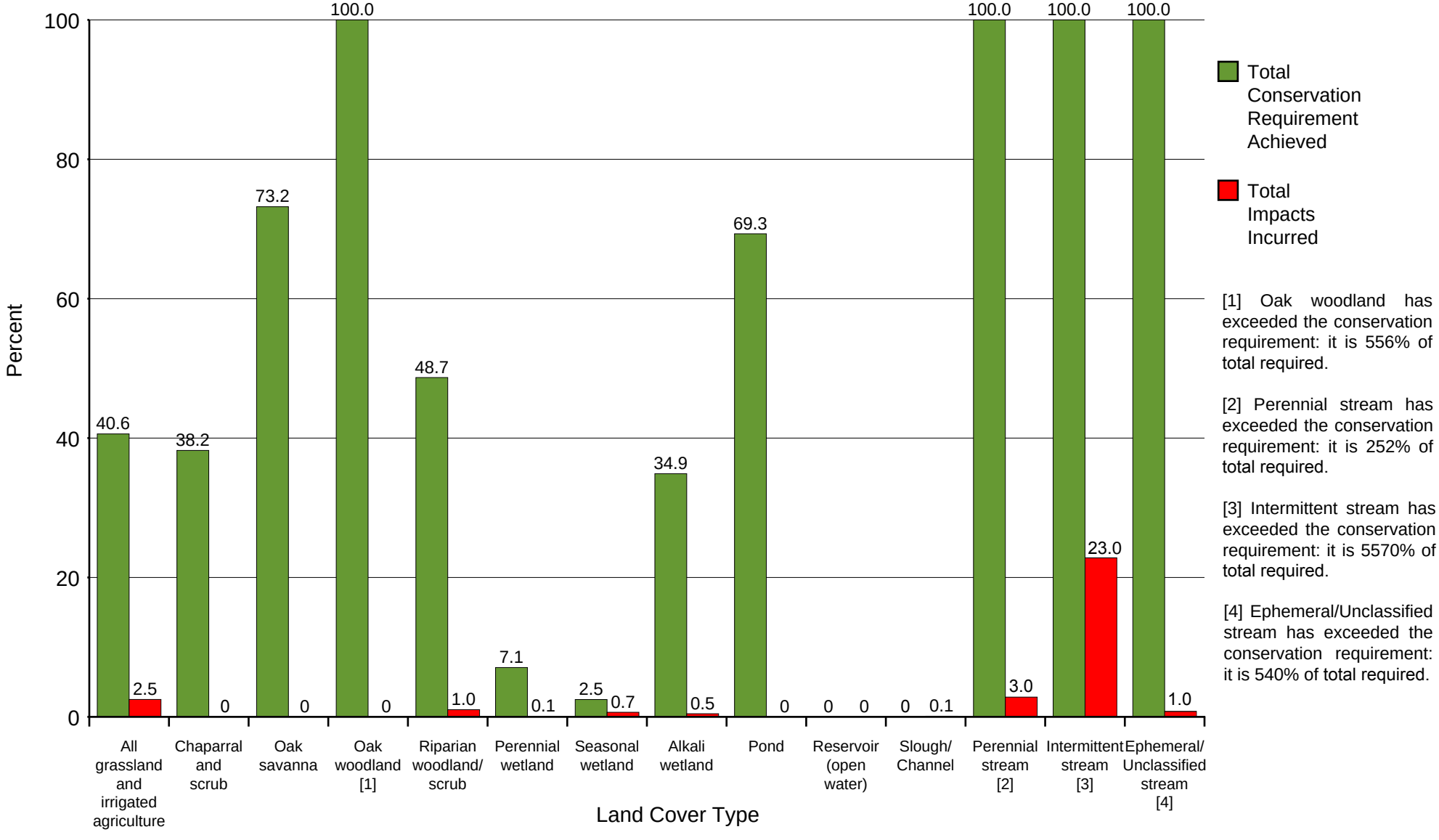
- On April 30, 2012, USFWS issued a Biological Opinion for the RGP. The Biological Opinion relies on the HCP/NCCP for mitigation measures and eliminates the need for the Corps to consult individually with USFWS for each project covered by the RGP. The term of the Biological Opinion corresponds with the 30-year term of the HCP/NCCP.
- The Conservancy is seeking to establish an In-Lieu Fee (ILF) program to comply with the recent *Compensatory Mitigation for Losses of Aquatic Resources* (Mitigation Rule; Code of Federal Regulations [CFR], Title 33, Part 332). The proposed ILF program would be implemented in conjunction with requirements of the RGP and HCP/NCCP. The ILF program would sanction payment of HCP/NCCP fees as suitable mitigation under Corps permits. The Conservancy is working with the Corps to develop the ILF program agreement.
- Until the ILF program is in place, the interim approach is *permittee-responsible compensatory mitigation*, an option defined in Mitigation Rule 33 CFR Part 332. Under this approach, until the ILF is approved, the Conservancy will designate a portion of its existing wetland restoration sites as compensatory mitigation for an applicant's project, and this will fulfill the applicant's Section 404 compensatory mitigation requirements under the RGP. The Corps initially approved using this interim strategy for up to 1 year, at which time the interim strategy would be replaced by the ILF program. In 2013, the Corps approved extending the interim strategy while it continues to work on the ILF program.
- To date, 10 covered projects and 2 Conservancy restoration projects have received permit coverage through the RGP.

Funding

The Conservancy successfully pursued and secured grants during the 2014 reporting period. Various federal, state, and private funding sources generously granted $16,204,377 during 2014 to the Conservancy's conservation activities. Mitigation fees and other payments from project proponents totaled $1,376,538. Local matching funds, which include grants awarded to local partners, totaled an estimated $4,618,113.

Figure ES-1. Stay Ahead Compliance

This is a graphical representation of data in Table 14.
The chart compares conservation achieved to impacts incurred according to the specific guidelines set forth in the Stay Ahead Provision.
The green bars display the percent of the land cover acquired as a percent of the conservation required.
The red bars display the percent of land cover impact incurred as a percent of the impact limits.
To comply with the Stay Ahead Provision, for terrestrial land covers the green bars need to be not more that 5% below the red bars.
With the extensive conservation effort to date, progress toward conservation goals have met, exceeded or vastly exceeded Stay Ahead Provision requirements.



[1] Oak woodland has exceeded the conservation requirement: it is 556% of total required.

[2] Perennial stream has exceeded the conservation requirement: it is 252% of total required.

[3] Intermittent stream has exceeded the conservation requirement: it is 5570% of total required.

[4] Ephemeral/Unclassified stream has exceeded the conservation requirement: it is 540% of total required.

Figure ES-2a. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Terrestrial Land Cover Types

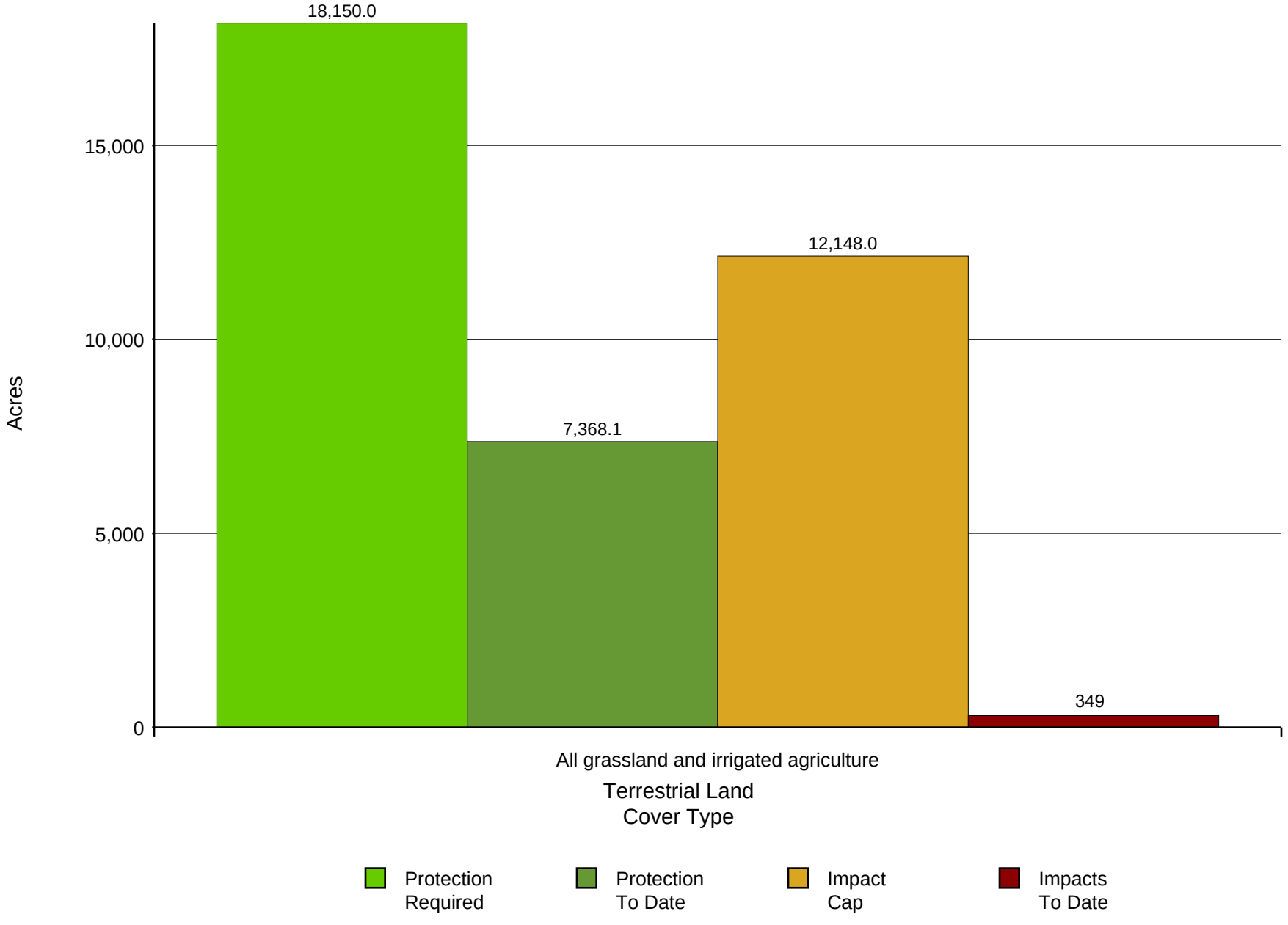


Figure ES-2b. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Terrestrial Land Cover Types

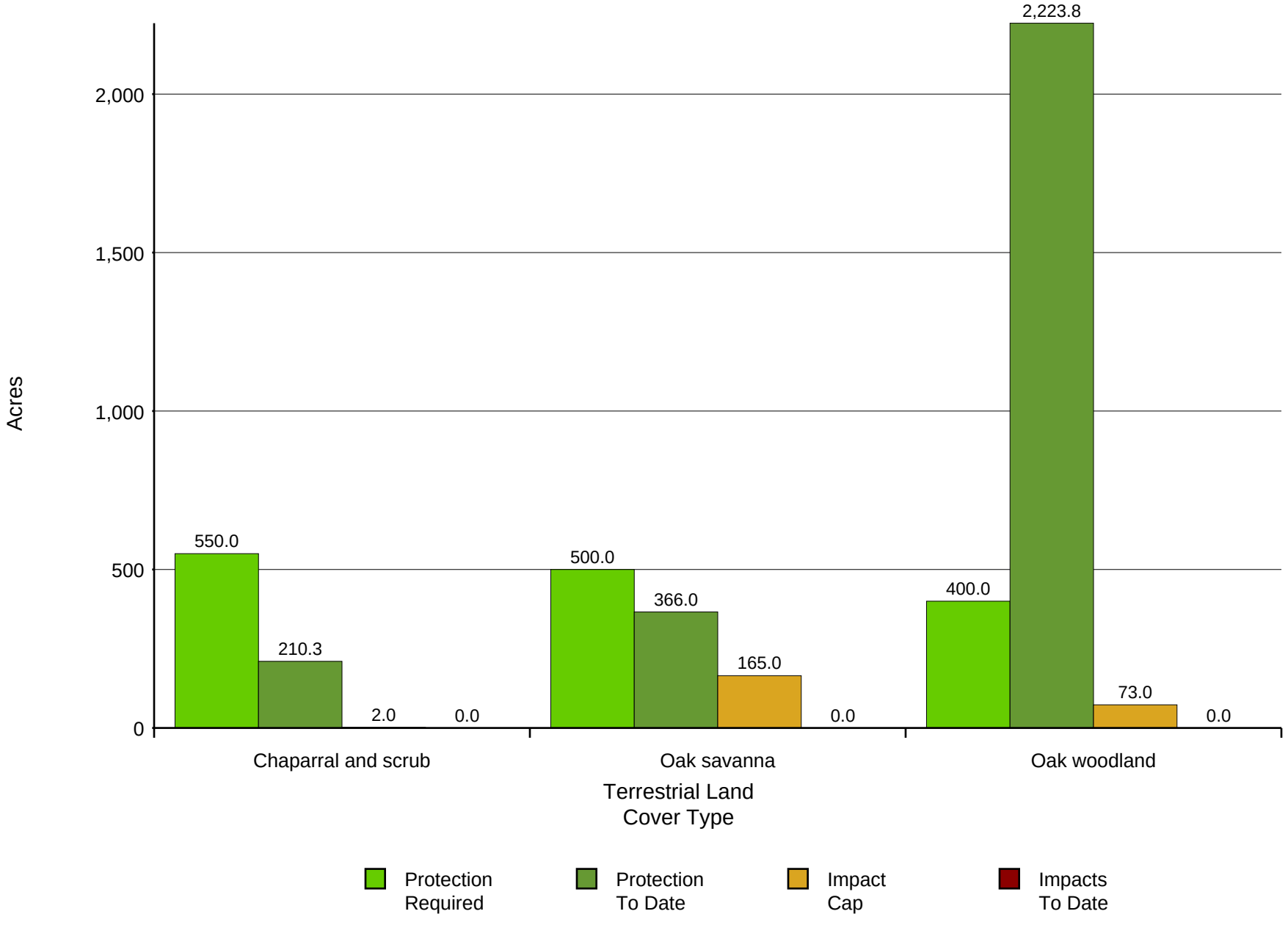


Figure ES-3a. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Aquatic Land Cover Types

Note: Aquatic land cover requirements are linked to mitigation ratios rather than absolute acreage figures.
The caps and requirements shown here are based on the maximum estimated impacts.

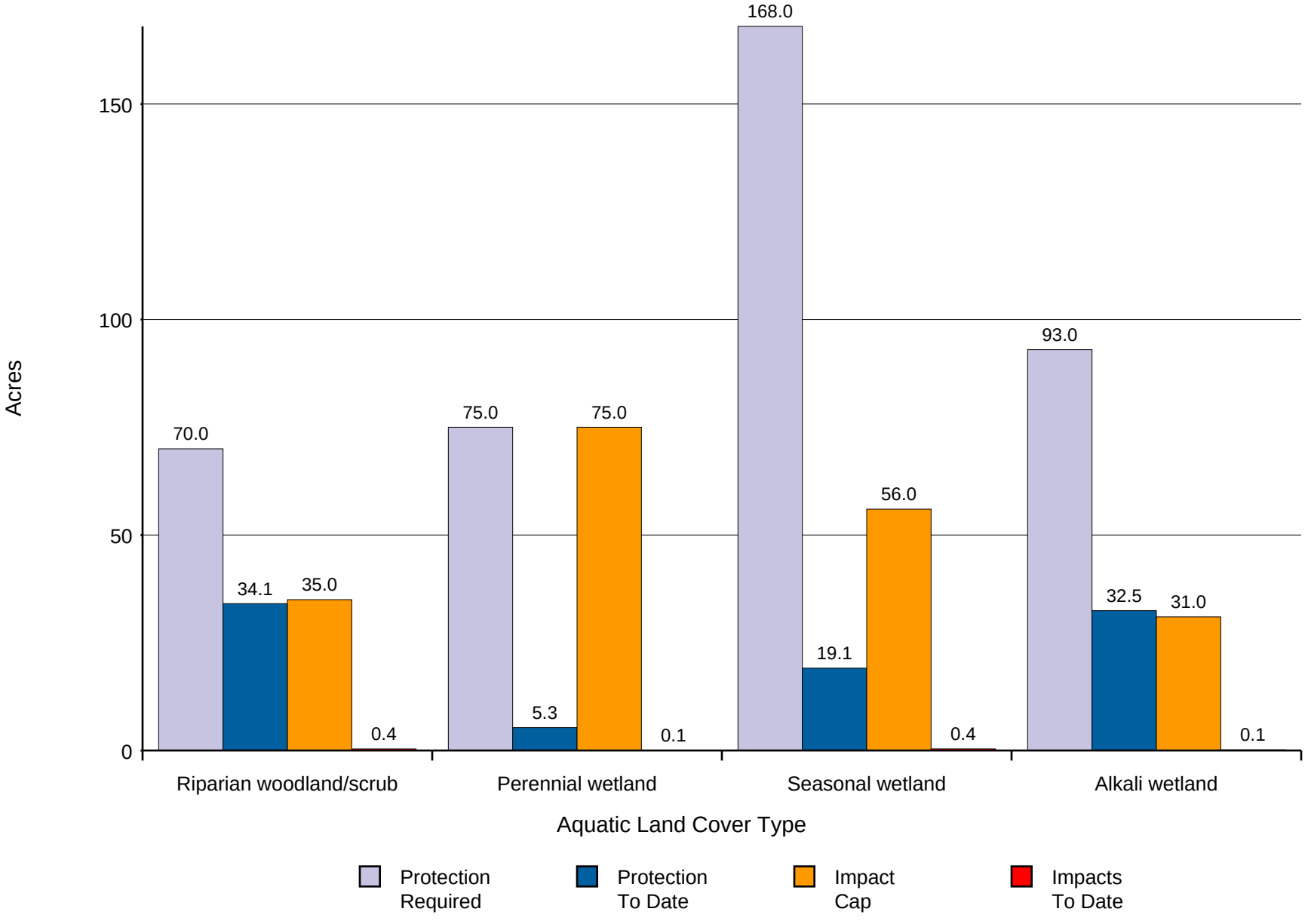


Figure ES-3b. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Aquatic Land Cover Types

Note: Aquatic land cover requirements are linked to mitigation ratios rather than absolute acreage figures.
The caps and requirements shown here are based on the maximum estimated impacts.

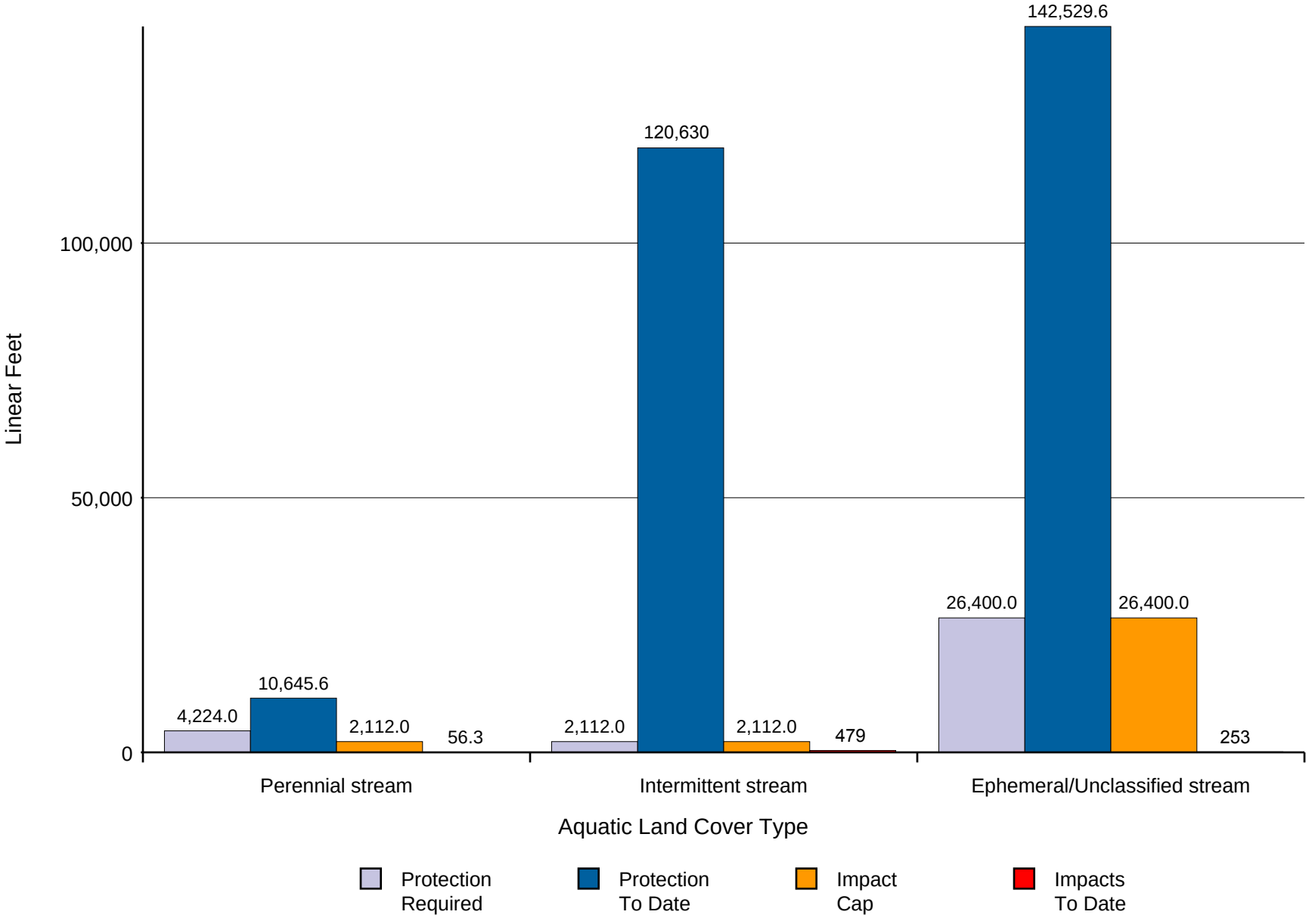
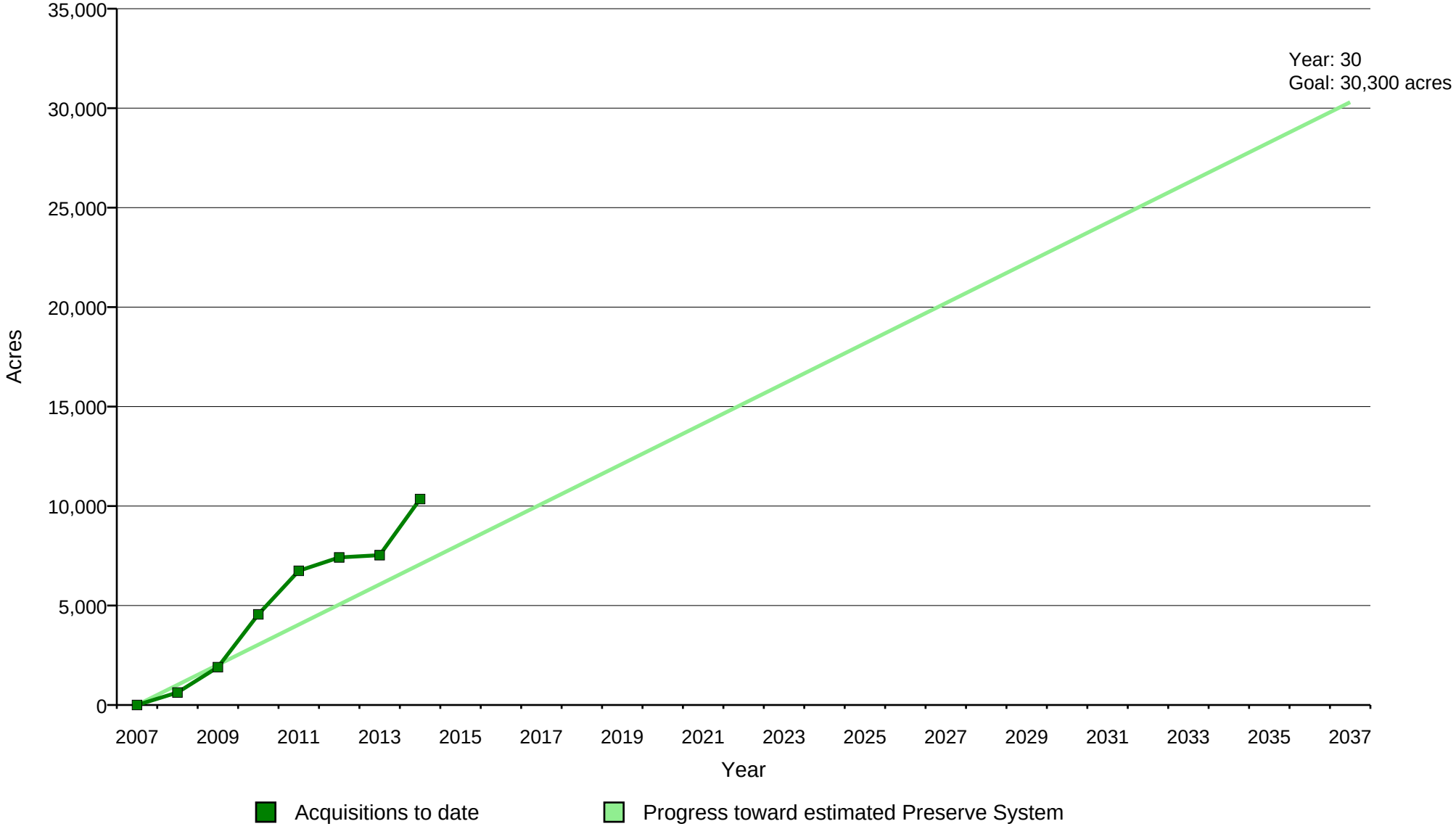


Figure ES-4. Progress Toward Assembling the Preserve System

Note: The HCP/NCCP estimates a maximum of approximately 30,300 acres will be necessary by 2037 (Year 30) to achieve all conservation requirements.



I. INTRODUCTION

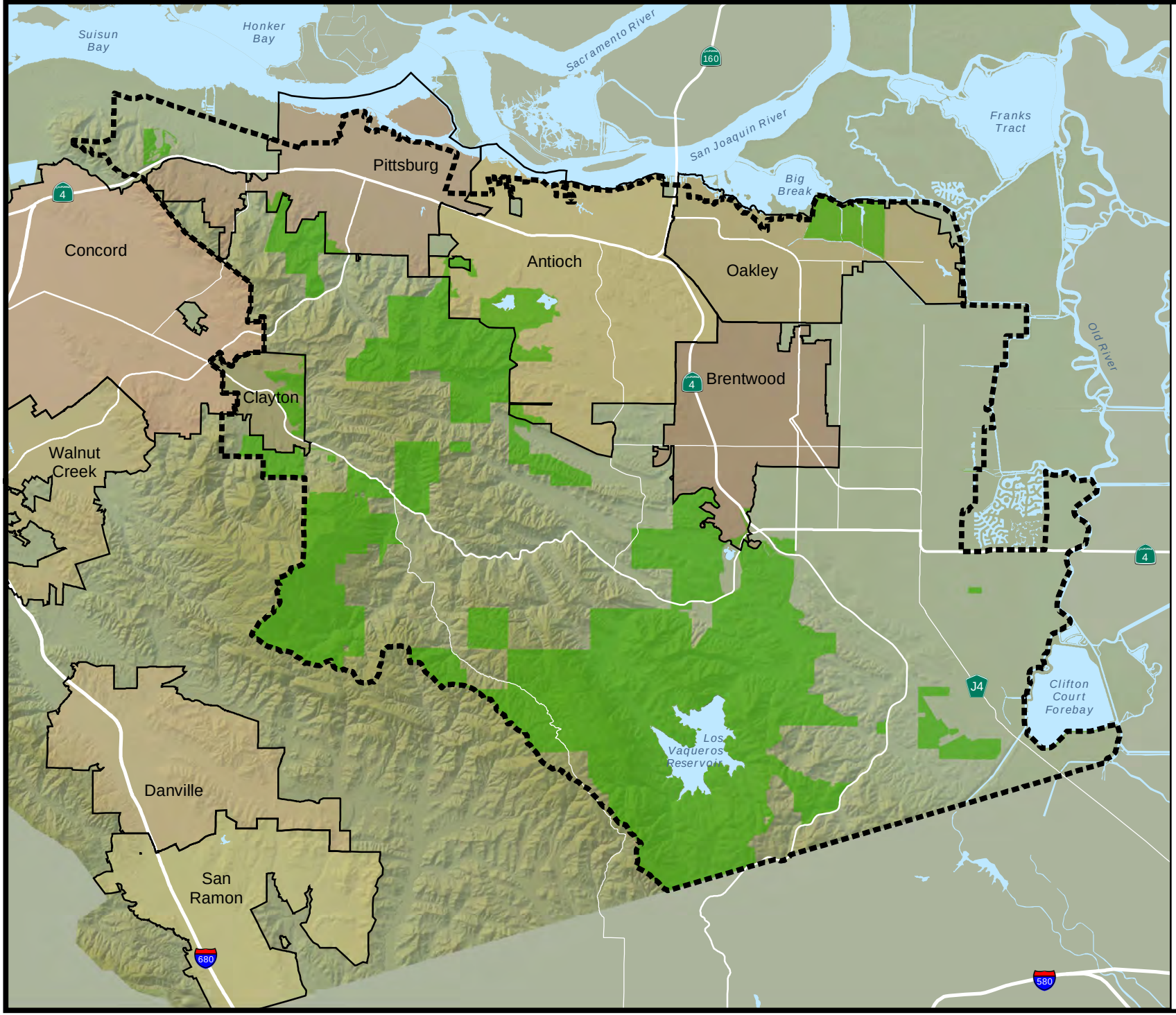
East Contra Costa County HCP/NCCP Background

Eastern Contra Costa County is a unique region where the San Francisco Bay Area, Sacramento–San Joaquin River Delta, and Central Valley meet (Figure 1). Much of the area retains a rural lifestyle supporting housing, farms, and ranches. It features a rich landscape that is home to a number of rare plants and animals. More than 150 rare species occur in the east Contra Costa County area, including the San Joaquin kit fox (*Vulpes macrotus mutica*), California red-legged frog (*Rana draytonii*), California tiger salamander (*Ambystoma californiense*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), western burrowing owl (*Athene cunicularia hypugea*), vernal pool fairy shrimp (*Brachinecta lynchi*), and Diablo helianthella (*Helianthella castanea*). Located east of San Francisco, the area's convenient location, natural beauty, and mild climate have led to rapid population growth. Contra Costa County's population is predicted to grow by 127,000 people between 2007 and 2025, providing important new housing for the San Francisco Bay Area's growing workforce. A significant portion of this growth will occur in east Contra Costa County in habitat that supports state and federally listed species, resulting in a conflict between conservation and development.

Between 2001 and 2006, the East Contra Costa County Habitat Conservation Plan Association (HCPA) developed the *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan* (HCP/NCCP or Plan) that provides regional conservation and development guidelines to protect natural resources while improving and streamlining the permit process for state and federally listed species and wetland regulations. The Plan was approved at the local level in 2006 and 2007, and permits were issued by the California Department of Fish and Wildlife (CDFW, formally the California Department of Fish and Game) and the U.S. Fish and Wildlife Service (USFWS) in 2007. The Plan allows Contra Costa County (County); the Contra Costa County Flood Control and Water Conservation District (County Flood Control District); the East Bay Regional Park District (EBRPD); the Cities of Brentwood, Clayton, Oakley, and Pittsburg; and the East Contra Costa County Habitat Conservancy (Conservancy) – a group collectively referred to as the *Permittees* – to control endangered species permitting for activities and projects in the region, performed or approved by the Permittees, while providing comprehensive species, wetlands, and ecosystem conservation and contributing to the recovery of endangered species in northern California. The Plan helps to avoid project-by-project permitting, which is generally costly and time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation.

The Plan was developed by a team of scientists and planners led by the HCPA with input from independent science reviewers, stakeholders, and regulators. Within the 174,018-acre inventory area, the issued permits provide take authorization under the California Natural Community Conservation Planning Act (NCCPA) and federal Endangered Species Act (ESA) for 8,670–11,853 acres of urban development and 1,126 acres of rural infrastructure projects. The primary means to offset these impacts is to conserve and restore lands in a Preserve System.

Figure 1. East Contra Costa County Habitat Conservation Plan Inventory Area



The Preserve System will encompass approximately 23,800–30,300 acres of land that will be managed to benefit the 28 species covered by the Plan as well as the natural communities that they, and hundreds of other species, depend on for habitat.

The Conservancy is the Entity tasked with implementation of the HCP/NCCP. The Conservancy is a joint exercise of powers authority formed by the participating cities and the County. The Conservancy Governing Board consists of elected officials from participating city councils and the County Board of Supervisors. The Executive Director and the Conservancy Secretary manage day-to-day activities of the Conservancy under the direction of the Governing Board. The Executive Director, in partnership with dedicated staff members, performs a wide range of tasks necessary to implement the Plan. Responsibilities include coordinating real estate activities; assisting, reviewing, and tracking applications for take authorization; coordinating habitat restoration; overseeing monitoring and adaptive management; maintaining the budget; managing consultants; applying for outside funding and administering approved grants; coordinating with external agencies; compiling annual reports to CDFW and USFWS; and supporting the Governing Board and advisory committees.

EBRPD is expected to be the primary landowner and land manager for the Preserve System, and so far all land acquisitions have been performed by EBRPD. EBRPD has more than 75 years of experience managing public open space lands and now owns more than 114,000 acres. HCP/NCCP Preserve System lands acquired by EBRPD will ultimately be available for public access.

Annual Report

The primary purpose of this Annual Report is to provide the Governing Board, USFWS, CDFW, and the general public the opportunity to review the Conservancy's actions and progress made toward implementing the Plan. These entities will use the Annual Report to assess the success of the Plan and provide recommendations to the Plan's Governing Board and the Conservancy staff for Plan implementation in subsequent years. The goals of the Annual Report are as follows.

- Providing the information and data necessary for the Permittees to demonstrate to CDFW and USFWS that implementation is proceeding according to the Plan, the Implementing Agreement, and the take permits.
- Disclosing and documenting issues with Plan implementation that require consultation and resolution with CDFW, USFWS, and/or the Permittees.
- Identifying administrative or minor changes to Plan components implemented in the last calendar year that were adopted to improve the success of the Plan.

This is the sixth Annual Report prepared by the Conservancy to document the progress of the Plan. This Annual Report is primarily focused on implementation actions taken during the reporting period of January 1, 2014, through December 31, 2014. However, this Annual Report also summarizes the Plan implementation activities undertaken from the actual start of Plan

Implementation on January 18, 2008 (when the last set of local ordinances took effect[2]), to December 31, 2014. The required elements of the Annual Report as defined by the Plan are listed below.

- Covered Activities and Impacts
- Land Acquisition
- Habitat Restoration and Creation
- Preserve Management
- Monitoring, Research, and Adaptive Management
- Stay-Ahead Provision
- Changed Circumstances and Remedial Measures
- Finances
- Program Administration

Covered Activities and Impacts

Section II of this Annual Report describes all projects and activities for which incidental take authorization was approved (covered activities) during the reporting period, including an accounting of the acreage of impact by project, activity type, and land cover type. Conditions on covered activities applied to each project are identified, and impacts on riparian and wetland land cover types are reported by watershed.

Land Acquisition

Section III describes the land acquisitions that occurred during the reporting period, including a summary of land acquisition funding from local, state, and federal sources. Each land acquisition conservation measure implemented is identified, and a summary of natural community protection during the reporting period and permit term is provided. In addition, progress toward all acquisition requirements, including land cover types, habitat connectivity, covered plant populations, and wetland protection is assessed.

Habitat Restoration and Creation

Section IV describes natural community creation and restoration conservation measures implemented during the reporting period and summarizes cumulative accomplishments made during the permit term, including riparian and wetland restoration by watershed.

Preserve Management

Section V describes all land management activities undertaken on Plan preserves and discusses the management issues facing the Conservancy at each preserve unit. Habitat enhancement measures implemented are identified.

[2] The HCP/NCCP implementing ordinances for the cities of Brentwood and Clayton and Contra Costa County took effect on January 15, 2008. The ordinances for the cities of Oakley and Pittsburg took effect on January 18, 2008.

Monitoring, Research, and Adaptive Management

Section VI summarizes the monitoring, research, and adaptive management activities that were conducted by the Conservancy and partners during the reporting period. These actions are summarized at the landscape level, natural community level, and species level.

Stay-Ahead Provision

Section VII assesses compliance with the Stay-Ahead Provision, a set of requirements to ensure that progress toward acquisition of Preserve System lands precedes impacts associated with covered activities. This assessment includes a cumulative summary of impacts and conservation for all land cover types.

Changed Circumstances and Remedial Measures

Section VIII describes actions taken or anticipated regarding changed circumstances, including remedial actions.

Finances

Section IX includes accounting of all revenues received by type (e.g., development fees, wetland fees, grants) and an overview of the Conservancy's budget and expenditures during the reporting period.

Program Administration

Section X summarizes administrative changes, minor modifications, or major amendments proposed or approved during the reporting year. Policy clarifications and early implementation tasks that occurred during the reporting period are described in subsections.

II. COVERED ACTIVITIES AND IMPACTS

This section describes the activities and projects within the inventory area that were approved for take authorization pursuant to the Plan (covered activities) during the reporting period. The Plan requires covered activities to compensate, avoid, and minimize impacts on covered species through a variety of conservation measures. The Plan allows incidental take coverage for the following four activities (Figure 2).

- Urban Development Area Projects: All activities and projects associated with urban growth within the urban development area as defined by the Plan.
- Rural Infrastructure Projects: Transportation projects, flood protection projects, and utility projects occurring outside the urban limit line that support urban development.
- Rural Infrastructure Operation and Maintenance Activities: Road, flood protection facility, and utility line or facility operation and maintenance projects that occur outside the urban development area and urban limit line.
- Preserve System Activities: Management and recreational facilities; habitat enhancement, restoration, and creation; species surveys, monitoring, and research; emergency activities; utility construction and maintenance; and neighboring landowner activities that occur within the Preserve System.

Covered Activities Receiving Take Coverage

A total of 22 projects received take coverage under the Plan during the reporting period (Table 1 and Figures 3a and 3b). Covered activities include the following:

- 7 Urban Development Area Projects
- 12 Rural Infrastructure Projects
- 1 Rural Operations and Maintenance Project
- 2 Restoration Projects

All covered activities mitigated impacts through the payment of HCP/NCCP fees. In 2014, mitigation fees, contribution to recovery charges, and


Photo credit: Contra Costa County Public Works

administrative fees related to covered projects totaled $1,376,538. See Section IX for more details.

Conditions on Covered Activities

The purpose of conditions on covered activities is to meet regulatory standards to avoid and minimize potential impacts on covered species (payment of fees or provision of land in lieu of fees satisfies mitigation requirements). Conditions also reduce and minimize impacts on important natural communities. Conditions on covered activities include completion of preconstruction surveys, minimization of development footprints that are adjacent to preserves, establishment of stream setbacks and fuel management buffers, management of the urban-wildland interface, maintenance of hydrologic conditions, avoidance of direct impacts on extremely rare plants and fully protected wildlife species and covered migratory birds, best management practices for flood control, and design requirements for roads outside the urban development area. Each condition is described in detail in Chapter 6 of the Plan under Section 6.4, *Specific Conditions on Covered Activities*.

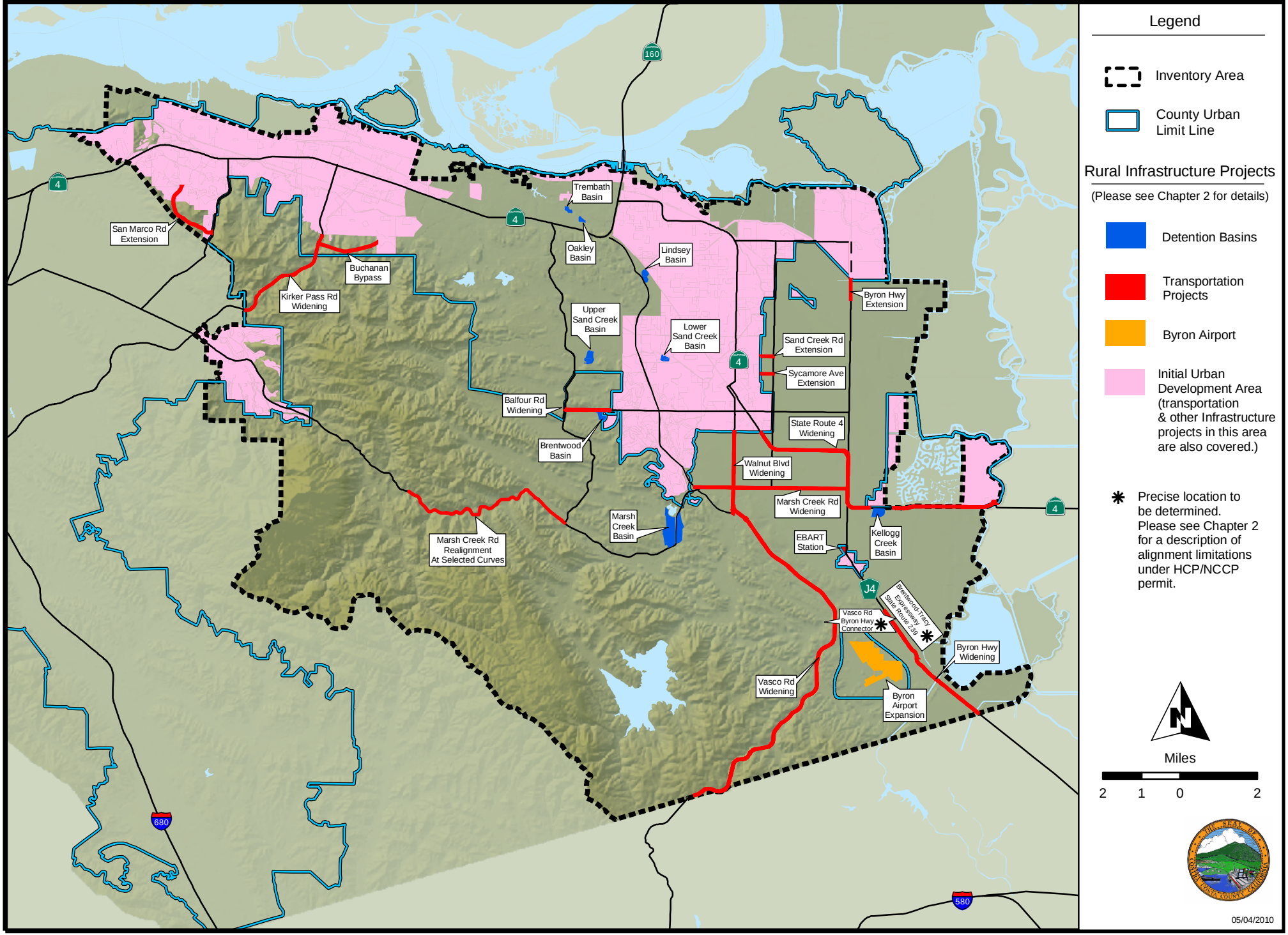
Specific project circumstances determine which conditions apply to each project. For example, Condition 1.12 *Implement Best Management Practices for Rural Road Maintenance* only applies to rural road maintenance projects. Compliance with the conditions on covered activities is an important part of the conservation strategy.

As shown in Tables 2 and 3, landscape, natural community, and species level conditions were applied to all 22 covered activities implemented during the 2014 reporting period.

Impacts on Land Cover Types and Covered Plants

Covered activity impacts were tracked by land cover type (Table 4), covered plant occurrences (Table 5), and aquatic habitat and stream by watershed (Table 6). During the reporting period there were a total of 46.14 acres of permanent and 168.68 acres of temporary impacts (Table 4). Both permanent and temporary impacts occurred on streams—267 linear feet of permanent impacts and 249.50 linear feet of temporary impacts. No covered plants were removed by covered projects (Table 5). Impacts on aquatic land cover types during the reporting period occurred in seven watersheds—East County Delta, Kirker Creek, Lower Marsh Creek, Lower Mt. Diablo, Upper Marsh Creek, Upper Mt. Diablo, and Willow Creek (Table 6).

Figure 2. Initial Urban Development Area and Specific Rural Infrastructure Projects that may be Covered



Legend

- Inventory Area
- County Urban Limit Line

Rural Infrastructure Projects

(Please see Chapter 2 for details)

- Detention Basins
- Transportation Projects
- Byron Airport
- Initial Urban Development Area (transportation & other Infrastructure projects in this area are also covered.)

✱ Precise location to be determined. Please see Chapter 2 for a description of alignment limitations under HCP/NCCP permit.

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Miles

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Figure 3a. Location and impact acreage for Projects that Received Coverage in 2014

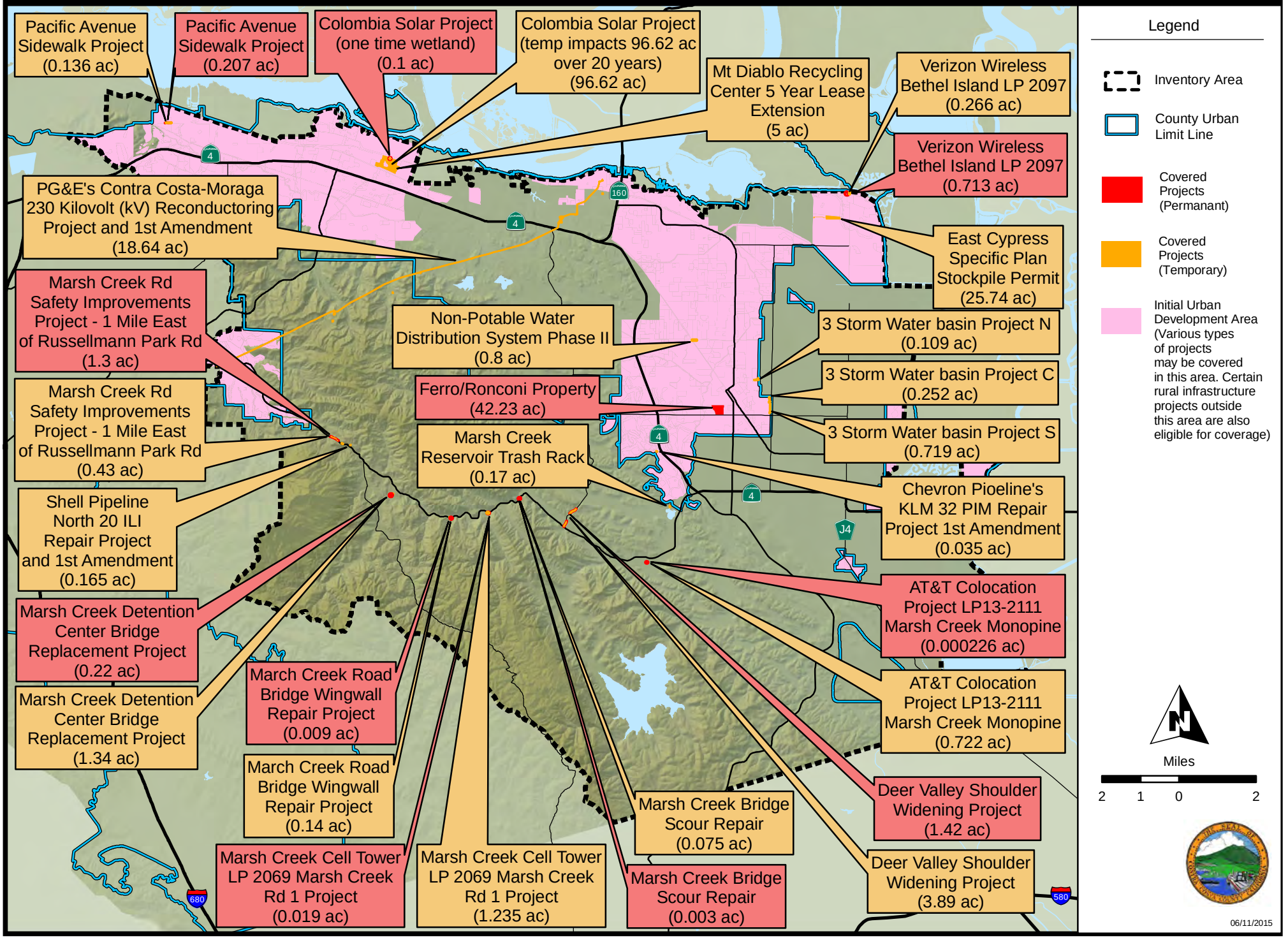
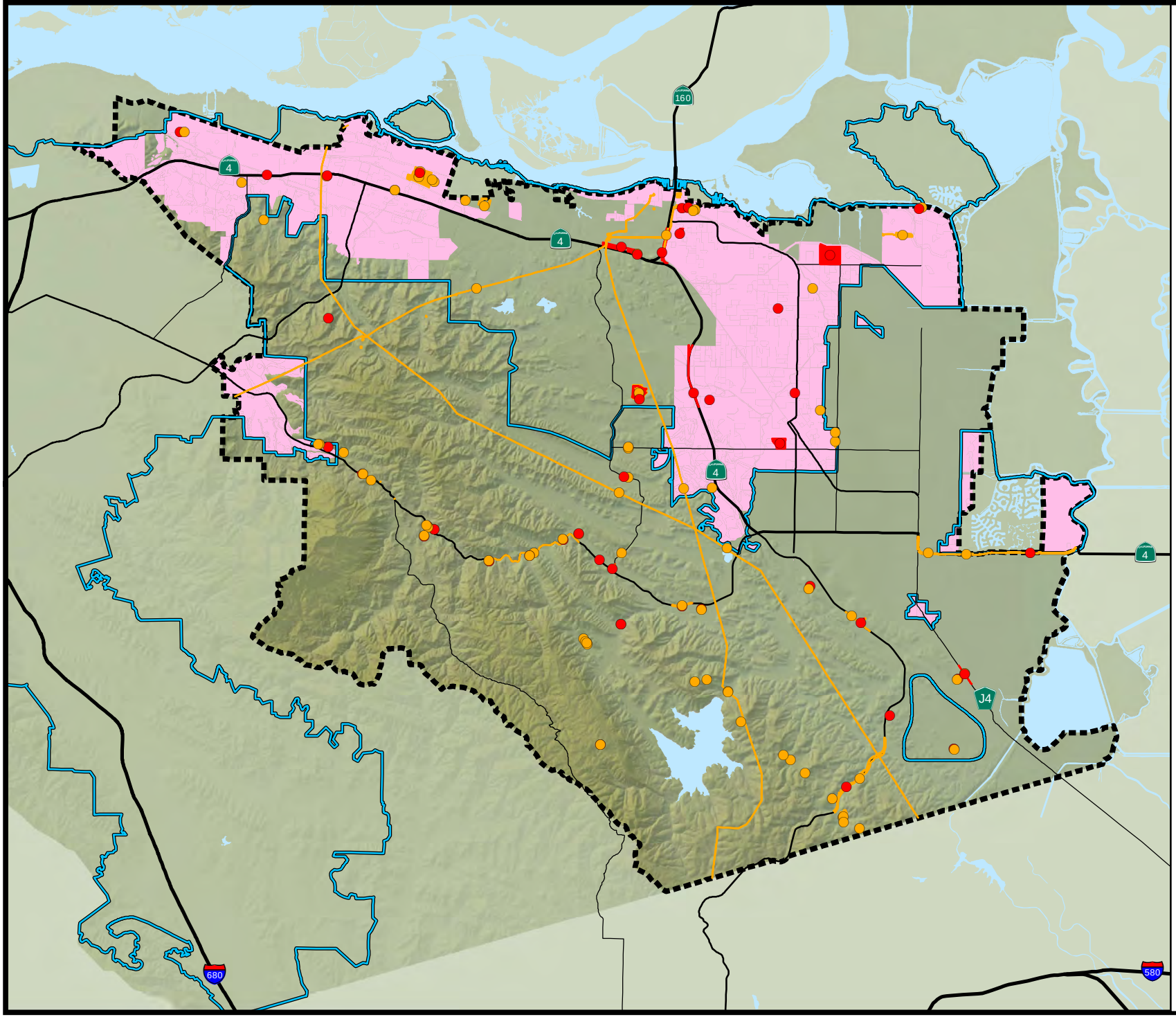


Figure 3b. Location of Covered Projects to-date (2008-2014)



Legend

Inventory Area

County Urban Limit Line

Symbol	Covered Project Type
	Permanent
	Temporary

Initial Urban Development Area (Various types of projects may be covered in this area. Certain rural infrastructure projects outside this area are also eligible for coverage)

N

Miles

2 1 0 2

03/30/2015

Table 1. Reporting Summary of Covered Activities for 2014

Activity Type	Covered By	Project Name	Location	Description
Activities within the HCP/NCCP Preserve System				
Restoration Project	ECCC Habitat Conservancy	Souza II Erosion Repair	The Project is on the Souza II parcel, which is an acquisition parcel owned and managed by the Conservancy, located in southeastern Contra Costa County, approximately two miles from the town of Byron near the Byron Airport.	The project is an adaptive management action based on the 2009 Restoration Plan. A large headcut has developed on the Souza II restoration project upstream of the tributary to Brush Creek. The Conservancy proposes to repair this erosional feature by diverting water away from the ephemeral drainage that is upstream. In order to divert water from the ephemeral drainage and erosional feature, a vegetated swale will be created just downstream of the culvert that will slow down water and direct it to the east where water will spread out onto the floodplain.
Restoration Project	ECCC Habitat Conservancy	Hess Creek Watershed Restoration Project	Kirker Pass Road	This project includes a number of components to create/restore habitat for HCP/NCCP covered species, including the creation, enhancement, and restoration of stream channel, wetlands, and riparian habitats within a 5.22-ac Project area along a section of Hess Creek south of the City of Pittsburg. The project created/restored 0.30 acres of seasonal wetland, restored 2.12 acres of Riparian habitat, and created 730 linear feet of new, stabilized creek channel.
Activities within Urban Development Area				
Utility	City of Brentwood	Non-potable Water Distribution System Phase II	Grant Street between O'Hara Avenue and Shady Willow Lane in the City of Brentwood	The City of Brentwood Public Works Department installed a distribution pipeline along Grant Street between O'Hara Avenue and Shady Willow Lane in Brentwood that delivers non-potable irrigation water to a portion of northern Brentwood.
Other	Contra Costa County-Public Works	Three Stormwater Basins - Re-establish Low Flow Channel	Heron Park and Garin Ranch in the City of Brentwood	Contra Costa County Public Works Department re-established low flow channels in off-line upland stormwater basins to ensure positive drainage.
Residential	City of Brentwood	Ferro/Ronconi Project	South of McClarren Road in Brentwood, CA	The project proponent proposes to develop the 42.23 acre property into a housing subdivision with a total of 160 single-family detached lots, a public park and associated infrastructure such as roads, sidewalks, lighting, landscaping and utilities.

Activity Type	Covered By	Project Name	Location	Description
Utility	City of Pittsburg	Columbia Solar Project	900 Loveridge Road, Pittsburg, CA 94565	Hanergy America Solar Solutions is constructing a nominal 20-megawatt solar photovoltaic (PV) power generation facility on an approximately 105-acre sit owned by USS-POSCO Industries and leased by Columbia Solar Energy.
Industrial	City of Pittsburg	Mount Diablo Recycling Center 5-acre Lease Site 5-yr Extension	1300 Loveridge Road, Pittsburg, CA	Garaventa Enterprises was reissued temporary take authorization for a 5 acre portion of the parcel for continued use as an equipment storage area for the Mount Diablo Recycling Center.
Flood Control	City of Oakley	East Cypress Corridor Specific Plan/Stockpile Permit	East side of Jersey Island Road, ¾ miles north of Cypress Road	The project proponent proposes to use the site for a temporary stockpile for future use to construct perimeter levee system and rough grading of site.
Transportation	Contra Costa County-Public Works	Pacifica Aveneue Sidewalk Project	Pacifica Avenue between Mariners Cove Drive and Inlet Drive, Bay Point, CA	Contra Costa County Public Works Department sidewalk project consisted of the construction of approximately 1,000 linear feet of 5-foot-wide sidewalk, plus curb and gutter from Mariners Cove Drive to Inlet Drive in Bay Point, CA. This project provided safe pedestrian access to three schools in the vicinity and decreased congestion on residential roads.
Rural Infrastructure Projects				
Other	Contra Costa County-Public Works	Marsh Creek Reservoir Trash Rack Replacement	Marsh Creek Reservoir	Contra Costa County Public Works department excavated approximately 5 cubic yards of silt material build up around a trash rack in Marsh Creek Reservoir in order to replace the track rack.
Utility	ECCC Habitat Conservancy	PG&E Contra Costa-Moraga 230 (kV) Reconductoring Project and First Amendment	Contra Costa-Moraga Transmission line through City of Antioch, City of Clayton and Unincorporated Contra Costa County.	PG&E is reconductoring the existing Contra Costa-Moraga 230 kV transmission line (CC-Moraga Line) between Contra Costa Power Plant Substation, located near the City of Antioch, and Moraga Substation, located in the City of Orinda—a distance of approximately 27 miles. Approximately half of the project—from Contra Costa Power Plant Substation to Tower 56 is located within the ECCC HCP/NCCP Area. The First Amendment, executed November 6, 2014, addresses minor modifications to the Project description and was adopted prior to any ground disturbance related to the project.

Activity Type	Covered By	Project Name	Location	Description
Utility	ECCC Habitat Conservancy	Chevron Pipe Line KLM 32 PIM Repair Project-First Amendment	The project site is located within the City of Brentwood.	This amendment to the Chevron Pipe Line's (CPL) KLM 32 PIM Repair project was to address CPL's request to complete a repair to the coating of the line that was discovered during the initial repair at KLM 32. This coating repair was approximately 15 feet north of the north edge of the original trench. CPL trenched another 20 feet adjacent to the original trench area to access the line and conduct the repair.
Utility	ECCC Habitat Conservancy	Chevron Pipe Line KLM 32 PIM Repair Project	The project site is located within the City of Brentwood at 37°54'40.90" N, 121°43'58.90" W. Additionally, the site occurs within SE¼, SE¼, Section 22, Township 1 north, Range 2 east (Brentwood 7.5-minute USGS quadrangle).	Chevron Pipe Line Company performed required maintenance at Site 32 on the KLM pipeline in an undeveloped area within the city limits of Brentwood, California. The repair was performed as part of a pipeline integrity management plan to comply with Department of Transportation hazardous materials and safety regulations.
Transportation	Contra Costa County-Public Works	Marsh Creek Bridge Scour Repair	Marsh Creek Road Bridge 28C-0143, approximately 1 mile west of the intersection of Deer Creek Road and 7 miles east of Morgan Territory Road.	Contra Costa County Department of Public Works repaired scour damage of right bank abutment (looking upstream) at Marsh Creek Bridge 28C-0143. Place rock-slope protection at Marsh Creek approach to both bridge abutments to protect bridge from future scour.
Transportation	Contra Costa County-Public Works	Marsh Creek Road Bridge 142 Wingwall Repair Project	A bridge over Marsh Creek Road, in unincorporated Contra Costa County, approximately 5 air miles southeast of the City of Clayton and approximately 3 miles east of Morgan Territory Road.	Contra Costa County Public Works Department repaired two wingwalls at Marsh Creek Road Bridge 142. The wingwall on the southeast (downstream) side of the bridge has failed, fallen into the creek, and was removed and replaced with a new wingwall. The wingwall on the northwest (upstream) side of the bridge was leaning and was secured.
Transportation	Contra Costa County-Public Works	Deer Valley Road Shoulder Widening Project	Located along two stretches of Deer Valley Road.	Contra Costa County Public Works Department widened the existing lanes and shoulders at 2 locations along Deer Valley Road and installed a Class II bikeway. This project addressed safety concerns and reduced collisions along Deer Valley Road.

Activity Type	Covered By	Project Name	Location	Description
Transportation	Contra Costa County-Public Works	Marsh Creek Detention Center Bridge Replacement Project	Marsh Creek Detention Center Bridge off of Marsh Creek Road (along access road to Marsh Creek Detention Center)	Contra Costa County Public Works Department replaced an existing one lane bridge that serves the Marsh Creek Detention Center in east/central Contra Costa County. The existing bridge was deemed functionally obsolete and structurally deficient by Caltrans. The project constructed a single-span cast-in-place pre-stressed concrete bridge on the existing alignment.
Transportation	Contra Costa County-Public Works	Marsh Creek Road Safety Improvements	Contra Costa County; Marsh Creek Road Engineering Station 13+00 to 33+00 – 1 Mile East of Russelmann Park Road	Contra Costa County Public Works Department widened approximately 1,900 feet of roadway along Marsh Creek Road in Contra Costa County. Safety improvements included widening of travel lanes from 10 feet to 12 feet and creating 8 foot shoulders (a combination of shoulder backing and approximately 6 feet of pavement) on each side of the road.
Other	Contra Costa County	Verizon Wireless Bethel Island LP-2097	5993 Bethel Island Road, Contra Costa County, CA 95461	Verizon Wireless proposes to install a telecommunications facility with an 85 foot monopine, equipment shelter, diesel generator, and associated utility connection.
Other	Contra Costa County	AT&T Co-location Project LP13-2111 Marsh Creek Monopine	20350 Marsh Creek Road, Brentwood, CA 94513	The project proponent proposes the co-location of a new telecommunications facility. The project will consist of installation of 9 new antennas on an existing monopine, the installation of associated equipment, a new diesel storage tank and backup generator, and approximately 30 feet of trenching to connect to a new vault that is to be installed in place of an existing AT&T vault.
Other	Contra Costa County	Marsh Creek Cell Tower LP13-2069	15320 Marsh Creek Rd	The project proponent proposes to construct a shelter to house radio cabinets for telecommunication purposes. The total lease area will be approx. 600 sq. ft.

Activity Type	Covered By	Project Name	Location	Description
Rural Operations and Maintenance				
Utility	ECCC Habitat Conservancy	Shell Pipeline North 20 ILI Repair Project and First Amendment	The project is located within the Clayton U.S. Geological Survey (USGS) 7.5-minute quadrangle. The project site is north of Marsh Creek Road approximately 2.5 miles southeast of the City of Clayton, Contra Costa County.	Shell Pipeline Company conducted repairs at one site along their existing Northbound 20-inch crude oil pipeline. The First Amendment, executed November 4, 2014, was to address the area of excavation required to complete the repairs. The area extended outside the originally permitted area from the PSE Agreement executed on July 29, 2014.

Table 2. Reporting Period Summary of Natural Community and Landscape-level Conditions on Covered Activities by Project

	Natural Community	Natural Community	Landscape								
Project Name	2.11 Enhance Cultivated Agricultural Lands to Benefit Covered Species	2.12 Wetland, Pond, and Stream Avoidance and Minimization Measures	1.6 Minimize Development Footprint Adjacent to Open Space	1.7 Establish Stream Setbacks	1.8 Establish Fuel Management Buffer to Protect Preserves and Property	1.9 Urban-Wildland Interface Design Elements	1.10 Maintain and Improve Hydrologic Conditions and Minimize Erosion	1.11 Avoid Direct Impacts on Extremely Rare Plants or Fully Protected Wildlife Species	1.12 Implement Best Management Practices for Rural Road Maintenance	1.13 Implement Best Management Practices for Flood Control Facility Operations and Maintenance	1.14 Design Requirements for Covered Roads outside UDA
Non-potable Water Distribution System Phase II								✓			
Souza II Erosion Repair		✓					✓	✓			
Hess Creek Watershed Restoration Project		✓					✓	✓			
Three Stormwater Basins - Re-establish Low Flow Channel								✓		✓	
Ferro/Ronconi Project								✓			
Columbia Solar Project							✓	✓			
Mount Diablo Recycling Center 5-acre Lease Site 5-yr Extension							✓	✓			
East Cypress Corridor Specific Plan/Stockpile Permit							✓	✓	✓		
Pacifica Aveneue Sidewalk Project		✓		✓			✓	✓			
Marsh Creek Reservoir Trash Rack Replacement							✓	✓			
PG&E Contra Costa-Moraga 230 kV Reconductering Project and First Amendment		✓					✓	✓			

	Natural Community	Natural Community	Landscape								
Project Name	2.11 Enhance Cultivated Agricultural Lands to Benefit Covered Species	2.12 Wetland, Pond, and Stream Avoidance and Minimization Measures	1.6 Minimize Development Footprint Adjacent to Open Space	1.7 Establish Stream Setbacks	1.8 Establish Fuel Management Buffer to Protect Preserves and Property	1.9 Urban-Wildland Interface Design Elements	1.10 Maintain and Improve Hydrologic Conditions and Minimize Erosion	1.11 Avoid Direct Impacts on Extremely Rare Plants or Fully Protected Wildlife Species	1.12 Implement Best Management Practices for Rural Road Maintenance	1.13 Implement Best Management Practices for Flood Control Facility Operations and Maintenance	1.14 Design Requirements for Covered Roads outside UDA
Chevron Pipe Line's KLM 32 PIM Repair Project - First Amendment		✓	✓					✓			
Chevron Pipe Line's KLM 32 PIM Repair Project		✓						✓			
Marsh Creek Bridge Scour Repair		✓						✓			✓
Marsh Creek Road Bridge 142 Wingwall Repair Project		✓					✓	✓			
Deer Valley Road Shoulder Widening Project		✓						✓			
Marsh Creek Detention Center Bridge Replacement Project								✓			
Marsh Creek Road Safety Improvements		✓	✓	✓	✓		✓	✓			✓
Verizon Wireless Bethel Island LP-2097							✓	✓			
AT&T Co-location Project LP13-2111 Marsh Creek Monopine							✓	✓			
Marsh Creek Cell Tower LP13-2069								✓			
Shell Pipeline North 20 ILI Repair Project and First Amendment		✓					✓	✓			

Table 3. Reporting Period Summary of Species-Level Conditions on Covered Activities by Project

	Species-Level Measures [1]																													
	Townsend's Big-Eared Bat				San Joaquin Kit Fox				Golden Eagle				Western Burrowing Owl				Swainson's Hawk				Giant Garter Snake				CA Tiger Salamander		CA Red-Legged Frog		Covered Shrimp			
Project Name	Planning Surveys	Preconstruction Surveys	AMM	Cpnstruction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Minimization	Planning Surveys	Minimization	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
Non-potable Water Distribution System Phase II													X	X			X	X														
Souza II Erosion Repair					X	X	X		X	X	X		X	X	X																	
Hess Creek Watershed Restoration Project					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X		X	X	X		
Three Stormwater Basins - Re-establish Low Flow Channel																																
Ferro/Ronconi Project					X	X	X						X	X	X																	
Columbia Solar Project					X	X					X		X	X	X				X													
Mount Diablo Recycling Center 5-acre Lease Site													X	X			X	X	X	X					X	X						
East Cypress Corridor Specific Plan/Stockpile					X	X					X	X			X	X	X		X	X	X	X										
Pacifica Aveneue Sidewalk Project									X	X	X		X	X	X														X	X		
Marsh Creek Reservoir Trash Rack Replacement											X				X				X													
PG&E Contra Costa-Moraga 230 kV					X	X	X	X	X	X	X		X	X	X	X	X	X	X													
Chevron Pipe Line KLM 32 PIM Repair Project-First Amendment					X	X	X	X					X	X	X	X									X	X						
Chevron Pipe Line KLM 32 PIM Repair Project					X	X	X	X					X	X	X	X									X	X		X				
Marsh Creek Bridge Scour Repair					X	X	X	X	X	X	X	X	X	X	X	X									X	X		X	X	X		X
Marsh Creek Road Bridge 142 Wingwall Repair Project	X	X	X	X					X	X	X	X																	X	X		X
Deer Valley Road Shoulder Widening Project					X	X	X	X	X	X			X	X	X	X									X	X	X				X	X
Marsh Creek Detention Center Bridge Replacement Project					X	X	X		X	X	X		X	X	X														X	X		
Marsh Creek Road Safety Improvements	X	X	X		X	X	X		X	X	X		X	X	X		X	X							X	X			X	X		
Verizon Wireless Bethel Island LP-2097													X	X	X	X	X	X	X	X	X	X							X	X		
AT&T Co-location Project LP13-2111 Marsh Creek Monopine					X	X			X	X	X	X	X	X	X	X	X	X	X	X	X											
Marsh Creek Cell Tower LP13-2069					X	X			X	X	X	X	X	X			X	X	X	X	X											
Shell Pipeline North 20 ILI Repair Project and First Amendment					X	X	X		X	X	X		X	X	X										X	X		X	X	X		X

[1]The implementation of these conditions and their results can be found in the planning survey reports upon request from the Conservancy.

Table 3. Continued

	Species-Level Measures[1]																															
	Alkali milkvetch				Big Tarplant				Brewers dwarf flax				Contra Costa goldfields				Diamond-petaled poppy				Large-flowered fiddleneck				Mount Diablo buckwheat				Mount Diablo fairy-lantern			
Project Name	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
Non-potable Water Distribution System Phase II																																
Souza II Erosion Repair					X	X			X	X			X	X			X	X			X	X			X	X			X	X		
Hess Creek Watershed Restoration Project					X	X			X	X			X	X			X	X			X	X			X	X			X	X		
Three Stormwater Basins - Re-establish Low Flow Channel																																
Ferro/Ronconi Project																																
Columbia Solar Project																																
Mount Diablo Recycling Center 5-acre Lease Site																																
East Cypress Corridor Specific Plan/Stockpile																																
Pacifica Aveneue Sidewalk Project																																
Marsh Creek Reservoir Trash Rack Replacement																																
PG&E Contra Costa-Moraga 230 kV					X	X			X	X			X	X			X	X			X	X			X	X			X	X		
Chevron Pipe Line KLM 32 PIM Repair Project-First Amendment																																
Chevron Pipe Line KLM 32 PIM Repair Project																																
Marsh Creek Bridge Scour Repair	X	X																														
Marsh Creek Road Bridge 142 Wingwall Repair Project																																
Deer Valley Road Shoulder Widening Project	X	X							X	X																						
Marsh Creek Detention Center Bridge Replacement Project																																
Marsh Creek Road Safety Improvements									X	X											X	X			X	X			X	X		
Verizon Wireless Bethel Island LP-2097																																
AT&T Co-location Project LP13-2111 Marsh Creek Monopine												X	X			X	X															
Marsh Creek Cell Tower LP13-2069																																
Shell Pipeline North 20 ILI Repair Project and First Amendment																																

[1]The implementation of these conditions and their results can be found in the planning survey reports upon request from the Conservancy.

Table 3. Continued

	Species-Level Measures[1]																											
	Round-leaved filaree				Showy madia				Adobe navarretia				Brittlescale				San Joaquin Spearscale				Diablo Helianthella				Caper fruited tropidocarpum			
Project Name	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
Non-potable Water Distribution System Phase II																												
Souza II Erosion Repair	X	X			X	X			X	X			X	X			X	X							X	X		
Hess Creek Watershed Restoration Project	X	X			X	X			X	X															X	X		
Three Stormwater Basins - Re-establish Low Flow Channel																												
Ferro/Ronconi Project																												
Columbia Solar Project																												
Mount Diablo Recycling Center 5-acre Lease Site																												
East Cypress Corridor Specific Plan/Stockpile																												
Pacifica Aveneue Sidewalk Project																												
Marsh Creek Reservoir Trash Rack Replacement																												
PG&E Contra Costa-Moraga 230 kV	X	X			X	X																						
Chevron Pipe Line KLM 32 PIM Repair Project-First Amendment													X	X	X		X	X	X									
Chevron Pipe Line KLM 32 PIM Repair Project													X	X			X	X										
Marsh Creek Bridge Scour Repair																												
Marsh Creek Road Bridge 142 Wingwall Repair Project																												
Deer Valley Road Shoulder Widening Project	X	X			X	X			X	X																		
Marsh Creek Detention Center Bridge Replacement Project																												
Marsh Creek Road Safety Improvements	X	X			X	X			X	X											X	X						
Verizon Wireless Bethel Island LP-2097																												
AT&T Co-location Project LP13-2111 Marsh Creek Monopine																												
Marsh Creek Cell Tower LP13-2069																												
Shell Pipeline North 20 ILI Repair Project and First Amendment																												

[1]The implementation of these conditions and their results can be found in the planning survey reports upon request from the Conservancy.

Table 3. Continued

	Species-Level Measures[1]											
	Mount Diablo fairy-lantern				Mount Diablo Manzanita				Recurved larkspur			
Project Name	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
Non-potable Water Distribution System Phase II												
Souza II Erosion Repair	X	X							X	X		
Hess Creek Watershed Restoration Project	X	X										
Three Stormwater Basins - Re-establish Low Flow Channel												
Ferro/Ronconi Project												
Columbia Solar Project												
Mount Diablo Recycling Center 5-acre Lease Site												
East Cypress Corridor Specific Plan/Stockpile												
Pacifica Aveneue Sidewalk Project												
Marsh Creek Reservoir Trash Rack Replacement												
PG&E Contra Costa-Moraga 230 kV	X	X										
Chevron Pipe Line KLM 32 PIM Repair Project-First Amendment												
Chevron Pipe Line KLM 32 PIM Repair Project												
Marsh Creek Bridge Scour Repair												
Marsh Creek Road Bridge 142 Wingwall Repair Project												
Deer Valley Road Shoulder Widening Project	X	X										
Marsh Creek Detention Center Bridge Replacement Project												
Marsh Creek Road Safety Improvements												
Verizon Wireless Bethel Island LP-2097												
AT&T Co-location Project LP13-2111 Marsh Creek Monopine												
Marsh Creek Cell Tower LP13-2069												
Shell Pipeline North 20 ILI Repair Project and First Amendment												

[1]The implementation of these conditions and their results can be found in the planning survey reports upon request from the Conservancy.

Table 4. Reporting Period Cumulative Impacts on Land Cover Types from Covered Activities and Conservation Measure Implementation (includes projected impacts from activities not yet performed)

	Reporting Period Impacts (acres, unless otherwise noted)		Cumulative Impacts (acres, unless otherwise noted)	
Land Cover Type	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Terrestrial				
Annual grassland	2.67	10.29	81.84	112.88
Alkali grassland	0.0	0.0	0.76	1.54
Ruderal	43.10	116.19	113.91	245.01
Chaparral and scrub	0.0	0.0	0.0	0.0
Oak savanna	0.0	0.0	0.0	0.7
Oak woodland	0.0	0.0	0.0	0.0
Subtotal terrestrial	*45.77*	*126.48*	*196.51*	*360.12*
Aquatic				
Riparian woodland/scrub	0.19	0.23	0.55	1.35
Perennial wetland[1]	0.00	0.00	0.07	0.61
Seasonal wetland	0.07	0.00	0.44	2.22
Alkali wetland	0.00	0.01	0.14	0.84
Pond	0.01	0.04	0.01	0.04
Reservoir (open water)[2]	0.00	0.02	0.00	0.02
Slough/Channel (includes stream)	0.00	0.00	0.07	0.14
Subtotal aquatic	*0.27*	*0.30*	*1.28*	*5.22*
Stream (length in linear feet)				
Total stream length	267.00	249.50	788.31	4454.70
Stream length by width category				
≤ 25 feet wide	148.00	54.00	582.00	4074.50
> 25 feet wide	119.00	195.50	206.31	380.20
Stream length by type and order				
Perennial	0.00	105.00	56.31	426.20
Intermittent	119.00	123.50	479.00	3917.50
Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
Ephemeral, 1st or 2nd order	148.00	21.00	253.00	111.00
Subtotal stream length	*267.00*	*249.50*	*788.31*	*4454.70*
Irrigated agriculture				
Cropland	0.0	25.74	128.09	32.30
Pasture	0.0	15.44	0.00	16.80
Orchard	0.0	0.00	1.73	0.00
Vineyard	0.0	0.27	23.08	5.87
Subtotal irrigated agricultural	*0.0*	*41.45*	*152.90*	*54.97*
Other				
Nonnative woodland	0.10	0.45	0.20	1.81
Wind turbines	0.00	0.00	0.00	0.57
Subtotal other	*0.10*	*0.45*	*0.20*	*2.38*

Land Cover Type	Reporting Period Impacts (acres, unless otherwise noted) Permanent	Reporting Period Impacts (acres, unless otherwise noted) Temporary	Cumulative Impacts (acres, unless otherwise noted) Permanent	Cumulative Impacts (acres, unless otherwise noted) Temporary
Uncommon Vegetation Types (subtypes of above land cover types)				
Purple needlegrass grassland	0.00	0.10	0.00	0.16
Wildrye grassland	0.00	0.00	0.03	0.01
Wildflower fields	0.00	0.00	0.00	0.00
Squirreltail grassland	0.00	0.00	0.00	0.00
One-sided bluegrass grassland	0.00	0.00	0.00	0.00
Serpentine grassland	0.00	0.00	0.00	0.00
Saltgrass grassland (alkali grassland)	0.00	0.00	0.20	0.34
Alkali sacaton bunchgrass grassland	0.00	0.00	0.00	0.00
Other uncommon vegetation types	0.00	0.00	0.06	0.00
Subtotal uncommon vegetation types	*0.00*	*0.10*	*0.29*	*0.51*
Uncommon Landscape Features or Habitat Elements				
Rock outcrop	0.00	0.00	0.15	0.13
Cave	0.00	0.00	0.00	0.00
Springs/seeps	0.00	0.00	0.00	0.00
Scalds	0.00	0.00	0.00	0.00
Sand deposits	0.00	0.00	0.00	0.00
Turf	0.00	0.49	0.00	0.49
Buildings - Bat Roosts (number)	0.00	1.00	0.00	1.00
Mines (number)	0.00	0.00	0.00	0.00
Buildings (number)	0.00	0.00	0.00	0.00
Potential nest sites (number)	0.00	0.00	0.00	0.00
Subtotal uncommon landscape features (acres)	0.00	0.49	0.15	0.62
Subtotal uncommon landscape features (number)	*0.00*	*1.00*	*0.00*	*1.00*
Totals (excludes subtypes)				
Acres	46.14	168.68	350.89	422.69
Linear feet	267.00	249.50	788.31	4454.70

[1]Perennial wetlands are equivalent permanent wetlands

[2] Reservoir (open water) is equivalent to aquatic

Table 5. Reporting Period and Cumulative Impacts to Covered Plants

Common Name	Scientific Name	Known Occurrences that May Be Removed by Covered Activities[1]	Impacts (occurrences)	
			Reporting Period	Cumulative
Mount Diablo manzanita	*Arctostaphylos auriculata*	0	--	--
Brittlescale	*Atriplex depressa*	1	--	--
San Joaquin spearscale	*Atriplex joanquiniana*	0	--	[see note[2]]
Big tarplant	*Blepharizonia plumosa*	1	--	--
Mount Diablo fairy lantern	*Calochortus pulchellus*	0	--	--
Recurved larkspur	*Delphinium recurvatum*	1	--	--
Round-leaved filaree	*Erodium macrophyllum*	2	--	[see note[3]]
Diablo helianthella	*Helianthella castanea*	0	--	--
Brewer's dwarf flax	*Hesperolinon breweri*	0	--	--
Showy madia	*Madia radiata*	0	--	--
Adobe navarretia	*Navarretia nigelliformis* ssp. *nigelliformis*	1	--	--
Total		**6**	**0**	**0**

[1] This column provides the limit of impacts, by number of occurrences, on plant species allowable under the HCP/NCCP per HCP/NCCP Table 5-5.

[2] Vasco Project population translocated and impact avoided (2011).

[3] Temporary impacts occurred to round-leaved filaree as part of the PG&E Contra Costa Las Positas Project (2009). The soil was protected from disturbance, the site was returned to pre-project connections, seeds collected on site were propagated, and monitoring reports document that round-leaved filaree persists on site and is as abundant as before the project.

Table 6. Impacts to Aquatic and Stream Land Cover Types by Watershed: Reporting Period and Cumulative

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	Land Cover Type	Permanent	Temporary	Permanent	Temporary
Brushy	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.01	0.12
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.01	0.60
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.02*	*0.72*
	Stream (linear feet)				
	Total stream length	--	--	132.00	348.50
	Stream length by width category				
	≤ 25 feet wide	--	--	110.00	230.50
	> 25 feet wide	--	--	22.00	118.00
	Stream length by type and order				
	Perennial	--	--	56.00	282.50
	Intermittent	--	--	0.00	0.00
	Ephemeral, 3rd or higher order	--	--	0.00	0.00
	Ephemeral, 1st or 2nd order	--	--	76.00	66.00
	Subtotal stream length	*0.00*	*0.00*	*132.00*	*348.50*
Clifton Court Forebay	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
	Stream (linear feet)				
	Total stream length	0.00	0.00	47.00	112.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	112.00
	> 25 feet wide	0.00	0.00	47.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	47.00	112.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*47.00*	*112.00*

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	**Land Cover Type**	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Deer	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
	Stream (linear feet)				
	Total stream length	0.00	0.00	12.00	43.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	15.00
	> 25 feet wide	0.00	0.00	12.00	28.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	12.00	43.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*12.00*	*43.00*
East County Delta	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.02	0.00	0.02
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.02*	*0.00*	*0.02*
	Stream (linear feet)				
	Total stream length	0.00	0.00	0.00	0.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	0.00	0.00	0.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	0.00	0.00	0.00	0.00

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	**Land Cover Type**	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Kellogg	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.05	0.31
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.29	0.01
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.07	0.14
	Subtotal aquatic	*0.00*	*0.00*	*0.41*	*0.46*
	Stream (linear feet)				
	Total stream length	0.00	0.00	6.00	0.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	0.00	0.00	6.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	6.00	0.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*6.00*	*0.00*
Kirker	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.07	0.00	0.07	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.07*	*0.00*	*0.07*	*0.00*
	Stream (linear feet)				
	Total stream length	0.00	0.00	0.00	0.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	0.00	0.00	0.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	0.00	0.00	0.00	0.00

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	**Land Cover Type**	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Lower Marsh	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.04
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.01	0.13	0.24
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.01*	*0.13*	*0.28*
	Stream (linear feet)				
	Total stream length	0.00	0.00	0.31	38.70
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	0.00	0.00	0.31	38.70
	Stream length by type and order				
	Perennial	0.00	0.00	0.31	38.70
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*0.31*	*38.70*
Lower Mt. Diablo	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
	Stream (linear feet)				
	Total stream length	148.00	0.00	148.00	0.00
	Stream length by width category				
	≤ 25 feet wide	148.00	0.00	148.00	0.00
	> 25 feet wide	0.00	0.00	0.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	148.00	0.00	148.00	0.00
	Subtotal stream length	*148.00*	*0.00*	*148.00*	*0.00*

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	**Land Cover Type**	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Sand	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.30	0.73
	Perennial wetland[1]	0.00	0.00	0.04	0.47
	Seasonal wetland	0.00	0.00	0.02	2.18
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.36*	*3.38*
	Stream (linear feet)				
	Total stream length	0.00	0.00	295.00	3639.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	295.00	3639.00
	> 25 feet wide	0.00	0.00	0.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	295.00	3639.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*295.00*	*3639.00*
Upper Marsh	**Aquatic (acres)**				
	Riparian woodland/scrub	0.14	0.21	0.15	0.25
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.06	0.03
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.01	0.04	0.01	0.04
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.15*	*0.25*	*0.22*	*0.32*
	Stream (linear feet)				
	Total stream length	60.00	195.50	89.00	219.50
	Stream length by width category				
	≤ 25 feet wide	0.00	33.00	29.00	57.00
	> 25 feet wide	60.00	162.50	60.00	162.50
	Stream length by type and order				
	Perennial	0.00	105.00	0.00	105.00
	Intermittent	60.00	90.50	60.00	90.50
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	29.00	24.00
	Subtotal stream length	*60.00*	*195.50*	*89.00*	*219.50*

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	**Land Cover Type**	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Upper Mt. Diablo	**Aquatic (acres)**				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland[1]	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
	Stream (linear feet)				
	Total stream length	23.00	21.00	23.00	21.00
	Stream length by width category				
	≤ 25 feet wide	0.00	21.00	0.00	21.00
	> 25 feet wide	23.00	0.00	23.00	0.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	23.00	0.00	23.00	0.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	21.00	0.00	21.00
	Subtotal stream length	*23.00*	*21.00*	*23.00*	*21.00*
Willow	**Aquatic (acres)**				
	Riparian woodland/scrub	0.04	0.01	0.04	0.01
	Perennial wetland[1]	0.00	0.00	0.02	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water)[2]	0.00	0.00	0.00	0.00
	Slough/Channel[3] (includes stream)	0.00	0.00	0.00	0.00
	Subtotal aquatic	*0.04*	*0.01*	*0.06*	*0.01*
	Stream (linear feet)				
	Total stream length	36.00	33.00	36.00	33.00
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	36.00	33.00	36.00	33.00
	Stream length by type and order				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	36.00	33.00	36.00	33.00
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	0.00	0.00	0.00	0.00
	Subtotal stream length	*36.00*	*33.00*	*36.00*	*33.00*

		Impacts			
		Reporting Period		Cumulative	
Watershed/ Basin	**Land Cover Type**	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Total	**Aquatic (acres)**				
	Riparian woodland/scrub	0.19	0.23	0.55	1.35
	Perennial wetland[1]	0.00	0.00	0.07	0.59
	Seasonal wetland	0.07	0.00	0.44	2.22
	Alkali wetland	0.00	0.01	0.14	0.84
	Pond	0.01	0.04	0.01	0.04
	Reservoir (open water)[2]	0.00	0.02	0.00	0.02
	Slough/Channel[3] (includes stream)	0.00	0.00	0.07	0.14
	Total aquatic	***0.27***	**0.30**	***1.28***	***5.22***
	Stream (linear feet)				
	Total stream length	267.00	249.50	788.31	4454.70
	Stream length by width category				
	≤ 25 feet wide	148.00	54.00	582.00	4074.50
	> 25 feet wide	119.00	195.50	206.31	380.20
	Stream length by type and order				
	Perennial	0.00	105.00	56.31	426.20
	Intermittent	119.00	123.50	479.00	3917.50
	Ephemeral, 3rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1st or 2nd order	148.00	21.00	253.00	111.00
	Total stream length	***267.00***	***249.50***	***788.31***	***4454.70***

III. LAND ACQUISITION

Preserve System

The Conservancy is required to establish a Preserve System through acquisition of land in fee title, conservation easement, mitigation banking, or land dedication. Land acquired as part of the Preserve System will be for the benefit of covered species, natural communities, biological diversity, and overall ecosystem function. The following principles guide the development of the Preserve System.

- Maximize Size
- Preserve the Highest-Quality Natural Communities
- Link Acquisitions
- Buffer Urban Impacts
- Minimize Edge
- Fully Represent Environmental Gradients
- Consider Watersheds
- Consider Full Ecological Diversity within Communities
- Consider Management Needs

Reporting year and cumulative Preserve System acquisitions demonstrate implementation of Conservation Measure 1.1 *Acquire Lands for Preserve System.*

Acquisition Analysis Zones

To develop priorities and identify potential locations for acquisition, the inventory area was subdivided geographically into six Acquisition Analysis Zones (Zones; Figure 4). These Zones were further divided into Subzones to distinguish between important landscape features. Acquisition priorities for each Zone were developed primarily on the basis of the ecological opportunities and constraints for collectively achieving the biological goals and objectives for covered species, natural communities, and landscapes.

Land Acquisition Requirements by Acquisition Zone

To ensure that acquisition occurs in locations that will maximize the benefits to natural communities and covered species, acquisition requirements are defined by Zone and, in some cases, by Subzone. The priorities for land acquisition within the Zones under the Initial Urban Development area are shown in Figure 5. Land acquisition priorities under the Maximum Urban Development Area are shown in Figure 6. The differences between the acquisition priorities for the two urban development areas are in Zones 4, 5, and 6. There are no differences between the acquisition priorities for the two urban development areas in Zones 1, 2, and 3.

Figure 4. Acquisition Analysis Zones and Sub-Zones

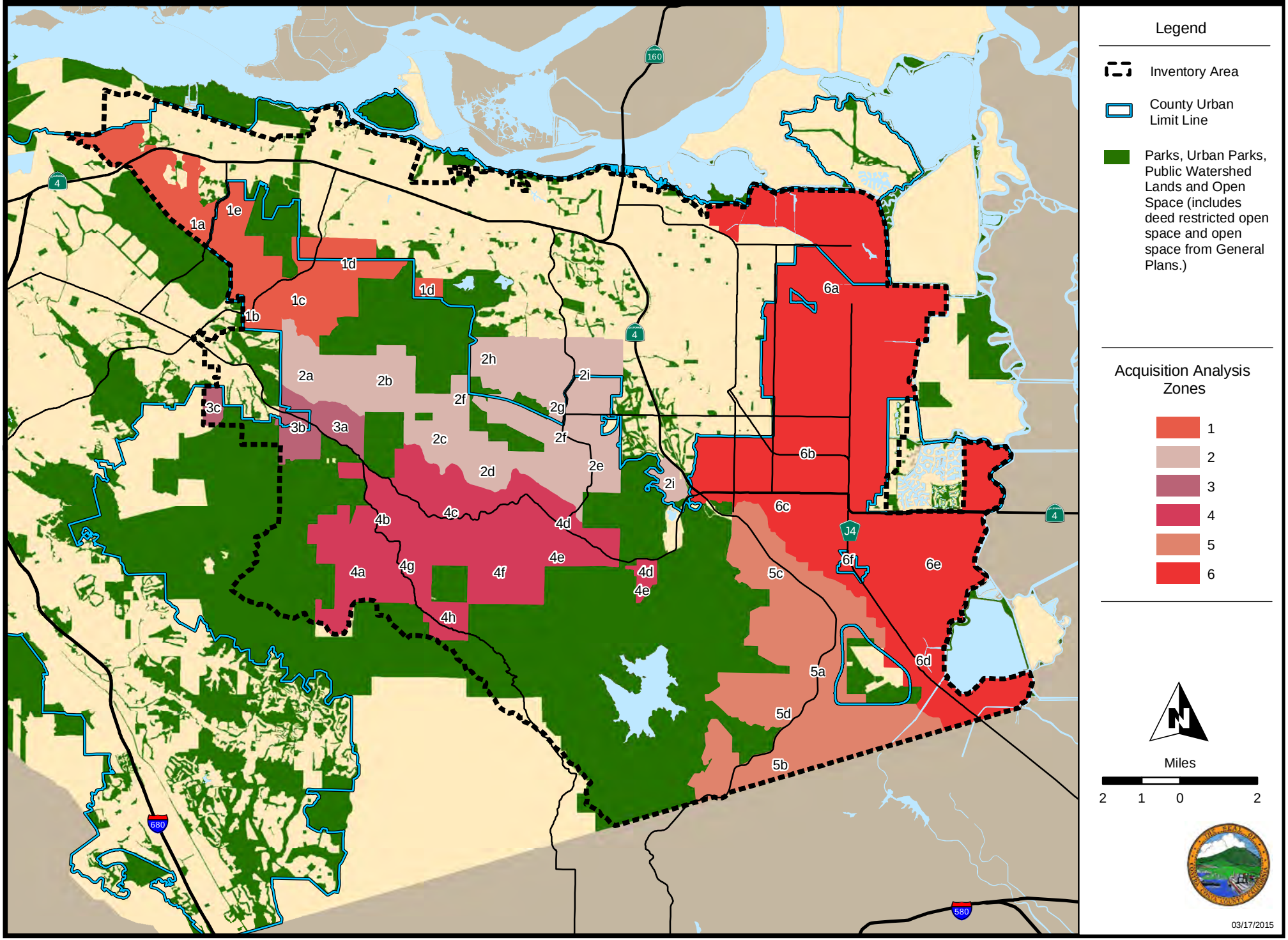
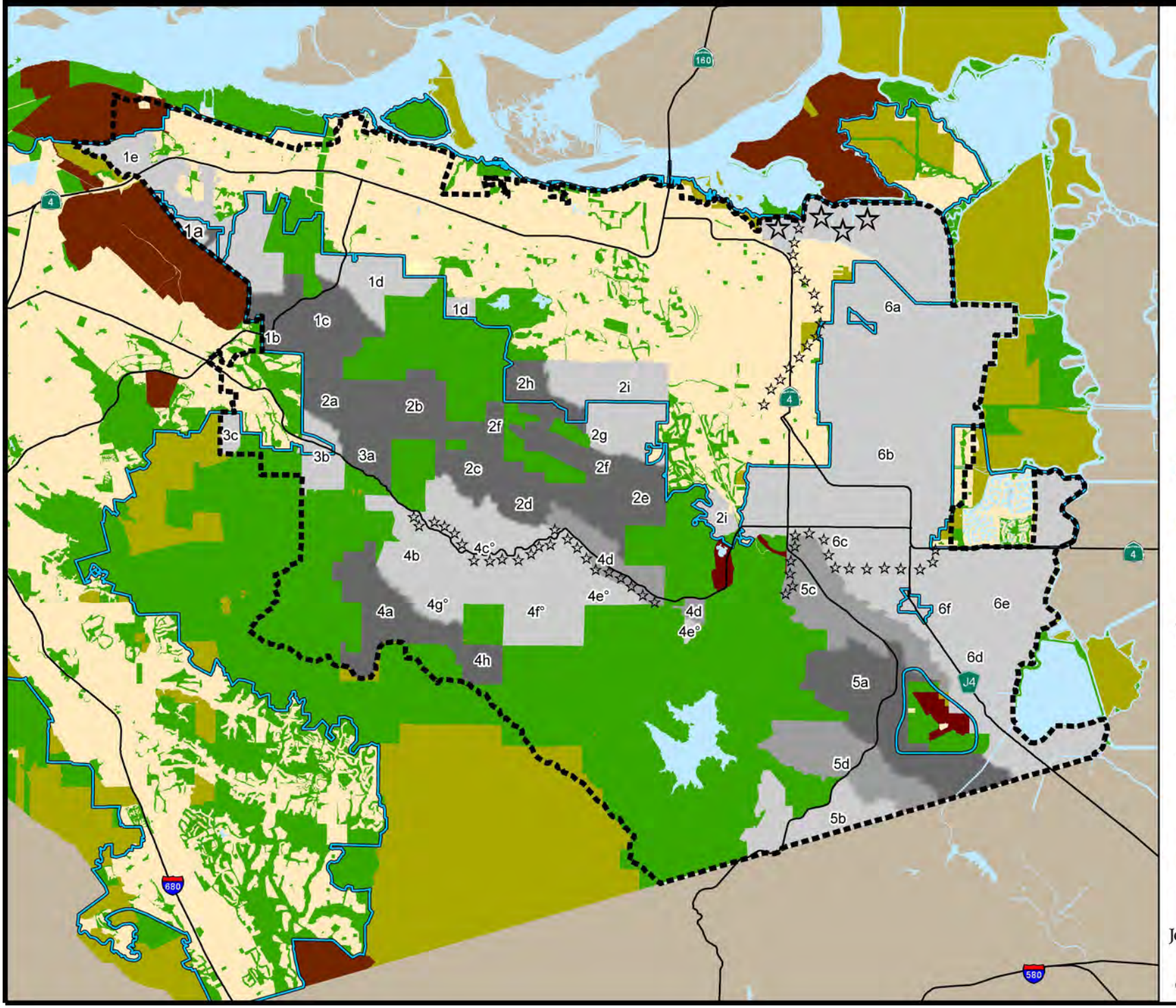


Figure 5. Acquisition Priorities with Initial Urban Development Area



Legend

Inventory Area

County Urban Limit Line

Level of Acquisition Effort

Lower

Medium 1a — Sub-Zone

Higher

Please see Chapter 5 for additional information on the purpose of this map.

Land Use Designations Outside Acquisition Analysis Zones

Parks, Urban Parks, Open Space, and Public Watershed

Public Facilities with Undeveloped Land

Agricultural Land Uses

Development Land Uses

Additional key restoration priorities

Extensive restoration is also planned within areas also emphasized for acquisition

Some acquisitions in subzones 4c, 4e, 4f, 4g are interchangable

N

Miles

2 1 0 2

Jones & Stokes

08/15/2006

Figure 6. Acquisition Priorities with Maximum Urban Development Area

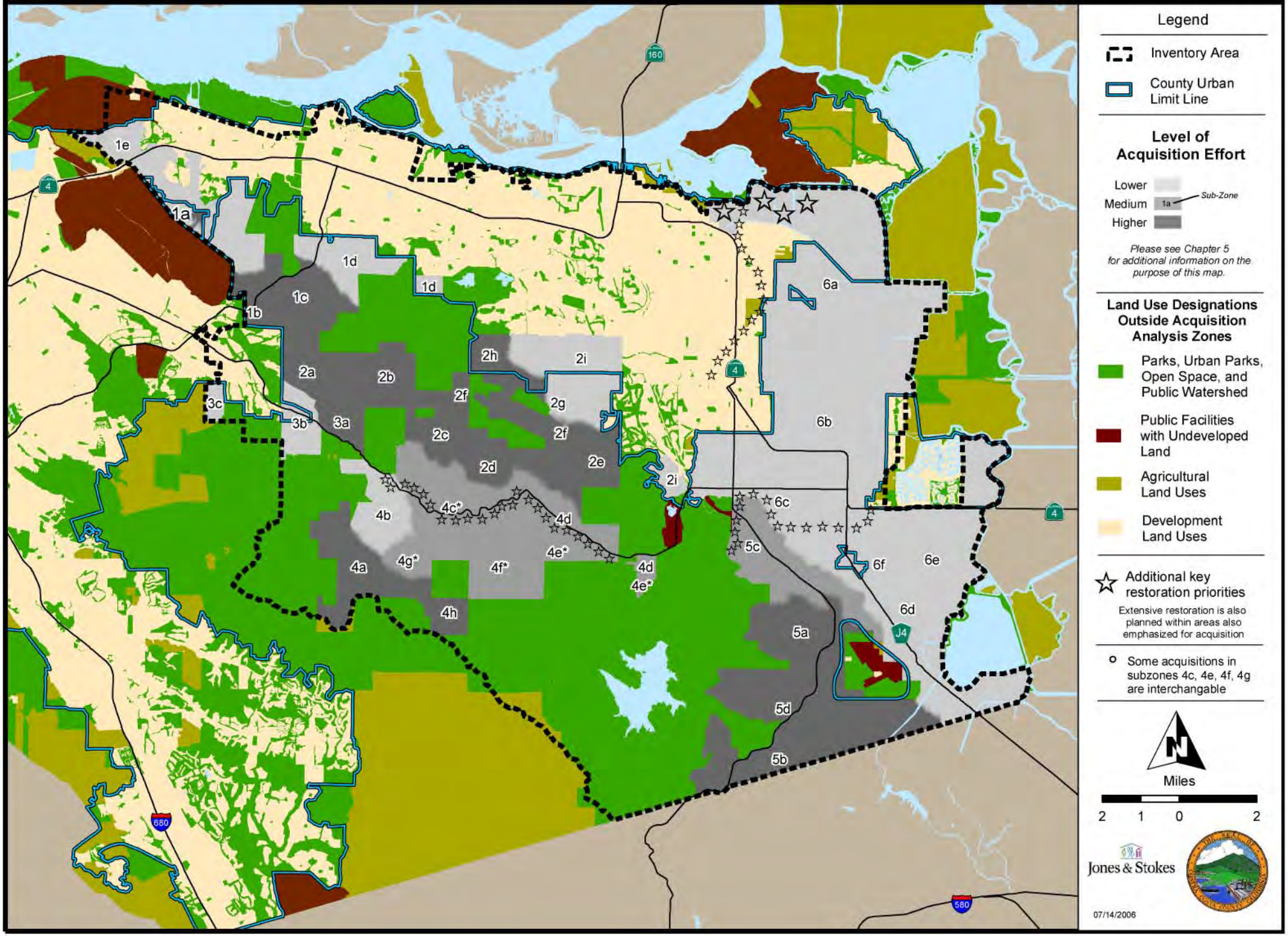
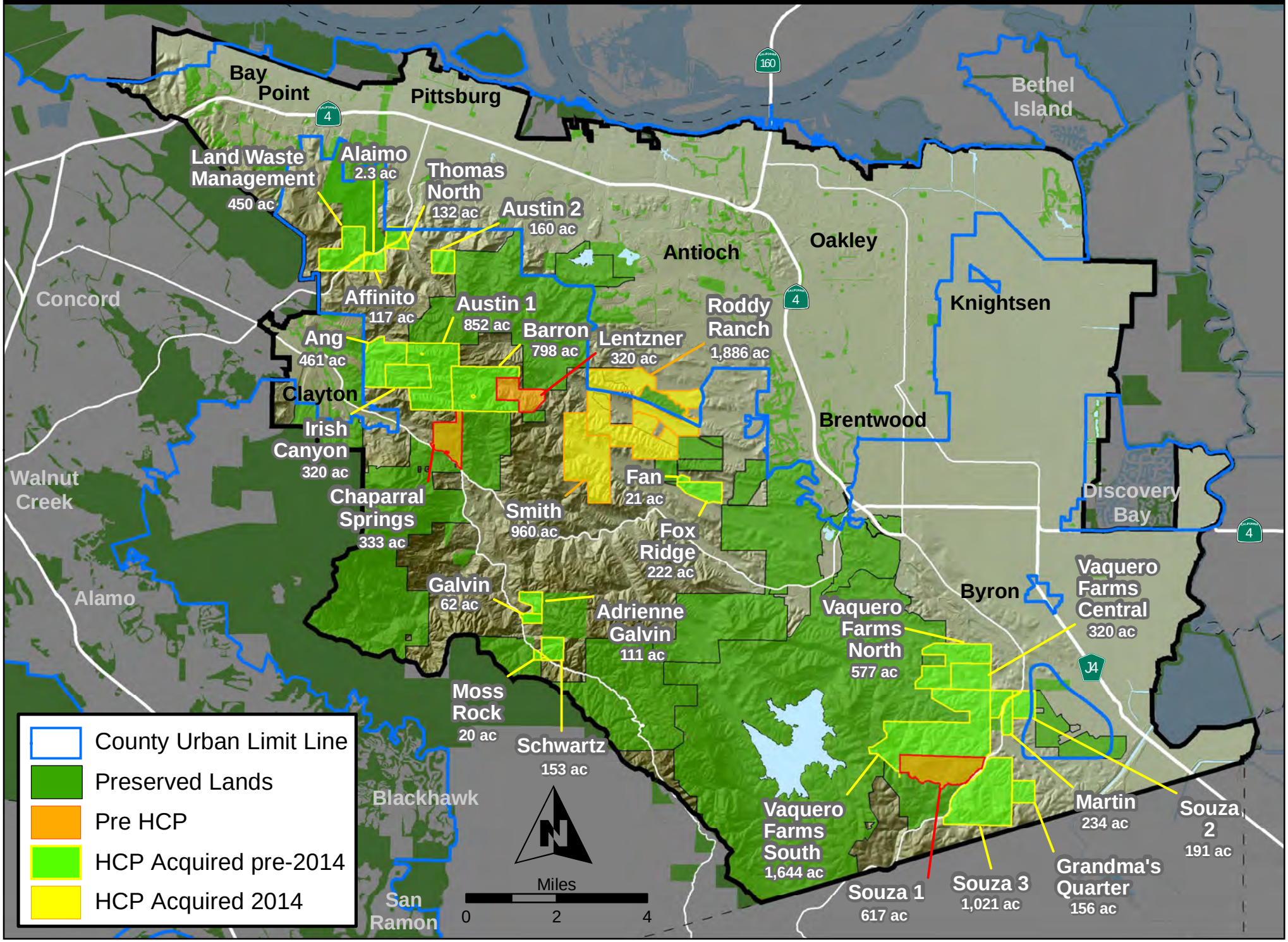


Figure 7. EBRPD Acquisitions Completed under HCP as of December 31, 2014



In addition to quantitative land acquisition requirements by land cover type and Zone, qualitative land acquisition requirements are also provided for some Zones. For instance, connection to existing public lands or preservation of a certain number of ponds or covered plant populations could be required.

2014 Land Acquisition

This section summarizes the progress toward land acquisition requirements during this reporting period (Table 8a). Working with EBRPD, the Conservancy acquired two properties in 2014 for the Preserve System, totaling 2,817 acres: the Smith Property (955 acres) and Roddy Ranch (1,862 acres) (Tables 7 and 8b). Deed restrictions were recorded on the Smith Property and Roddy Ranch. The remainder of the properties (earlier acquisitions) will have deed restrictions in place in 2015.[3] The location of the Smith Property and Roddy Ranch are shown in Figure 7, and details of the properties are shown in Figures 8 through 11.

These two properties represent important contributions to the Stay-Ahead Provision requirements, wildlife corridors, and recreational opportunities in high priority conservation areas—Zones 2 and 4. Stay-Ahead Measurement Method #2, as described in Chapter 8 of the HCP/NCCP, was created to encourage land acquisition in Zone 2 early in Plan implementation because it has a high conservation value and risk for development compared to other Zones—owners tend to sell to real estate speculators or develop the land themselves rather than selling for public open space. Collectively, these two acquisitions contribute to 28% of the Stay-Ahead Measurement Method #2.

High priority Zone 2 acquisitions are of critical importance because the area supports a variety of high quality habitat for several key species and serves a critical connectivity function for San Joaquin kit fox. Both properties expand the conservation corridor between Black Diamond Mines Regional Preserve, Marsh Creek State Park, Round Valley Regional Preserve, and Los Vaqueros Reservoir watershed lands.

Both properties offer substantial recreational benefits and support a key goal of EBRPD's Master Plan in creating a park centered in Deer Valley. These properties enable a significant expansion of the regional trail network and support regional trail connection between Black Diamonds Mines and Round Valley Regional Preserves. Roddy Ranch includes two ridges—one separating Horse Valley and Deer Valley and the other separating Deer Valley and Briones Valley—with elevations ranging from 250 feet to 1,020 feet. These ridgelines provide outstanding scenery with spectacular views of Mount Diablo, the surrounding foothills, and the Delta.

Tables 8 and 10 show the land cover types protected by the two acquisitions. Key highlights from the tables are listed below.

- 1,608.5 acres of annual grassland were acquired during the reporting period with 7,090 acquired to date (43% of the annual grassland preservation requirement achieved).

[3] This finalizes enrollment into the Preserve System (see Plan Section 8.6 *Land Acquisition*).

- 60.2 acres of alkali grassland were acquired during the reporting period with more than 225 acquired to date (18% of the alkali grassland preservation requirement achieved).
- 76.7 acres of chaparral were acquired during the reporting period with more than 210 acres acquired to date (38% of the chaparral preservation requirement achieved).
- 974.3 acres of oak woodland were acquired during the reporting period with 2,223.8 acres acquired to date (556% of the oak woodland preservation requirement achieved).
- 10.7 acres of alkali wetland were acquired during the reporting period with nearly 30 acres acquired to date (32% of the alkali wetlands preservation requirement achieved).
- 3.8 acres of pond were acquired during the reporting period with nearly 10.7 acquired to date (67% of the pond preservation requirement achieved).
- Acquisition of the Smith Property results in the preservation of 3 of the 13 ponds in Subzone 2c (43% of the requirement).

Table 10 summarizes progress toward preservation requirements of covered plant populations.[4] During the reporting period, 2014 acquisitions were surveyed for covered plants. Three occurrences of shining navarretia (*Navarretia nigelliformis* subsp. *radians*),[5] two populations of big tarplant (*Blepharizonia plumosa*), and one occurrence of Brewer's dwarf flax (*Hesperolinon breweri*) were documented on the Roddy Ranch property. These acquisitions are large and multiple years will be needed to survey them for all HCP/NCCP target plant species.

To date, 46 known occurrences of covered plant populations have been preserved: 1 occurrence of brittlescale (*Atriplex depressa*); 2 occurrences of round-leaved filaree (*Erodium macrophyllum*); 3 occurrences of Brewer's dwarf flax and Mount Diablo fairy lantern (*Calochortus pulchellus*); 5 occurrences of shining navarretia; 8 occurrences of San Joaquin spearscale (*Atriplex joaquiniana*) and 12 occurrences big tarplant and Diablo helianthella.

The 2014 acquisitions are known to support or have a strong potential to support several covered species, including the following:

- Alameda whipsnake (*Masticophis lateralis euryxanthus*)

[4] The reported covered plant populations include only those occurrences confirmed in annual inventories. As such, plant populations acquired in the current reporting year may not be included if an inventory has not yet been conducted.

[5] The species *Navarretia nigelliformis* subsp*. nigelliformis* is no longer considered to occur within Contra Costa County based on specimen annotations at the UC and Jepson Herbaria at the University of California Berkeley as well as the opinions of experts in the genus. This taxon is now recognized as *Navarretia nigelliformis* subsp*. radians*. Pending further policy clarification, the Conservancy is treating shining navarretia (*Navarretia nigelliformis* subsp*. radians*) as a covered species and applying permit requirements for adobe navarretia (*Navarretia nigelliformis subsp. Nigelliformis*) to shining navarretia *(Navarretia nigelliformis subsp. radians*).

- California tiger salamander (*Ambystoma californiense*)
- California red-legged frog (*Rana aurora draytonii*)
- Western pond turtle (*Actinemys marmorata*)
- Western burrowing owl (*Athene cunicularia hypugaea*)
- Golden eagle (*Aquila chrysaetos*)
- Swainson's hawk (*Buteo swainsoni*)
- Tri-colored black bird (*Agelaius tricolor*)
- Foothill yellow-legged frog (*Rana boylii*)
- San Joaquin kit fox (*Vulpes macrotus mutica*)
- Silvery legless lizard (*Anniella pulchra pulchra*)
- Vernal pool fairy shrimp species
- Big tarplant (*Blepharizonia plumosa*)
- Brittlescale (*Atriplex depressa*)
- Spearscale (*Atriplex joaquiniana*)
- Mount Diablo fairy lantern (*Calochortus pulchellus*)
- Diablo helianthella *(Helianthella castanea*)
- Brewer's dwarf flax (*Hesperolinon breweri*)
- Shining navarretia *(Navarretia nigelliformis subsp. radians*)
- Round-leaved filaree (*Erodium macrophyllum*)

Table 11 describes land acquisition, species habitat, and covered plant preservation requirements by Zone and/or Subzone. The table demonstrates progress toward land acquisition requirements within all five Zones and their Subzones. Key highlights include the following acquisition achievements to date.

- 37% of Subzone 1b/c annual grassland requirements and 42% of 1d total area requirements were met.
- 49% of Subzone 2d and 10% of Subzone 2e requirements to protect 800 acres of annual grassland in each Subzone were met.
- 30% of Subzone 4h requirement to protect 75% of natural land cover types was met.
- 44% of Zone 5 requirement to protect 40 acres of alkali wetland was met.
- 40% of the estimated minimum overall land acquisition requirement and 30% of the estimated maximum requirement were met.

Smith Property

The Smith Property totals 955 acres and is located in the center of the inventory area along Briones Valley Road (Figures 7 and 9). This high-priority acquisition is composed of a mosaic of important habitat types including annual grassland, chaparral, oak savanna, oak woodland, pond, wetland, and seasonal wetland. Most of the property is located in the HCP/NCCP Acquisition Analysis Zone 2 (a small portion of the property is in Zone 4). Within Zone 2, the property lies within Subzones 2c, 2d, and 2f. The portion of the property in Zone 4 is within subzone 4c. The property is the first acquisition in Subzones 2c and 4c. Subzones 2c, 2d, and 2f are designated as high priority for acquisition for the Preserve System.

Smith Property with view of Mount Diablo
Photo Credit: Heath Bartosh, Nomad Ecology

Within Zone 2, specific conservation targets exist for land cover and species habitat. The property contributes to annual grassland requirements in Subzone 2c (138 acres, 34.5% of requirement), Subzone 2d (253 acres, 31.6% of requirement), and Subzone 2f (0.19 acre, 0.02% of requirement). Subzone 2c is the only subzone with a specific requirement to protect ponds due to its unusually high density of unprotected ponds compared with the rest of the Inventory Area. Protection of most of these ponds will protect an important core population of California red-legged frog, California tiger salamander, and western pond turtle centrally located in the Preserve System. With the acquisition of this property, 3 of the 13 ponds in Subzone 2c (43% of the requirement) are now protected.

The presence of oak woodland (469.54 acres), chaparral (8.64 acres), oak savanna (34.64 acres), riparian woodland/scrub (10.62 acres), seasonal wetland (0.21 acre), alkali wetland (1.75 acres), pond (0.96 acre), and stream (32,931.63 feet) contribute to the Preserve System–wide acquisition requirements.

Roddy Ranch

The Roddy Ranch property totals 1,861.88 acres and is located near Deer Valley Road and Chadbourne Road in Antioch (Figures 7 and 8). The property is one of the most important acquisitions for conservation in the entire Inventory Area. The property supports a mosaic of habitat types including alkali grassland, alkali wetland, chaparral, grassland, oak savanna, oak woodland, pond, and seasonal wetland.

Roddy Ranch is entirely located in Zone 2 and is the first acquisition in Subzones 2f, 2g, 2h, and 2i. Subzones 2f and 2h are designated as high priority for acquisition for the Preserve System.

Within Zone 2, specific conservation targets exist for land cover and species habitat. Acquisition of the property contributes to annual grassland requirements in Subzone 2f (432.30 acres, 43% of requirement); Subzone 2h (272.71 acres, 45% of requirement); Subzone 2e (376 acre, 47% of requirement); Subzone 2e, 2f, and 2h combined (1,081 acres, 45% of requirement); and Preserve System–wide (1,183.14 acres, 7% of requirement). The property contributes to several Zone 2–wide requirements: 16% of the estimated minimum requirement, 12% of the estimated maximum requirement, and 24% of the Stay-Ahead Measurement Method #2.

Roddy Ranch
Photo Credit: East Contra Costs County Habitat Conservancy

The presence of alkali grassland (58.38 acres), oak woodland (504.71 acres), chaparral (68.02 acres), oak savanna (20.96 acres), alkali wetland (8.99 acres), seasonal wetland (2.04 acres), pond (2.83 acres), and stream (48,614 feet) also contribute to Preserve System–wide acquisition requirements. The Roddy Ranch property provides suitable habitat for a variety of covered wildlife species including San Joaquin kit fox, California red-legged frog, California tiger salamander, golden eagle, western burrowing owl, Swainson's hawk, Alameda whipsnake, silvery legless lizard, western pond turtle, and covered fairy shrimp species. The property supports big tarplant, round-leaved filaree, shining navarretia, and Brewer's dwarf flax. The property is also known to support several special-status, non-covered species such as San Joaquin pocket mouse (*Perognathus inornatus*), American badger (*Taxidea taxus*), California fairy shrimp, numerous bat and migratory species, and plant species associated with grassland and other habitats present on Roddy Ranch.

A Note on Property Acreages

All acreage figures provided in this section were derived from the Conservancy's geographic information system (GIS). GIS measurements typically do not match the acreage stated in deeds and legal descriptions. Because the existing parcel data is not necessarily accurate in rural areas, the Conservancy uses a variety of techniques to better map the boundaries of the acquired properties. These techniques include aerial photography and descriptions of metes and bounds. Following these refinements, GIS acreage calculations and those reported in deeds may differ. Any remaining discrepancies are probably related to discrepancies in assessor parcel maps, inaccurate fence line placement, and errors made in original and sometimes very old surveys. GIS acreages are used in this section because GIS is the only practical means of reliably measuring the amount of land cover and the other features within each property.

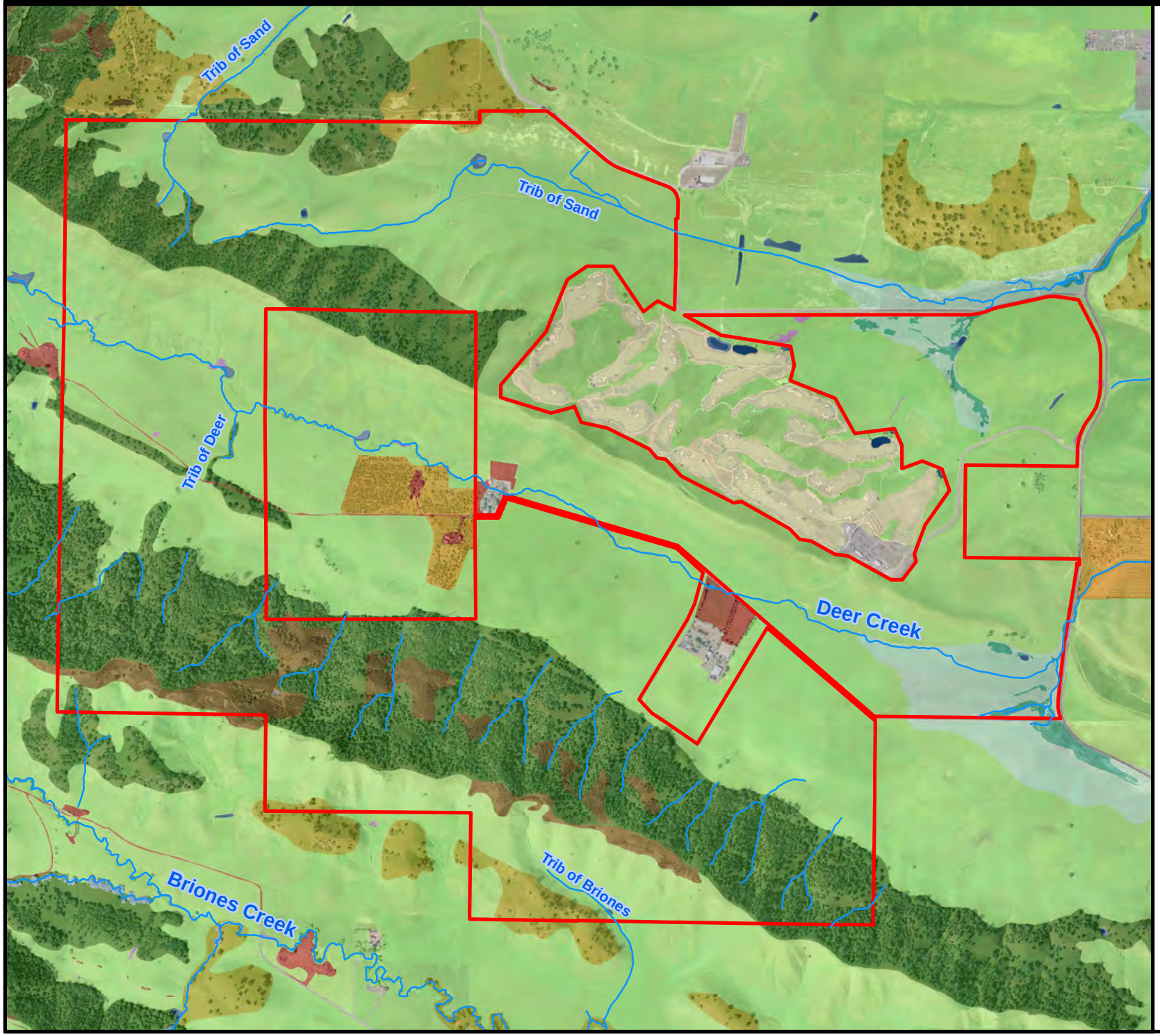
A Note on Land Cover Mapping Refinements and Cumulative Acreages

The Conservancy revises its GIS land cover mapping in the Preserve System as survey and inventory of these lands progress. These revisions can result in changes to cumulative acreages from year to year.

Pre-Existing Conservation Easements

The Plan provides the Conservancy the choice of counting or not counting the areas within conservation easements toward conservation requirements. If they are counted, the impacts associated with the development projects mitigated by these conservation easements must be counted toward impact allocations. In this Annual Report they are not counted.

Figure 8. Roddy Ranch Property - Land Cover Map



Legend

Property Boundary

Landcover

Grassland

- grassland (1,186.04 acres)
- alkali grassland (58.39 acres)
- ruderal (4.05 acres)

Wetland

- permanent wetland
- seasonal wetland (2.03 acre)
- alkali wetland (8.99 acres)

Aquatic

- stream (51,718.11 feet)
- aquatic/open water
- pond (2.81 acre)
- riparian
- chaparral (68.04 acres)
- oak savanna (20.97 acres)
- oak woodland (504.72 acre)
- rock outcrops

Irrigated Agriculture

- pasture
- cropland
- vineyard

Developed

- urban (5.85 acres)
- aqueduct
- wind turbines

N

Feet

0 1,500 3,000

03/17/2015

Figure 9. Smith Property - Land Cover Map

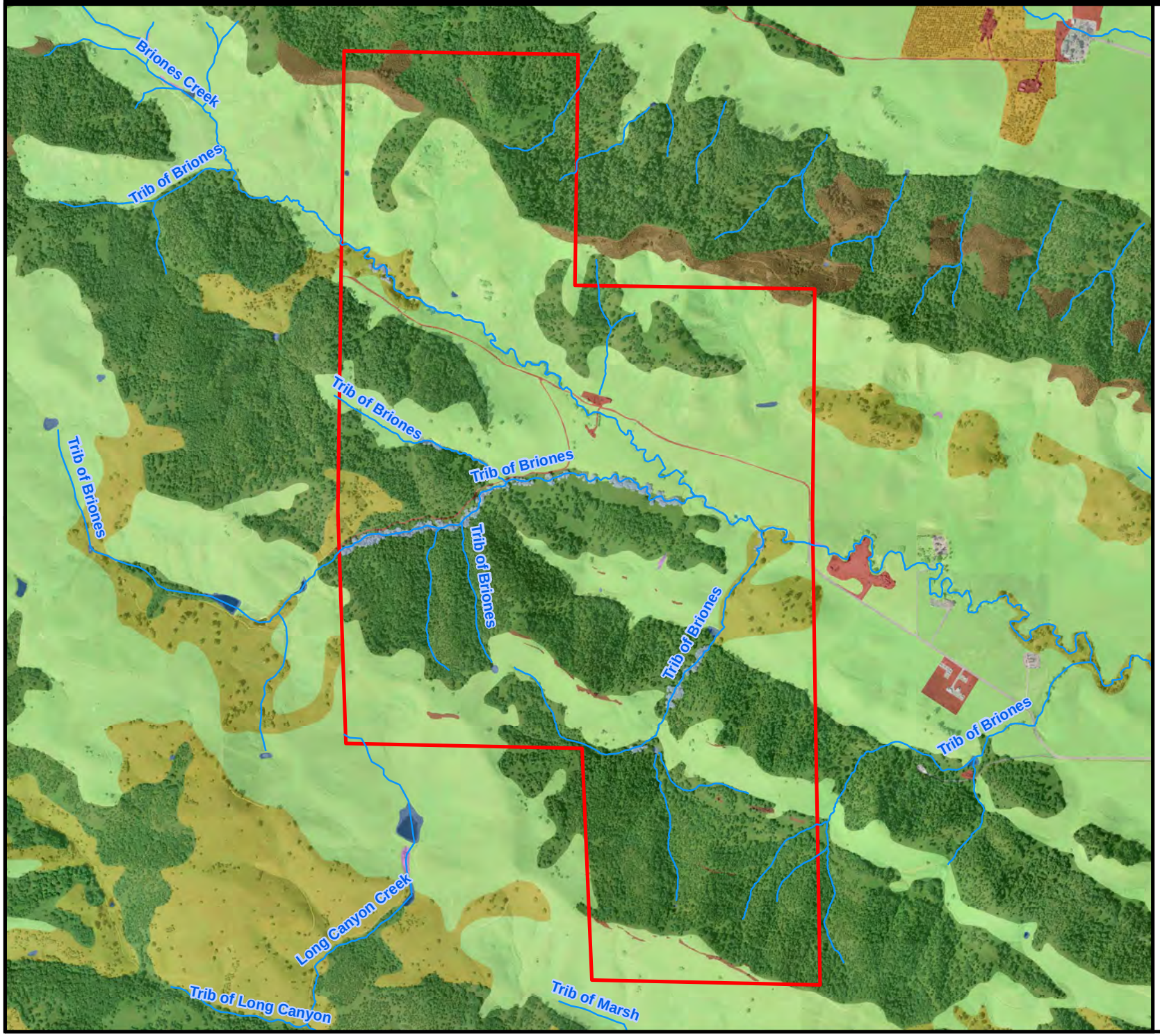


Figure 10. Smith Property: Representative Photographs

Photo 1: Looking south through Briones Valley

Photo 2: Looking west toward Mount Diablo

Photo 3: Briones Creek

Photo 4: Mosaic of habitats on Smith Property

Photo 5: View to the north from southern ridge across Briones Valley

Photo 6: Western Boundary looking north across Briones Valley

Figure 11. Roddy Ranch: Representative Photographs

Photo 1: Large pond in Horse Valley

Photo 2: View East through Briones Valley

Photo 3: Pool in Horse Valley with Mount Diablo visible in the distance.

Photo 4: Ridgeline and Deer Valley

Photo 5: Rock outcrops on ridgeline

Photo 6: View of Mount Diablo from Deer Valley

Souza 1

Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 12/23/2004
Acres: 615.28
Key land cover: annual grassland, alkali grassland, seasonal wetland, alkali wetland, pond
Land Cost: $2,961,600
Eligible for the following Section 6 grants: FY06 and FY07

Funding Source	Funding Amount	Current Fair Market Value	Source of non-federal match?
Moore Foundation grant	$1,500,000	$1,408,023	yes
EBRPD REP Program	$1,461,600	$1,371,977	no
TOTAL	$2,961,600	$2,780,000	

Lentzner

Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 3/4/2005
Acres: 317.05
Key land cover: annual grassland, oak savanna, oak woodland, chaparral, alkali grassland, seasonal wetland, alkali wetland, pond
Land Cost: $960,000
Eligible for the following Section 6 grants: FY07 (it is also in the eligible area for FY08 and FY09 but was omitted from the parcel list because of its acquired status)

Funding Source	Funding Amount	Current Fair Market Value	Source of non-federal match?
EBRPD (tax revenues)	$270,402	$377,436	yes
Prop 40 Per capita	$273,000	$381,063	yes
EBRPD REP Program	$416,598	$581,501	no
TOTAL	$960,000	$1,340,000	

Chaparral Spring

Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 12/23/2008
Acres: 329
Key land cover: annual grassland, oak savanna, oak woodland, chaparral, seasonal wetland, pond
Land Cost: $1,400,000
Eligible for the following Section 6 grants: FY07 (one of the parcels), FY08 and FY09

Funding Source	Funding Amount	Current Fair Market Value	Source of non-federal match?
California Coastal Conservancy	$1,400,000	$1,400,000	yes
TOTAL	$1,400,000	$1,400,000	

Schwartz

Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 6/9/2009
Acres: 152.24
Key land cover: oak woodland, chaparral, annual grassland, streams and oak savanna.
Appraised Value: $803,880
Purchase Price: $803,880
Difference: $0

Funding Source	Funding Amount	Percent
EBRPD (tax revenues)	$127,249	16%
US Bur Rec CVPCP Grant	$676,631	84%
TOTAL	$803,880	100%

Souza 2

Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 7/30/2009
Acres (deed): 191.49
Key land cover: annual grassland, alkali grassland, seasonal wetland
Land Cost: $1,692,000
Eligible for the following Section 6 grants: FY06 and FY07

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$200,000	12%	yes
ECCC Habitat Conservancy (fees)	$342,000	20%	no
US Bur Rec CVPCP Grant	$550,000	33%	no
SWRCB Grant[5]	$600,000	35%	yes
TOTAL	$1,692,000	100%	

Vaquero Farms South

To be Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 12/31/2009
Acres: 1,648
Key land cover: annual grassland, alkali grassland, seasonal wetland, alkali wetland, pond
Appraised value: $3,160,000
Purchase price: $2,924,000
Difference: $236,000
Eligible for the following Section 6 grants: FY06 and FY07

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$500,000	17%	yes
ECCC Habitat Conservancy(fees)	$250,000	9%	no
Section 6 Grant	$2,174,000	74%	no
TOTAL	$2,924,000	100%	

Non-Federal Match Needed: **$2,657,111.11** (amount necessary to achieve 55:45 ratio of match to Section 6)

Source	Amount
EBRPD (tax revenues)	$500,000
Bargain sale (seller donation)	$236,000
Match from prior acquisitions	$1,921,111
TOTAL	$2,657,111

Fox Ridge

To be Acquired by: EBRPD in partnership with Conservancy
Date Acquired: 12/30/2009
Acres: 221.13
Key land cover: annual grassland, seasonal wetland, oak savanna
Appraised Value: $1,960,000
Purchase Price: $1,760,000
Difference: $200,000
Eligible for the following Section 6 grants: FY07, FY08 and FY09

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$250,000	14%	yes
ECCC Habitat Conservancy(fees)	$75,000	4%	no
Moore Foundation	$880,000	50%	yes
Section 6 Grant	$555,000	32%	no
TOTAL	$1,760,000	100%	

Non-Federal Match Needed: **$678,333** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Moore Foundation	$880,000
Bargain sale (seller donation)	$200,000
EBRPD (tax revenues)	$250,000
TOTAL	$1,330,000
Excess match:	$651,667

Vaquero Farms North

Acquired by: EBRPD in partners EBRPD in partnership with Conservancy
Date acquired: 6/29/2010
Acres: 574.86
Key land cover: annual grassland, alkali grassland, seasonal wetland, alkali wetland, pond
Land Cost: $2,770,000
Eligible for the following Section 6 grants: FY06 and FY07

Proposed Funding Source	Funding Amount	Percent	Source of non-federal match?
Section 6 Grant	$2,770,000	100%	no
TOTAL	$2,770,000	100%	

Non-Federal Match Needed: **$3,385,556** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Bargain sale (seller donation)	$16,000
SWRCB grant for restoration	$150,000
DFG Grants for restoration	$150,000
Match from prior acquisitions	$3,097,077
TOTAL	$3,413,077
Excess match:	$27,521

Grandma's Quarter

Acquired by: EBRPD in partnership with Conservancy
Date aquired: 7/16/2010
Acres: 156.96
Key land cover: annual grassland, alkali grassland, pond, seasonal wetland, creek
Appraised Value: $1,036,200
Purchase Price: $1,036,200
Difference: $0
Eligible for the following Section 6 grants: FY06, FY07

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$564,725	54%	yes
Section 6 Grant (FY06)	$471,475	46%	no
TOTAL	$1,036,200	100%	

Non-Federal Match Needed: **$576,247** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Match from prior acquisitions	$11,522
EBRPD (tax revenues)	$564,725
TOTAL	$576,247
Excess match:	$0

Martin

Acquired by:	EBRPD in partnership with Conservancy
Date aquired:	7/16/2010
Acres:	234.35
Key land cover:	annual grassland, seasonal wetland, permanent wetland, creek
Appraised Value:	$ 2,745,395
Purchase Price:	$ 2,745,395
Difference:	$ 2,745,395
Eligible for the following Section 6 grants:	FY06, FY07

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$1,629,816	59%	yes
Section 6 Grant (FY06)	$1,115,579	41%	no
TOTAL	$2,745,395	100%	

Non-Federal Match Needed: **$1,363,485** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
EBRPD (tax revenues)	$1,629,816
TOTAL	$1,629,816
Excess match:	$266,331

Souza 3

Acquired by:	EBRPD in partnership with Conservancy
Date aquired:	10/22/2010
Acres:	1,025.87
Acres not in CE:	915.37
Key land cover:	annual grassland, seasonal wetland, permanent wetland, creek
Appraised Value:	$5,300,400
Value of CE area:	$75,975
Value of non CE	$5,224,425
Purchase Price:	$5,300,400
Difference:	$0
Eligible for the following Section 6 grants:	FY06, FY07

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$915,220	18%	yes
Moore Foundation	$2,000,000	38%	yes
Section 6 Grant (FY07)	$2,385,180	46%	no
TOTAL	$5,300,400	101%	

Non-Federal Match Needed: **$2,915,220.00** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Match from prior acquisitions	$282,330
Moore Foundation	$2,000,000
EBRPD (tax revenues)	$915,220
TOTAL	$3,197,550
Excess match:	$206,355

Non-Easement

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$839,245	16%	yes
Moore Foundation	$2,000,000	38%	yes
Section 6 Grant (FY07)	$2,385,180	46%	no
TOTAL	$5,224,425	100%	

Non-Federal Match Needed: **$2,915,220.00** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Match from prior acquisitions	$282,330
Moore Foundation	$2,000,000
EBRPD (tax revenues)	$839,245
TOTAL	$3,121,575

Excess match: $206,355

Easement

EBRPD's Purchase of Conservation Easement Area of Souza 3 (no relation to WCB or Section 6 Grant)

Acquired by:	EBRPD
Date Acquired:	9/30/2010
Acres:	110.50
Appraised Value:	$75,975
Purchase Price:	$75,975
Difference:	$0

Funding Source	Funding Amount
EBRPD (tax revenues)	$75,975.00

Ang

Acquired by:	EBRPD in partnership with Conservancy
Date Acquired:	8/9/2010
Acres (deed):	461.9
Key land cover:	annual grassland, oak savanna, oak woodland, pond, riparian, creek
Appraised Value:	$2,856,000
Purchase Price:	$2,763,840
Difference:	$92,160
Eligible for the following Section 6 grants:	FY07, FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$1,520,115	55%	yes
Section 6 Grant	$1,243,725	45%	no
TOTAL	$2,763,840	100%	

Non-Federal Match Needed: **$1,520,108** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Bargain sale (seller donation)	$92,160
EBRPD (tax revenues)	$1,520,115
TOTAL	$1,612,275

Excess match: $92,167

Irish Canyon - Chopra

Acquired by:	EBRPD in partnership with Conservancy
Date aquired:	11/24/2010
Acres:	313.04
Key land cover:	annual grassland, oak savanna, oak woodland, pond, riparian, creek
Appraised Value:	$1,760,000
Purchase Price:	$842,000
Difference:	$918,000
Eligible for the following Section 6 grants:	FY07, FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$50,000	3%	yes
Section 6 Grant	$792,000	45%	no
TOTAL	$842,000	100%	

Non-Federal Match Needed: **$968,000.00** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
Bargain sale (seller donation)	$918,000.00
EBRPD (tax revenues)	$50,000.00
TOTAL	$968,000.00
Excess match:	$0.00

Land Waste Management

Acquired by: EBRPD in partnership with Conservancy
Date aquired: 4/26/2011
Acres (deed): 448.64
Key land cover: annual grassland, alkali grassland, oak savanna, oak woodland, alkali wetlands, permanent and seasonal wetlands,
Appraised Value: $3,050,000
Purchase Price: $3,050,000
Difference: $0
Eligible for the following Section 6 grants: FY07, FY08

Funding Source		Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)		$1,177,500	39%	yes
IRWMP Grant from SWRCB		$500,000	16%	yes
Section 6 Grant	(FY08)	$1,372,500	45%	no
TOTAL		$3,050,000	110%	

Non-Federal Match Needed: **$1,677,500** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
EBRPD (tax revenues)	$1,177,500
IRWMP Grant from SWRCB	$500,000
TOTAL	$1,677,500
Excess match:	$0

Barron

Acquired by: EBRPD in partnership with Conservancy
Date acquired: 3/30/2011
Acres: 763.49
Key land cover: annual grassland, oak woodlands, oak savanna, chaparral/scrub, ponds, seasonal wetlands and streams
Appraised Value: $2,952,600
Purchase Price: $2,952,600
Difference: $0
Eligible for the following Section 6 grants: FY07, FY08

Funding Source		Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)		$650,000	22%	yes
WCB Proposition 84		$973,930	33%	yes
Section 6 Grant	(FY08)	$1,328,670	45%	no
TOTAL		$2,952,600	100%	

Non-Federal Match Needed:	**$1,623,930**	(amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
WCB Proposition 848	$973,930
EBRPD (tax revenues)	$650,000
TOTAL	$1,623,930
Excess match:	$0

Thomas Southern/Austin 1

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	9/27/2011
Acres (deed):	813.87
Key land cover:	annual grasslands, oak woodlands, chaparral, oak savanna, ponds, and streams
Appraised Value:	$3,240,000
Purchase Price:	$3,240,000
Difference:	$0
Eligible for the following Section 6 grants:	FY07, FY08

Funding Source		Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)		$377,000	10%	yes
WCB Proposition 84		$1,562,166	41%	yes
Section 6 Grant	(FY07)	$695,425	18%	no
Section 6 Grant	(FY08)	$1,135,409	30%	no
TOTAL		$3,770,000	100%	

Non-Federal Match Needed:	**$1,654,686**	(amount necessary to achieve 55:45 ratio of match to Section 6)

Source	Funding amount
EBRPD (tax revenues)	$324,000
WCB Proposition 84	$1,562,166
TOTAL	$1,886,166

Non-Federal Match Needed:	**$2,184,867**	(amount necessary to achieve 55:45 ratio of match to Section 6)
Total Excess Match	**$530,001**	

PG&E lease revenue

Appraised Value:	$530,000
Purchase Price:	$530,000
Difference:	$0
Eligible for the following Section 6 grants:	FY07, FY08

Proposed Funding Source		Funding Amount		Source of non-federal match?
EBRPD (tax revenues)		$53,000	10%	yes
Section 6 Grant	(FY08)	$477,000	90%	no
TOTAL		$530,000	100%	

Non-Federal Match Needed:	**$583,000**	(amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	
WCB Proposition 848	$1,562,166
EBRPD (tax revenues)	$53,000
In-kind match (prior acquisitions)	$39,520
TOTAL	$1,654,686
Excess match:	$530,001.00

Thomas Central/Austin 2

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	9/27/2011
Acres:	159.91
Key land cover:	annual grassland, ponds, wetlands, and streams
Appraised Value:	$624,000
Purchase Price:	$624,000
Difference:	$0
Eligible for the following Section 6 grants:	FY07, FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$62,400	10%	yes
WCB Proposition 84	$280,800	45%	yes
Section 6 Grant	$280,800	45%	no
TOTAL	$624,000	100%	

Non-Federal Match Needed: **$343,200** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
WCB Proposition 84	$280,800.00
EBRPD (tax revenues)	$62,400.00
In-kind match	$0.00
TOTAL	$343,200.00
Excess match:	$0.00

Affinito

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	2/24/2012
Acres:	117.38
Key land cover:	annual grassland, oak savanna, oak woodland, chaparral, pond, creek
Appraised Value:	$2,235,000
Purchase Price:	$2,235,000
Difference:	$0
Eligible for the following Section 6 grants:	FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$223,500	10%	yes
WCB Proposition 84	$1,005,750	45%	yes
Section 6 Grant	$1,005,750	45%	no
TOTAL	$2,235,000	100%	

Non-Federal Match Needed: **$1,229,250** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
WCB Proposition 84	$1,005,750.00
EBRPD (tax revenues)	$223,500.00
In-kind match	$0.00
TOTAL	$1,229,250.00
Excess match:	$0.00

Vaquero Farms Central

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	3/5/2012
Acres:	319.95
Key land cover:	annual grassland, alkali grasslad, alkali wetland, pond
Appraised Value:	$2,464,000
Purchase Price:	$2,400,000
Difference:	$64,000
Eligible for the following Section 6 grants:	FY07

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$240,000	10%	yes
G&B Moore Foundation	$850,000	35%	yes
WCB Proposition 84	$230,000	9%	yes
Section 6 Grant	$1,080,000	45%	no
TOTAL	$2,400,000	100%	

Non-Federal Match Needed: **$1,320,000** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
WCB Proposition 84	$230,000.00
EBRPD (tax revenues)	$240,000.00
G&B Moore Foundation	$850,000.00
TOTAL	$1,320,000.00
Excess match:	$0.00

Galvin

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	1/30/2012
Acres:	61.95
Key land cover:	annual grassland, chaparral/scrub, oak savanna, oak woodland, creek
Appraised Value:	$370,000
Purchase Price:	$370,000
Difference:	$0
Eligible for the following Section 6 grants:	FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$37,000	10%	yes
G&B Moore Foundation	$166,500	45%	yes
Section 6 Grant	$166,500	45%	no
TOTAL	$370,000	100%	

Non-Federal Match Needed: **$203,500** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
EBRPD (tax revenues)	$37,000.00
G&B Moore Foundation	$166,500.00
TOTAL	$203,500.00
Excess match:	$0.00

Moss Rock

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	1/30/2012
Acres:	20.47
Key land cover:	oak woodland, creek
Appraised Value:	$410,000
Purchase Price:	$410,000
Difference:	$0

Eligible for the following Section 6 grants: FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$41,000	10%	yes
G&B Moore Foundation	$184,500	45%	yes
Section 6 Grant	$184,500	45%	no
TOTAL	$410,000	100%	

Non-Federal Match Needed: **$225,500** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
EBRPD (tax revenues)	$41,000.00
G&B Moore Foundation	$184,500.00
TOTAL	$225,500.00
Excess match:	$0.00

Fan

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	1/31/2012
Acres:	21.04
Key land cover:	oak woodland, creek
Appraised Value:	$220,000
Purchase Price:	$220,000
Difference:	$0

Eligible for the following Section 6 grants: FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$22,000	10%	yes
G&B Moore Foundation	$99,000	45%	yes
Section 6 Grant	$99,000	45%	no
TOTAL	$220,000	100%	

Non-Federal Match Needed: **$121,000** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
EBRPD (tax revenues)	$22,000.00
G&B Moore Foundation	$99,000.00
TOTAL	$121,000.00
Excess match:	$0.00

Thomas North

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	11/2/2012
Acres:	131.52
Key land cover:	grassland, stream, wetland
Appraised Value:	$863,900
Purchase Price:	$863,900
Difference:	$0
Eligible for the following Section 6 grants:	FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$86,390	10%	yes
WCB Proposition 84	$388,755	45%	yes
Section 6 Grant	$388,755	45%	no
TOTAL	$863,900	100%	

Non-Federal Match Needed: **$475,145** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
WCB Proposition 84	$388,755.00
EBRPD (tax revenues)	$86,390.00
TOTAL	$475,145.00
Excess match:	$0.00

Alaimo

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	4/15/2013
Acres:	2.31
Key land cover:	Stream, Urban (with restoration potential)
Appraised Value:	$185,000
Purchase Price:	$185,000
Difference:	$0
Eligible for the following Section 6 grants:	FY08

Funding Source	Funding Amount	Percent	Source of non-federal match?
EBRPD (tax revenues)	$18,500	10%	yes
Section 6 Grant	$166,500	90%	no
TOTAL	$185,000	100%	

Non-Federal Match Needed: **$203,500** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
EBRPD (tax revenues)	$18,500.00
In-kind match (prior due dilligence and ha	$185,500.00
TOTAL	$204,000.00
Excess match:	$0.00

Adrienne Galvin

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	4/30/2013
Acres:	111.18
Key land cover:	Oak Woodland, grassland
Appraised Value:	$1,134,400
Purchase Price:	$1,134,400
Difference:	$0
Eligible for the following Section 6 grants:	FY08

Proposed Funding Source	Funding Amount	Percent	Source of non-federal match?
Section 6 Grant	$1,134,400	100%	no
TOTAL	$1,134,400	100%	

Non-Federal Match Needed: **$1,386,489** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount	
In-kind match	$1,386,489.00	(prior due diligence and habitat enhancement)
TOTAL	$1,386,489.00	
Excess match:	$0.00	

Smith

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	7/15/2014
Acres:	958.76
Key land cover:	Oak woodland, grassland
Appraised Value:	$5,376,000
Purchase Price:	$5,376,000
Difference:	$0
Eligible for the following Section 6 grants:	FY10

Source	Funding Amount	Percent	Source of non-federal match?
WCB Proposition 84	$2,260,275	42%	yes
EBRPD (tax revenues)	$537,600	10%	yes
Section 6 Grant	$2,578,125	48%	no
TOTAL	$5,376,000	100%	

Non-Federal Match Needed: **$2,797,875** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount	
WCB Proposition 84	$2,260,275.00	
EBRPD (tax revenues)	$537,600.00	
TOTAL	$2,797,875.00	
Excess match:	-$353,166.67	(match required by Smith taken from Roddy excess match)

Roddy Ranch

Acquired by:	EBRPD in partnership with Conservancy
Date acquired:	7/24/2014
Acres:	1861.97
Key land cover:	Oak woodland, grassland
Appraised Value:	$14,245,000
Purchase Price:	$14,245,000
Difference:	$0

Eligible for the following Section 6 grants: FY09, FY10

Source	Funding Amount	Percent	Source of non-federal match?
WCB Proposition 84	$4,841,875	34%	yes
EBRPD (tax revenues)	$3,561,250	25%	yes
G&B Moore Foundation Grant	$1,000,000	7%	yes
Section 6 Grant	$2,341,875	16%	no
Section 6 Grant	$2,500,000	17%	no
TOTAL	$14,245,000	100%	

Non-Federal Match Needed: **$9,403,125** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

Source	Amount
WCB Proposition 84	$4,841,875.00
EBRPD (tax revenues)	$3,561,250.00
G&B Moore Foundation Grant	$1,000,000.00
TOTAL	$9,403,125.00
Excess match:	$3,485,277.78
Excess match after Smith:	$3,132,111.11

Table 8a. Summary of Natural Community Protection, Restoration, and Creation by Land-Cover Type

	Land Cover Requirements[3] (acres)			Reporting Period (acres)				Cumulative (acres)				Percent Complete (%)		
Land Cover Type	Protection	Creation	Restoration	Protection	Existing Easement (no credit)	Creation	Restoration	Protection	Existing Easement (no credit)	Creation	Restoration	Protection	Creation	Restoration
Terrestrial														
Annual grassland	16,500	--	--	1,608.5	-	-	-	7,090.0	1,450.8	-	0.04	43%	--	--
Alkali grassland	1,250	--	--	60.2	-	-	-	225.4	17.5	-	0.02	18%	--	--
Ruderal	-	--	--	8.4	-	-	-	68.1	23.9	-	-	-	--	--
Chaparral and scrub	550	--	--	76.7	-	-	-	210.3	-	-	-	38%	--	--
Oak savanna	500	--	165	55.6	-	-	-	366.0	23.9	-	-	73%	--	0%
Oak woodland	400	--	--	974.3	-	-	-	2,223.8	130.8	-	-	556%	--	--
Subtotal terrestrial	*19,200*	--	*165*	*2,783.6*	-	-	-	*10,183.5*	*1,646.9*	-	*0.06*	53%	--	0%
Aquatic														
Riparian woodland/scrub	70	--	55	10.6	-	-	3.1	30.1	0.2	-	4.0	43%	--	7%
Perennial wetland[1]	75	--	85	-	-	-	-	5.2	5.8	-	0.2	7%	--	0%
Seasonal wetland	168	--	163	2.3	-	-	0.2	10.6	1.4	-	8.5	6%	--	5%
Alkali wetland	93	--	67	10.7	-	-	-	30.0	4.3	-	2.4	32%	--	4%
Pond	16	16	--	3.8	-	-	-	10.7	2.7	0.4	-	67%	3%	-
Reservoir (open water)[2]	12	6	--	-	-	-	-	-	-	-	-	0%	0%	-
Slough/Channel	36	--	72	-	-	-	-	-	-	-	-	0%	--	0%
Subtotal aquatic	*470*	--	*442*	*27.4*	-	-	*3.3*	*86.5*	*14.4*	*0.4*	*15.1*	*18%*	--	*3%*
Stream (length in linear feet)														
Perennial	4,224	--	2,112	-	-	-	-	10,645.6	889.1	-	-	252%	--	0%
Intermittent	2,112	--	2,112	28,819.0	-	-	-	117,646.6	24,414.5	-	2,983.4	5570%	--	141%
Ephemeral[4]	26,400	--	26,400	52,726.6	-	-	-	66,742.9	877.8	-	-	253%	--	0%
Classification pending[4]	--	--	--	-	-	-	-	82,210.1	16,445.3	-	683.2	--	--	--
Subtotal stream length	*32,736*	--	*30,624*	*81,545.6*	-	-	-	*277,245.2*	*42,626.7*	-	*3,666.6*	847%	--	*12%*
Irrigated agriculture														
Orchard								0.1	-	-	-	--	--	--
Subtotal irrigated agricultural	*0*	--	--	*0*	*0*	*0*	*0*	*0.1*	*0*	*0*	*0*	--	--	--
Other														
Nonnative woodland			--	--	--	--	-	0.7	-	-	-	--	--	--
Wind turbines	--	--	--	--	--	--	-	38.7	15	-	-	--	--	--
Subtotal other	--	--	--	*0*	*0*	*0*	*0*	*39.4*	*14.5*	*0*	*0*	--	--	--
Developed														
Urban	--	--	--	6.1	-	-	-	25	1	-	-	--	--	--
Turf	--	--	--	0.03	-	-	-	0.03	-	-	-	--	--	--
Subtotal developed	--	--	--	*6.2*	*0*	*0*	*0*	*25*	*1*	*0*	*0*	--	--	--
Uncommon Landscape Features or Habitat Elements														
Rock outcrop	--	--	--	--	--	--	3	16	5	-	-	--	--	--
Cave	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Springs/seeps	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Scalds	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Sand deposits	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Mines (number)	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Buildings (number)	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Potential nest sites (number)	--	--	--	--	--	--	-	0	0	-	-	--	--	--
Subtotal uncommon landscape	--	--	--	*0*	*0*	*0*	*3*	16	5	0.00	0.00	--	--	--
Totals (excludes subtypes)														
Acres	--	--	--	2,817.2	-	-	6.7	10,351.4	1,681.1	0.4	15.1	--	--	--
Linear feet	--	--	--	81,545.6	-	-	-	277,245.2	42,626.7	-	3,666.6	--	--	--

[1]Perennial wetlands are equivalent permanent wetlands.

[2] Reservoir (open water) is equivalent to aquatic.

[3]All land cover requirements assume the Maximum Urban Development Area scenario. The requirements for restoration and creation are dependent upon amount of impact. The requirements provided are based on the conservative estimates of wetland impacts provided in the Plan.

[4]Many of the streams identified as "classification pending" will ultimatley be classified as ephemeral.

Table 8b. Reporting Period Summary of Natural Community Protection, Restoration, and Creation by Land Acquisition

	Reporting Period Land Acqusitions (acres)							
	Roddy Ranch				Smith			
Land Cover Type	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Terrestrial								
Annual grassland	1,186.02	-	-	-	422.52	-	-	-
Alkali grassland	58.38	-	-	-	1.84	-	-	-
Ruderal	4.05	-	-	-	4.35	-	-	-
Chaparral and scrub	68.02	-	-	-	8.64	-	-	-
Oak savanna	20.96	-	-	-	34.64	-	-	-
Oak woodland	504.71	-	-	-	469.54	-	-	-
Subtotal terrestrial	*1,842.14*	*0.0*	*0.0*	*0.0*	*941.53*	*0.0*	*0.0*	*0.0*
Aquatic								
Riparian woodland/scrub	-	-	-	-	10.62	-	-	-
Perennial wetland[1]	-	-	-	-	-	-	-	-
Seasonal wetland	2.04	-	-	-	0.21	-	-	-
Alkali wetland	8.99	-	-	-	1.75	-	-	-
Pond	2.83	-	-	-	0.96	-	-	-
Reservoir (open water)[2]	-	-	-	-	-	-	-	-
Slough/Channel	-	-	-	-	-	-	-	-
Subtotal aquatic	*13.86*	*0.0*	*0.0*	*0.0*	*13.54*	*0.0*	*0.0*	*0.0*
Stream (length in linear feet)								
Perennial	-	-	-	-	-	-	-	-
Intermittent	9,870.86	-	-	-	18,948.12	-	-	-
Ephemeral	38,743.14	-	-	-	13,983.51	-	-	-
Classification pending	-	-	-	-	-	-	-	-
Subtotal stream length	*48,614.00*	*-*	*-*	*-*	*32,931.63*	*0.0*	*0.0*	*0.0*
Irrigated agriculture								
Orchard	-	-	-	-	-	-	-	-
Subtotal irrigated agricultural	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other								
Nonnative woodland	-	-	-	-	-	-	-	-
Wind turbines	-	-	-	-	-	-	-	-
Subtotal other	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Developed								
Urban	5.85	-	-	-	0.28	-	-	-
Aqueduct	-	-	-	-	-	-	-	-
Turf	0.03	-	-	-	-	-	-	-
Landfill	-	-	-	-	-	-	-	-
Subtotal developed	*5.88*	*-*	*-*	*-*	*0.28*	*-*	*-*	*0.0*
Uncommon Landscape								
Rock outcrop	-	-	-	-	3.43	3.43	-	-
Subtotal uncommon landscape	*-*	*-*	*-*	*-*	*3.43*	*3.43*	*-*	*-*
Totals (excludes subtypes)								
Acres	1,861.88	-	-	-	955.35	-	-	0.0
Linear feet	48,614.00	-	-	-	32,931.63	-	-	0.0

[1]Perennial wetlands are equivalent permanent wetlands.

[2] Reservoir (open water) is equivalent to aquatic.

[3]All land cover requirements assume the Maximum Urban Development Area scenario. The requirements for restoration and creation are dependent upon amount of impact. The requirements provided are based on the maximum estimates of wetland impacts provided in the Plan.

Table 9. Cumulative Summary of Progress towards Fulfilling Preservation Requirements for Jurisdictional Wetland and Waters Requirements

Jurisdictional Wetlands and Waters Requirement	Total Requirement[1]	Reporting Period Area Acquired	Cumulative Area Acquired	Percentage of Requirement Met by Acquisition
Preserve-wide Riparian woodland/scrub (acres)	70.0	10.6	30.1	43%
Preserve-wide Perennial wetland (acres)	75.0	0.0	5.2	7%
Preserve-wide Seasonal wetland (acres)	168.0	2.3	10.6	6%
Preserve-wide Alkali wetland (acres)	93.0	10.7	30.0	32%
Preserve-wide Pond (acres)	16.0	3.8	10.7	67%
Preserve-wide Reservoir (open water) (acres)	12.0	0.0	0.0	0%
Preserve-wide Slough/Channel (acres)	36.0	0.0	0.0	0%
Preserve-wide stream length (feet)	32,736.0	81,545.6	182,094.1	556%
Stream length by type and order				
Perennial (feet)	4,224.0	0.0	10,645.6	252%
Intermittent (feet)	2,112.0	28,819.0	117,646.6	5570%
Ephemeral[2] (feet)	26,400.0	52,726.6	66,742.9	253%
Classification Pending[2] (feet)	15,921.0	0.0	82,210.1	419%

[1]Requirements are dependent on the amount of impacts. The requirements provided are based on the conservative estimates of wetland impacts provided in the Plan.

[2]Many of the streams identified as "classification pending" will ultimatley be classified as ephemeral.

Table 10. Reporting Period and Cumulative Conservation of Covered Plants

		Number of Occurrences Protected by HCP/NCCP[1]			
Common Name	***Scientific Name***	**Required**	**Reporting Period**	**Cumulative**	**Percent Complete**
Mount Diablo manzanita[2]	*Arctostaphylos auriculata*	2	0	0	0%
Brittlescale	*Atriplex depressa*	2 (4)[3]	0	1	50% (25%)
San Joaquin spearscale	*Atriplex joaquiniana*	0	0	8	--
Big tarplant	*Blepharizonia plumosa*	3	1	12	400%
Mount Diablo fairy lantern	*Calochortus pulchellus*	1	0	3	300%
Recurved larkspur	*Delphinium recurvatum*	2	0	0	0%
Round-leaved filaree	*Erodium macrophyllum*	2	1	2	100%
Diablo helianthella	*Helianthella castanea*	2	3	12	600%
Brewer's dwarf flax	*Hesperolinon breweri*	1	3	3	300%
Showy madia	*Madia radiata*	0	0	0	0%
Adobe navarretia[4]	*Navarretia nigelliformis subsp. Nigelliformis*	1	0	0	0%
Shining navarretia	*Navarretia nigelliformis subsp. Radians*	1	5	5	500%
Total		16 (18)	13	46	

[1]For the 2014 Annual Report, we are recording sightings confirmed in 2014. Surveys will continue at part of the inventory phase.

[2] Previous Annual Reports have indicated one occurrence of Mount Diablo manzanita (*Arctostaphylos auriculata*) was protected by the HCP/NCCP, however Nomad Ecology confirmed this occurrence was misidentified. 2014 surveys confirmed the misidentified population as special-status plant species Contra Costa manzanita (*Arctostaphylos manzanita* subsp. *laevigata*).

[3]With the initial urban development area, at least two occurrences of brittlescale will be preserved. As soon as permitted urban development exceeds this, four occurrences of brittlescale must be preserved

[4]The species *Navarretia nigelliformis subsp. nigelliformis* is no longer considered to occur within Contra Costa County based on specimen annotations at the UC and Jepson Herbaria at the University of California Berkeley as well as the opinions of experts in the genus. This taxon is now recognized as *Navarretia nigelliformis subsp. radians*. Pending further policy clarification, the Conservancy is treating shining naverretia (*Navarretia nigelliformis subsp. Radians)* as a covered species and applying permit requirements for adobe navarretia (*Navarretia nigelliformis subsp. Nigelliformis*) to shining navarretia (*Navarretia nigelliformis subsp. Radians*).

Table 11. Achievement of Zone-Specific Land Acquisition Requirements: Reporting Period and Cumulative Summary

Zone/ Subzone	Requirements[1]	Acres	Min. Acres Required (MUDA)	Aquired Reporting Period	Acquired Cumulative To date	Percent Achieved
Zone 1						
1a	Annual grassland	85	85	0.0	0.0	0%
1b	Annual grassland (1,450 acres combined w/ 1c)	TBD	1,450	0.0	49.5	37%
1c	Annual grassland (1,450 acres combined w/ 1b)	TBD		0.0	484.6	
1d	25% of total area	478	478	0.0	201.2	42%
1e	No specific requirements	0	0	0.0	0.0	--
All	Estimated minimum requirement	2,100	2,250	0.0	858.9	38%
All	Estimated maximum requirement	2,850	3,150	0.0	858.9	27%
Zone 2						
2a	At least 60% of subzone	1,104	1,104	0.0	1,402.1	127%
2a	Annual grassland (850 acres)	--	850	0.0	935.8	110%
2a	90% of chaparral in 2a, 2b, and 2c (122 acres total)	--	see below	0.0	0.5	--
2a	Land to protect Mount Diablo manzanita	--	--	0.0	0.0	--
2b	Annual grassland (450 acres)	450	450	0.0	393.0	87%
2b	Connection b/w Black Diamond R.P. and Clayton Ranch (w/ 2c)		see below	0.0	0.0	--
2b	90% of chaparral in 2a, 2b, and 2c (122 acres total)		see below	0.0	5.0	--
2c	Annual grassland (400 acres)	400	400	137.2	144.9	36%
2c	0.5-mile wide connect b/w Black Diamond and Clayton Ranch (w/2b)			0.0	0.0	--
2c	90% of chaparral in 2a, 2b, and 2c (122 acres total)		see below	3.8	3.8	--
2c	Seven (7) of thirteen (13) ponds for TCB, CTS, WPT, or CRLF		7	0.0	0.0	0%
2d	Annual grassland (800 acres)	800	800	250.8	389.0	49%

Table 11. Continued

Zone/ Subzone	Requirements[1]	Acres	Min. Acres Required (MUDA)	Aquired Reporting Period	Acquired Cumulative To date	Percent Achieved
2d	Known occurrence of round-leaved filaree (number)	1	1	1.0	1.0	100%
2e	Annual grassland (800 acres)	800	800	0.0	79.5	10%
2e	See 2e/2f/2h below		see below	0.0	0.0	--
2f	Annual grassland (1000 acres)	1,000	1,000	432.6	432.6	43%
2f	San Joaquin kit fox movement corridor	--	--	493.1	493.1	--
2f	Land for SJKF Movement must include 2 occurrence of big tarplant	--	--	0.0	0.0	--
2f	Land for SJKF Movement must include 1 occurrence of of round-leaved filaree	--	--	0.0	0.0	--
2f	Where possible, land for SJKF and plants, should include alkali soils	--	--	0.0	0.0	--
2f	See 2e/2f/2h below	--	see below	0.0	0.0	--
2g	No specific requirements	--	--	0.0	0.0	--
2h	Annual grassland (600 acres)	600	600	274.1	274.1	46%
2h	Two occ. of big tarplant (number)	2	2	1.0	1.0	50%
2h	Known occ. of Mt. Diablo manzanita and Brewer's dwarf flax (number)	2	2	3.0	3.0	150%
2h	San Joaquin kit fox (75%)			295.1	295.1	--
2h	Silvery legless habitat, if present			31.7	31.7	--
2h	See 2e/2f/2h below		see below	0.0	0.0	--
2i	No specific requirements	--	--	0.0	0.0	--
2a/2b/2c	Chaparral habitat (90%)	122	122	3.8	9.4	8%
2e/2f/2h	Annual grassland, combined	2,400	2,400	706.7	786.2	33%
All	Vernal pool invertebrate suitable habitat, wherever possible			Yes (not quantified)	Yes (not quantified)	--
All	Estimated minimum requirement	7,500	7,500	0.0	0.0	0%
All	Estimated maximum requirement	9,550	9,550	0.0	0.0	0%
All	Alternative Stay Ahead Measurement for Zone 2		4,900	1,735.1	4,363.2	89%
Zone 3						
3a	90% of modeled AWS suitable core habitat	159	159	0.0	94.9	60%
3a	Land to increase linkage from chaparral in zone to Mt. Diablo chaparral			0.0	0.0	0%
3b	No specific requirements	0	0	0.0	0.0	0%
3c	No specific requirements	0	0	0.0	0.0	0%
All	Estimated minimum requirement	400	400	0.0	0.0	0%
All	Estimated maximum requirement	750	750	0.0	292.7	39%

Zone/ Subzone	Requirements[1]	Acres	Min. Acres Required (MUDA)	Aquired Reporting Period	Acquired Cumulative To date	Percent Achieved
Zone 4						
4a	75% of natural land cover types	1,700	1,700	0.0	0.0	0%
4a	Known occ. of Diablo helianthella and Brewer's dwarf flax			0.0	0.0	
4a	See 4a/4h below		see below	0.0	0.0	--
4b	Known occ. for Mt. Diablo fairy lantern if extant.	0	0	0.0	0.0	
4c	See 4c/4e/4f/4g below	--	see below	0.0	0.0	--
4d	60% of natural land cover types	953	953	0.0	0.0	0%
4e	See 4c/4e/4f/4g below	--	see below	0.0	0.0	
4f	Known occ. for Brewer's dwarf flax (number)	TBD	TBD	0.0	0.0	
4f	See 4c/4e/4f/4g below	--	see below	0.0	0.0	
4g	See 4c/4e/4f/4g below	--	see below	0.0	0.0	
4h	75% of natural land cover types	791	791	0.0	238.5	30%
4h	Linkage between Morgan Territory Ranch, Morgan Territory RP and Mt. Diablo	--	--	0.0	0.0	
4h	See 4a/4h below	--	see below	0.0	0.0	
4a/4h	90% of modeled AWS suitable core habitat	200	200	0.0	33.7	17%
4c/4e/4f/4g	18%/IDA or 39%MDA of natural land cover types in 4c, 4e, 4f, 4g	1,400	3,000	0.0	0.0	0%
All	Chaparral/Scrub	270	270	0.0	33.2	12%
All	Estimated minimum requirement	4,900	6,050	384.1	384.1	6%
All	Estimated maximum requirement	6,150	8,350	38.4	384.1	5%
Zone 5						
5a	See 5a/5d and 5a/5b/5d below	--	see below	0.0	0.0	--
5b	See 5a/5b/5d below	--	see below	0.0	0.0	--
5c	Annual Grassland/Suitable foraging habitat for Swainson's hawk/ SJKF core and movement habitat	1,000	1,000	0.0	0.0	0%
5c	Modeled silvery legless lizard habitat, if feasible (for MUDA)			0.0	0.0	
5d	See 5a/5d and 5a/5b/5d below	--	see below	0.0	0.0	--
5a/5d	2 (IUDA) or 4 (MUDA) of the occ. of brittlescale	4,300		0.0	2.0	
5a/5d	At least 2 occurrences of recurved larkspur		2	0.0	1.0	50%
5a/5d	170 acres connected to Byron Airport preserved areas		170	0.0	191.5	113%
5a/5b/5d	Annual grassland		7,100	0.0	3,073.3	43%
All	Grassland	5,300	8,100	0.0	3,074.3	38%
All	Alkali grassland	750	900	0.0	129.5	14%
All	Alkali wetland	40	40	0.0	17.5	44%
All	Vernal pool invertebrate suitable habitat, wherever possible			Yes (not quantified)	8.8	
All	Estimated minimum requirement	6,100	9,050	0.0	3,359.9	37%

Zone/ Subzone	Requirements[1]	Acres	Min. Acres Required (MUDA)	Aquired Reporting Period	Acquired Cumulative To date	Percent Achieved
All	Estimated maximum requirement	7,200	11,450	0.0	3,359.9	29%
Zone 6						
6a	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6b	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6c	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6d	See 6d/6e below	--	see below	0.0	0.0	--
6e	See 6d/6e below	--	see below	0.0	0.0	--
6f	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6d/6e	Alkali grassland	100	300	0.0	0.0	0%
6d/6e	Alkali wetland	20	40	0.0	0.0	0%
6a/6b/6c/6f	Cropland or Pasture	250	400	0.0	0.0	0%
All	Estimated minimum requirement	450	800	0.0	0.0	0%
All	Estimated maximum requirement	550	1,100	0.0	0.0	0%
All Zones						
All	Estimated minimum requirement	21,450	26,050	2,817.2	10,351.4	40%
All	Estimated maximum requirement	27,050	34,350	2,817.2	10,351.4	30%

[1] The requirements in this table are a summary of the land acquisition requirements in Chapter 5 of the HCP/NCCP; consult that chapter for a complete description of all land acquisition requirements

IV. HABITAT RESTORATION AND CREATION

Habitat restoration and creation is an integral component of the Plan's conservation strategy. Restoration and creation of specific habitats and land cover types is required in addition to protection of land within the Preserve System. Together, land preservation and restoration/creation provide benefits to covered species, natural communities, biological diversity, hydrologic function, and ecosystem function to compensate for impacts and to contribute to recovery of covered species. Habitat restoration and creation includes several focus areas, as summarized below.

Wetlands and Streams

Wetlands and streams exhibit a high degree of biological, physical, and hydrologic diversity in the inventory area. Consequently, it is important to preserve, enhance, restore, or create the full range of diversity of these land cover types. Restoration of wetlands ensures no net loss of wetlands in the inventory area and replacement of the ecosystem functions lost to covered activities.

Hess Creek Channel Restoration Project
Photo Credit: East Contra Costa County Habitat Conservancy

Alkali Wetlands

Alkali wetlands are particularly rare in the inventory area, mainly occurring on a 380-acre wetland complex in the southeastern portion of the inventory area south and east of Byron. Land cover mapping indicates that less than 1% of the Plan inventory area contains alkali wetlands (see page 3-18 of the Plan).

Mitigation and Contribution to Recovery

Conservation Measure 2.1 *Enhance, Restore, and Create Land Cover Types and Species Habitat* and Conservation Measure 2.3 *Restore Wetlands and Create Ponds* of the Plan require wetland restoration and pond creation to compensate for future impacts on these land cover types caused by development activities. Additionally, the Plan requires wetland restoration and creation actions over and above mitigation requirements in order to contribute to recovery of covered species. Restoration or creation activities must stay ahead of impacts.

Over the 30-year life of the Plan, the Conservancy may be required to restore or create a large number of acres of various types of wetlands and waters. If impacts on wetlands and waters are substantial during those 30 years, the cumulative total restoration/creation acreage could be as large as 500 acres.

During the reporting period, the Conservancy constructed one new restoration project. The project at Hess Creek is the eighth restoration project to be implemented since the adoption of the HCP/NCCP. The Conservancy continues to monitor the below listed seven prior restoration projects.

- Souza II Corral Vernal Pool Restoration (constructed 2012).
- Vaquero Farms South Vernal Pool Restoration (constructed 2012).
- Upper Hess Creek Watershed Habitat Restoration Project (constructed 2011).
- Irish Canyon Riparian Restoration Project (constructed 2010).
- Souza II Restoration Project (constructed 2009).
- Lentzner Springs Wetland Restoration Project (constructed 2008).
- Souza I Restoration Project (constructed 2008).

A discussion of the 2014 Hess Creek Channel Restoration Project of goals and objectives, contribution to restoration and creation requirements, and performance criteria and monitoring is provided below. For projects constructed in previous years, project summaries and discussions of management actions, if applicable are included in the section below. Table 8a summarizes restoration and creation to-date by land cover type. Table 12 provides restoration and creation information by watershed.[6]

The eight restoration projects provide a range of benefits to covered species. All projects benefit covered amphibian species (California red-legged frog and California tiger salamander). Wetland restoration at Souza II in 2009 and 2012 and at Vaquero Farms South in 2012 increased habitat for covered vernal pool crustaceans. Restoration on Lentzner and Souza II increased rare alkali grassland and supports habitat for alkali wetland plants. All projects provide habitat for common wildlife foraging in the area.

Monitoring in 2014[7] demonstrated advancement toward achievement of site-specific restoration objectives; however, drought conditions during the past three rainy seasons have influenced plant survival and wetland feature performance at most of the restoration project sites. The overall functionality of the sites indicates success criteria during the establishment period could be met with a wet rainy season.

[6] The restoration summary provided in Table 12 is based on GIS data. It differs slightly from the numbers provided in the text of the Annual Report.

[7] Monitoring results do not include the 2014/2015 rain year, which starts in October 2014.

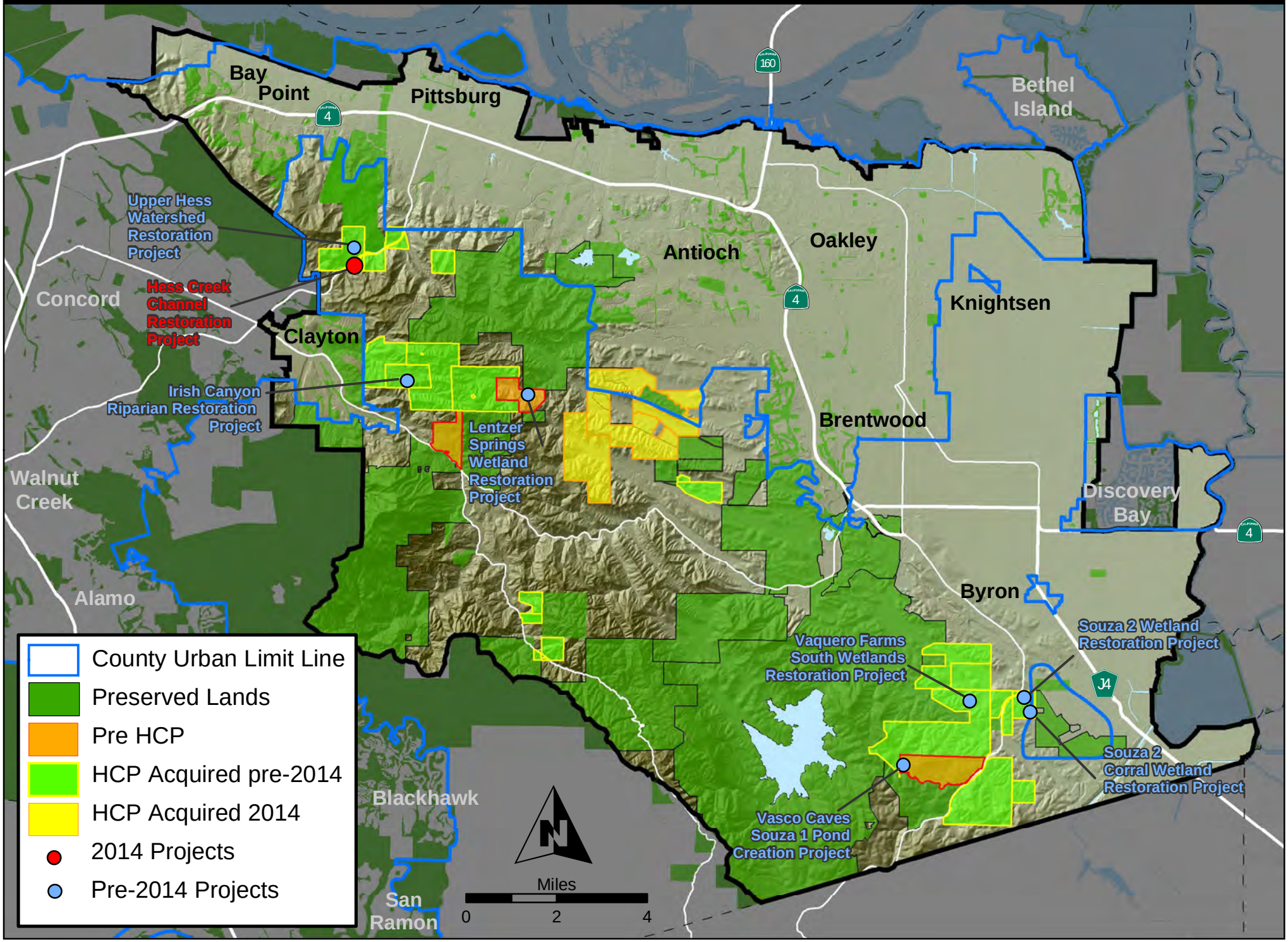
Table 12. Aquatic and Stream Land Cover Restoration and Creation by Watershed

	Aquatic Land Cover (acres)								Stream Land Cover (linear feet)				
Basin/Watershed	**Riparian woodland/ scrub**	**Perennial wetlands[1]**	**Seasonal wetlands**	**Alkali wetlands**	**Ponds**	**Reservoir (open water)[2]**	**Slough/ channel**	**Aquatic Land Cover Total**	**Perennial**	**Intermittent**	**Ephemeral**	**Classification Pending**	**Stream Land Cover Total**
Brushy Creek													
Restoration	--	0.2	8.1	--	--	--	--	8.3	2,074.6	--	2,409.4	-	0
Creation	--	--	--	--	0.3	--	--	0.3	--	--	--	-	0
subtotal	*0*	*0.2*	*8.1*	*0*	*0.3*	*0*	*0*	*8.6*	*2,074.6*	*0*	*2,409.4*	*0*	*4,484.0*
Frisk Creek Sub Basin													
Restoration	--	--	0.2	--	--	--	--	0.2	--	--	-	-	0
Creation	--	--	--	--	--	--	--	0	--	--	--	-	0
subtotal	*0*	*0*	*0.2*	*0*	*0*	*0*	*0*	*0.2*	*0*	*0*	*0*	*348.3*	*348.3*
Kirker Creek													
Restoration	3.08	--	0.23	2.40	--	--	--	5.71	--	--	1,759.56	-	0
Creation	--	--	--	--	0.12	--	--	0.12	--	--	--	-	0
subtotal	*3.08*	*0*	*0.23*	*2.40*	*0.12*	*0*	*0*	*5.83*	*0*	*0*	*1,759.56*	*0*	*1,759.56*
Sand Creek Sub Basin													
Restoration	--	--	--	0.1	--	--	--	0.1	--	--	-	-	0
Creation	--	--	--	--	--	--	--	0	--	--	--	-	0
subtotal	*0*	*0*	*0*	*0.1*	*0*	*0*	*0*	*0.1*	*0*	*0*	*0*	*0*	*0*
Upper Mt. Diablo Creek													
Restoration	0.9	--	--	--	--	--	--	0.9	908.8	--	908.8	-	908.8
Creation	--	--	--	--	--	--	--	0	--	--	--	-	0
subtotal	*0.9*	*0*	*0*	*0*	*0*	*0*	*0*	*0.9*	*908.8*	*0*	*908.8*	*0*	*908.8*
Total for Inventory Area	**4.0**	**0.2**	**8.5**	**2.4**	**0.4**	**0**	**0**	**15.5**	**2,983.4**	**0**	**5,077.8**	**348.3**	**7,500.7**

[1] *Perennial wetlands* include wetlands of indeterminate hydrology. In Appendix J, perennial wetlands are classified as *wetlands*

[2] The term *aquatic* used in Appendix J refers to reservoirs and open water. *Reservoir (open water)* is used to in place of *aquatic* in this table to remain consistent with the other tables in this report.

Figure 12. Location of Habitat Restoration and Creation Projects Constructed in 2014



Hess Creek Channel Restoration Project

Project Overview

New channel created at the Hess Creek Restoration Project with flowing water (December 2014)
Photo Credit: East Contra Costa County Habitat Conservancy

The Hess Creek Channel Restoration Project is located in the western portion of the inventory area and was completed in the fall of 2014 (H.T. Harvey & Associates 2013). This restoration project included a series of components along the main stem of Hess Creek. A 930-foot portion of Hess Creek was re-routed, stabilized, and enhanced. In addition, 0.30 acre of seasonal wetlands, 0.08 acre of other waters, and 2.57 acres of riparian woodland were restored. The net increase of restored habitats totaled 0.25 acre of wetlands, 0.06 acre of other waters, 2.39 acres of riparian woodland, and 730 linear feet of stream.

Prior to project construction, the site was dominated by annual grassland with riparian woodland/scrub and seasonal wetlands also present. The project established a new channel as well as stabilized and enhanced an existing section of Hess Creek. Substantial grading, including cutting, filling, and rerouting, was necessary to realign and stabilize the channel through the project reach, which had multiple large headcuts and crossed an abandoned asphalt road. The seasonal wetlands were restored by excavating approximately 1–2 feet of imported soil from a historical wet meadow. The historic wetland was exposed and revegetated using native wetland species plugs and seed. Fremont cottonwood (*Populus fremontii*) and red willow (*Salix laevigata*) cuttings were planted along the upper reach of the channel, within the wet meadow, and throughout a series of step-pools where hydrology is appropriate, totaling 0.45 acre of plantings. Over time, these plantings will improve stream bank stability and expand existing riparian habitat.

Approximately 0.45 acre of creekside riparian (willow) habitat and 2.39 acres of riparian woodland habitat were restored between existing stands of riparian habitat in the project area. California buckeye (*Aesculus californica*), coast live oak (*Quercus agrifolia*), and valley oak (*Quercus lobata*) trees will be installed from seed and California rose (*Rosa californica*), California blackberry (*Rubus californica*), and blue elderberry (*Sambucus nigra* spp. *caerulea*) from container stock.

Performance Criteria and Monitoring

Site-specific restoration objectives and performance criteria were set for the project (Table 13a). Progress toward meeting the restoration objectives and achieving the performance criteria is monitored annually using four monitoring elements: vegetation survey and general

site assessment, invasive plant assessment, wetland delineation, and hydrologic assessment. All monitoring components include photo-documentation. Photographs are taken from a number of fixed locations (photo-documentation points) established to measure specific success criteria. Photographs and written descriptions will be completed annually at the same time of year and measured against baseline assessments completed prior to project construction (H.T. Harvey & Associates 2013).

Souza II Corral Vernal Pool Restoration

Project Overview

The Souza II Corral Vernal Pool Restoration project was constructed in 2012. It is located on the 191-acre Souza II property in the Brushy Creek Watershed (Figure 12). An existing corral was cleared of debris and excavated to restore a 0.3 acre wetland feature. The size of the created seasonal wetland at the bottom contour is 15,906 square feet (0.37 acre). The seasonal wetland acreage increases as the inundation area becomes deeper, moving the seasonal wetland surface up side slopes to the invert elevation of the spillway. The objective was to create a seasonal wetland to support vernal pool fairy shrimp. Design features were also included to ensure the ponding duration was sufficient for successful California tiger salamander breeding.[8] To achieve these species-specific goals, most of the wetland (0.40 acre) was designed to inundate to 10 inches deep. This creates optimal conditions for vernal pool fairy shrimp and colonization by hydrophytic vegetation. A smaller (0.014 acre) 14-inch deep "dimple" was created in the bottom of the 0.40 acre wetland to support breeding (egg laying through metamorphosis) of California tiger salamander. As part of the construction, the new wetland was seeded with inoculum collected from a vernal pool impacted by the Deer Valley Road Widening Project. Site-specific restoration objectives and performance criteria were set for the project (Table 13b).

Monitoring and Adaptive Management

Monitoring was conducted to determine achievement of Year 2 restoration success criteria and site-specific restoration objectives and to determine if the seasonal wetland supports vernal pool fairy shrimp (Monk & Associates 2015a). As the wetland continues to progress toward meeting its success criteria, the most important management need is the removal of non-native plant species.

[8] This project feature was included to ensure that the wetland did not become a population sink for California tiger salamander. This species is not a target species for the restoration project; therefore no performance criteria were developed for it.

Vaquero Farms South Vernal Pool Creation Project

Project Overview

The Vaquero Farms South Vernal Pool Creation Project was constructed in 2012. The two pools are located on the 1,644-acre Vaquero Farms South property in the Brushy Creek watershed (Figure 12). This project created two wetland features (0.07 acre and 0.15 acre) in what is suspected to be an abandoned road bed. Similar to the Souza II Corral Vernal Pool Restoration Project, the wetland features are intended to function as vernal pools and provide habitat for vernal pool fairy shrimp and other vernal pool species. Site-specific restoration objectives and performance criteria were set for the project (Table 13c).

Monitoring and Adaptive Management

Year 2 monitoring of the two seasonal wetlands was conducted in 2013 and 2014 (Monk & Associates 2015b). It is expected that during normal to above normal rainfall years that hydrophytic vegetation will establish in this wetland. It is of interest to note that crownscale (*Atriplex coronata* ssp. *coronata*), a California Native Plant Society (CNPS) List 4 plant was observed in Seasonal Wetland 1 (upstream pool) in 2014 and composed approximately 1% of the total cover (Monk & Associates 2015b). During a large rain event in December 2014, an erosional feature developed on Seasonal Wetland 2 (downstream pool). Plans to repair the pool are underway and are expected in 2015.

Vaquero Farms South Vernal Pools (dry)
Photo Credit: East Contra Costa County Habitat Conservancy

Upper Hess Creek Watershed Habitat Restoration Project

Project Overview

The Upper Hess Creek Watershed Habitat Restoration Project was constructed in 2011. The project is located on the 450-acre Land Waste Management property in the Hess Creek subbasin of the Kirker Creek watershed (Figure 12). The project included a series of features all along the main stem of Upper Hess Creek. Within the project area, work occurred on approximately 7.4 acres across five restoration sites (H.T. Harvey & Associates 2011).

Four habitat types were restored or created across the restoration project using existing site features. The restoration sites are identified as California tiger salamander breeding pond, upper stock pond, channel restoration, main stock ponds, and alluvial valley. All sites were seeded with a native seed mix. Ranch debris including tires, concrete rubble, and metal barrels

was removed from the sites. A pond designed to support California tiger salamander breeding was created in the western portion of the project area in an upper reach of the central ephemeral drainage (0.06 acre). Wetland (0.005 acre) and channel (109 linear feet) restoration also occurred at this site. At the channel restoration site, a failing ranch road crossing was removed and the channel restored (117 linear feet). A small alkali wetland was also restored at this site (0.05 acre). Alkali wetlands (0.08 acre) and wetlands (0.002 acre) were restored at the main stock pond area. This included removal of debris and fill around the pond, creation of wetland terraces around the fringes of the pond, placement of rock perches and coarse woody debris to improve habitat for California red-legged frog, and enhancement/stabilization of an existing outlet spillway at a slightly lower elevation than the existing outlet pipe. The largest restoration area was the alluvial valley where 2.16 acres of alkali wetlands were restored. A total of 2.29 acres of alkali wetlands, 0.007 acre of wetlands, 0.06 acre of California tiger salamander breeding pond, and 226 linear feet of channel were restored or created as part of this project. Site-specific restoration objectives and performance criteria were set for the project (Tables 13d and 13e).

Monitoring and Adaptive Management

The restoration site was monitored throughout 2014 to determine achievement of Year 3 restoration success criteria and site-specific restoration objectives (Monk & Associates 2015c). Native vegetation and wetland plants were observed in all site features. Noxious weed infestations monitoring will continue and if observed, the Conservancy will be notified manage the control/treatment of the occurrence.

Irish Canyon Riparian Restoration Project

Project Overview

The Irish Canyon Riparian Restoration Project was installed in 2009 through 2010. It is located on the 320-acre Irish Canyon property in the Mt. Diablo Creek watershed (Figure 12). The goal of the restoration project is to expand and extend riparian woodland habitat. The project is expected to result in the restoration of 0.91 acre of riparian habitat along 688.5 linear feet of stream.

This project was performed by Save Mount Diablo staff and volunteers. The project involved the planting of more than 400 locally collected valley oaks acorns and buckeye nuts in a denuded stream corridor. Planting sites were caged and watering took place every 3 weeks after the rains stopped at the end of May 2010. In the subsequent years, Save Mount Diablo staff and volunteers continued to water planted sites through the dry months.

Adaptive Management

The restoration project continues to demonstrate high seedling recruitment and sapling survival. There are 111 established trees across the planted areas, just shy of the target of 122. Regular watering continued once every 2–3 weeks from January 10 through December 4, when the 2014/2015 rainy season commenced. Despite conscientious efforts, a small number of

plantings did not germinate. On December 11, 2014, volunteers replanted 20 oaks and 10 buckeyes in channel enhancement area one and 5 oaks in channel enhancement area three (Save Mount Diablo 2014). No replacement trees were planted in channel enhancement area two. All management was completed by Save Mount Diablo staff and volunteers. Weeding, watering, and replanting will continue in 2015.

Lentzner Springs Wetland Restoration Project

Project Overview

The Lentzner Springs Wetland Restoration Project was constructed in 2008. It is located at the northeastern edge of the Lentzner property in the upper part of a valley that drains to Oil Canyon Creek within the Sand Creek subbasin of the Marsh Creek watershed (Figure 12). The project was the first wetland restoration project implemented under the Plan. The restoration area was 0.5 acre and included restoration of a seasonal alkali wetland and native grassland. The restored seasonal alkali wetlands are being monitored using a number of performance criteria (Table 13f).

Monitoring and Adaptive Management

Since construction, results of monitoring have indicated that the Lentzner Springs restoration is progressing toward becoming alkali wetland habitat (Nomad Ecology 2014a). In December 2014, maintenance crews augmented the plantings of saltgrass within the project area. Saltgrass plugs were harvested from adjacent areas using the same technique as the original planting of the site. These additional plantings, if successful, will enable the project to meet success criteria in the 2014/2015 monitoring year. The monitoring period has been extended through the 2015/2016 rainy season.

Souza II Wetland Restoration Project

Project Overview

The Souza II Wetland Restoration Project, constructed in fall/winter of 2009, is located within the Brushy Creek Watershed along the North Fork of Brushy Creek as it traverses the Souza II property (Figure 12). The entire project area is approximately 60 acres in size and includes the restoration of 3,508 feet of an intermittent stream tributary, creation of a 0.2-acre pond, and restoration of 8.9 acres of seasonal wetland.

The 2009 restoration project restored the natural hydraulic function of the eastern third of the North Fork of Brushy Creek on the Souza II property by reconnecting it to its floodplain. To do this, the project removed the berms north and south of the tributary and graded the floodplain to better retain water. Vernal pools were created south of the creek. Incised stream banks were laid back in some places, and a pond and swale were created. In-stream habitat and pond habitat were created for covered species such as the California red-legged frog and California tiger salamander, pools suitable for fairy shrimp species were restored, and degraded grassland

areas of the site were restored with native grasses and rare plants. Restoration of the seasonal wetland included retiring a dirt road and a culvert installed on the tributary. A native upland and wetland seed mix was also applied. The restored wetlands and pond are being monitored using the performance criteria in Table 13h.

Monitoring and Adaptive Management

The restoration site was monitored throughout 2014 to determine achievement of Year 5 restoration success criteria and project objectives (Nomad Ecology 2014b). Erosion continued to decrease in 2014 as the vegetation has become established. A large headcut, several feet wide and several feet deep, was present where the ephemeral drainage joins the main unnamed tributary to Brushy Creek. This erosional feature was present during Years 1 to 5 of monitoring. The Conservancy repaired this erosional feature in October 2014 by diverting water away from the ephemeral drainage via a vegetated swale created just downstream of the culvert that will slow water flow and direct it to the east where water will spread across the floodplain. Subsequent years of monitoring will determine if this action allowed the area to stabilize.

Plant survival and health and wetland hydrology had mixed results across the site. Several areas that were intended to be wetland and wetland transition on the planting plan did not exhibit wetland hydrology. These areas will require further modifications to introduce wetland hydrology, such as lowering the elevation. If the features are not modified, it is recommended to adjust the project objectives to match the constructed project.

Souza II Erosion Repair: Vegetated Swale – Constructed 2014
Photo Credit: East Contra Costa County Habitat Conservancy

Depending on precipitation received, additional saltgrass may be planted in the seasonal wetlands to augment existing vegetation. Iodine bush (*Allenrolfia occidentalis*) was planted along the margins of select wetlands in December 2014. Iodine bush plants will be protected from cattle trampling and grazing by caging each of the plantings. Overall the banks of the creek are well-vegetated and saltgrass and other native vegetation are filling in. No additional planting in these areas is necessary.

Monthly hydrologic monitoring conducted in 2010 and 2011 demonstrated where water ponding occurs onsite in high rain years. Due to low rainfall in 2012, 2013, and 2014, wetland soils were saturated, with some standing water, but only in their deepest portion and only for a short duration. Monthly hydrologic monitoring and depth and duration of inundation monitoring will continue in 2015.

No San Joaquin spearscale nor crownscale were observed in the soil transplant sites. These sites will be monitored in spring 2015 to determine if individuals of these annual species are persisting onsite. Annual grasses will be removed from the transplant site as needed under the direction of the project biologist.

Vasco Caves Souza I Pond Creation Project

Project Overview

Vasco Caves Souza I Pond
Photo Credit: Monk and Associates

The Vasco Caves Souza I Pond Creation Project, constructed in 2008, is located in the northwestern corner of the Souza 1 property, about 1 mile north of the Alameda/Contra Costa County border (Figure 12). The project area totaled 2.6 acres and included creation of a 0.2-acre seasonal pond habitat and 0.99 acre of seasonal wetland. The pond was designed to provide breeding habitat for California tiger salamander and to support seasonal wetland vegetation. The pond was designed to collect precipitation and stormwater sheet flow from an approximately 15-acre sub-watershed of Brushy Creek. Pond design elements included an approximately 1-acre, 1-foot-deep portion (the seasonal wetland portion) and a smaller 2- to 3-foot-deep portion (the pond habitat portion). The pond was designed with three depths because the project area is subject to high evaporation rates and minimal rainfall. The 2- to 3-foot portion of the pond was created with the intent to hold water longer into spring. The 3-foot-deep area of the pond fills and spills into the 2- and 1-foot areas of the pond. The 2- to 3-foot area of the pond provides breeding habitat for the California tiger salamander. The pond will dry annually by June and start retaining water with the first rain (usually late October). The pond and wetland were seeded with a wetland seed mix. The surrounding uplands were seeded with a native grassland mix. The seasonal pond and native wetland plant species are being monitored using a number of performance criteria (Table 13g).

Monitoring and Adaptive Management to Date

In Year 5, the Souza 1 Pond met all of its hydrological success criteria in monitoring. The monitoring period was extended an additional year because an invasive plant species, European manna grass (*Glyceria declinata*), was observed in the 3-foot section of the pond. In the late-spring/early summer of Year 5 (2013), this plant was hand pulled, bagged, and carried off site. Monitoring continued into 2014. European Manna grass was again present and was hand pulled, bagged and carried off site. Persistent drought conditions to be a challenging in meeting hydrologic and vegetation success criteria. Monitoring will continue in 2015.

Year 7 monitoring started off with large rain events occurring in December 2014 and January 2015, filling the pond with as much as 3 feet of water during these months. During the January 2015 site visit, Monk & Associates (2015d) observed California tiger salamander egg masses and larvae swimming in the clear, shallow portions of the wetland.

Table 13a. **Hess Creek Restoration Specific Objectives and Performance Criteria**

Restoration Specific Objectives	Performance Criteria
Wetlands (and Other Aquatics)	
SO-1. Maintain or increase native emergent wetland vegetation.	Qualitative assessments, including photodocumentation before and after restoration activities in Years 1-3, and 5, determine that native emergent wetland vegetation has been maintained or increased.
SO-2. Reduce sediment deposition and transport along Hess Creek.	Maintenance of a stable channel that conveys flow through the restoration site in Year 1-3, 5, 7 and 10.
SO-3. Maintain or increase wetland capacity.	Wetland acreage onsite has been maintained or increased and is in the range of the targeted 0.3 ac of restored wetlands within 5 years following restoration implementation.
SO-4. Maintain or increase flows to and connectivity among wetlands and wetland complexes.	Qualitative assessment, including photo-documentation before and after restoration activities in Years 1-3, 5, 7 and 10, determines that Hess Creek is hydrologically connected between the restored channel and seasonal wetlands.
SO-5. Eliminate or reduce non-native invasive plant species[1] in the project area wetlands.	Total percent cover of non-native invasive plant species is no more than 10% cover in wetlands.
SO-6. Maintain or enhance upland habitat in close proximity to wetlands to support the life-history requirements of wetlanddependent covered species.	Qualitative assessment, including photo-documentation before and after restoration activities in Years 1-3, 5, 7 and 10, determines that upland habitat in close proximity to the restored wetlands has been maintained or enhanced to support the life-history requirements of wetland-dependent covered species.
SO-7. Restore approximately 0.30 ac of seasonal wetlands to compensate for permanent loss of this habitat.	Approximately 0.30 ac seasonal wetlands have been restored (confirmed via wetland delineation in Year 5) and meet the annual performance criteria.
SO-8. Restore approximately 0.3 ac of seasonal wetlands to contribute to the recovery of covered species.	Approximately 0.3 ac seasonal wetlands have been restored (confirmed via wetland delineation in Year 5) and meet the annual performance criteria.

Stream and Riparian Woodland Scrub	
SO-9. Protect a minimum of 0.5 linear mi of Hess Creek.	Qualitative assessment, including photo-documentation before and after restoration activities in Years 1-3, 5, 7 and 10, determines that a minimum of 0.5 linear mi of Hess Creek has been protected.
SO-10. Acquire approximately 2.6 ac of riparian/scrub habitat.	Acquire 2.6 ac of riparian/scrub habitat.
SO-11. Maintain or increase the cover, width, and connectivity of existing riparian vegetation.	Mapping before and after restoration activities in Years 3, 5, 7 and 10, determines that the cover, width, and connectivity of existing riparian vegetation has been maintained or increased.
SO-12. Reduce the biomass, cover, and extent of non-native invasive plant species in riparian woodland habitat.	Total cover of non-native invasive plant species is no more than 10% in riparian woodland habitat.
SO-13. Restore shaded riverine aquatic habitat to reduce water temperature and temperature variation.	Approximately 0.45 ac riparian streamside habitat has been restored and meets the annual performance criteria.
SO-14. Restore shaded riverine aquatic habitat to increase inputs of organic matter into Hess Creek.	Approximately 0.45 ac riparian streamside habitat has been restored and meets the annual performance criteria.
SO-15. Reduce sediment input and downstream sediment transport and deposition in Hess Creek.	Maintenance of a stable channel that conveys flow through the restoration site in Year 1-3, 5, 7 and 10.
SO-16. Maintain and enhance instream structural diversity.	Maintenance of a stable channel that conveys flow through the restoration site in Year 1-3, 5, 7 and 10.
SO-17. Improve stream flow and connectivity along Hess Creek for native aquatic wildlife.	Maintenance of a stable channel that conveys flow through the restoration site in Year 1-3, 5, 7 and 10.
SO-18. Restore riparian woodland in addition to that required above as compensation for habitat loss.	Approximately 2.57 ac of riparian woodland/streamside habitat have been restored and meets the annual performance criteria.
SO-19. Restore native species richness and diversity, vegetative cover, wildlife function and hydrologic function.	Approximately 0.3 ac of seasonal wetland and 2.57 ac of riparian woodland/streamside habitat have been restored and meets the annual performance criteria in Tables 7, 8, and 9; and approximately 930 ln ft of stable channel has been created/maintained that conveys flow through the restoration site in Year 1-3, 5, 7 and 10.

Table 13b. Souza II Corral Vernal Pool Restoration Specific Objectives and Performance Criteria

Restoration Specific Objectives	Performance Criteria
SO-1. Create Seasonal Wetland	Create new seasonal wetland.
SO-2. Increase wetland capacity and water duration in the project area.	The created wetland area must remain saturated or inundated to the surface for at least 30 days each fall/winter/spring over a five year monitoring period, but should not exceed 4 months of continuous standing water.
SO-3. Establish hydrophytic plant species.	At the end of five years the seasonal wetland shall support at least 51% total cover. At least 51% of hydrophytic species cover shall be composed of native California wetland species.

Table 13c. Vaquero Farms South Vernal Pool Creation Specific Objectives and Performance Criteria

Restoration Specific Objectives	Performance Criteria
SO-1. Creat two new seasonal wetlands.	At the end of the five-year monitoring period the maximum wetland acreage for Seasonal Wetland 1 will be 0.07 acre and it will be 0.15 acre for Seasonal Wetland 2.
SO-2. Increase wetland capacity and water duration in the project area.	The created wetland area must remain saturated or inundated to the surface for at least 30 days each fall/winter/spring over a five year monitoring period, but should not exceed 4 months of continuous standing water.
SO-3. Establish hydrophytic plant species.	Total cover must not vary between the natural pool and the created seasonal pools by more than 25 percent. At the end of five years the created seasonal wetlands shall support at least 51% total cover. At least 51% of hydrophytic species cover shall be composed of native California wetland species.

Table 13d. Upper Hess Habitat Restoration Project: Site-specific Restoration Objectives

Wetlands (and other Aquatic)	Performance Criteria
SO-1. Increase the abundance and distribution of native emergent vegetation in the project area.	See annual performance criteria in Table 13d.
SO-2. Reduce erosion along Upper Hess Creek.	Qualitative assessment including photodocumentation before and annually for 5 years after restoration activity determines that erosion along the Upper Hess Creek onsite has been reduced.
SO-3. Increase wetland and pond capacity and water duration in the project area.	Wetland and pond acreage onsite has increased and is in the range of the targeted 2.47 acres of restored wetlands and 0.12 acre of restored pond within 5 years following restoration construction.
SO-4. Hydrologically reconnect the Upper Hess Creek from lower stock pond to channel at property boundary.	Qualitative assessment and hydrologic monitoring based on photo-documentation and seasonal shallow groundwater monitoring annually for 5 years after restoration activity shows that Upper Hess Creek is hydrologically connected between the lower stock pond and the restored channel at the property line.
SO-5. Reduce non-native plant species in restored wetlands.	Total absolute cover of non-native invasive plant species[a] no more than 10% relative cover.
SO-6. Restore approximately 2.32 acres of alkali wetlands in the project area.	Approximately 2.32 acres alkali wetlands have been restored and confirmed via wetland delineation.
SO-7. Create an approximately 0.12 acre California tiger salamander breeding pond.	An approximately 0.12 acre pond will have been restored and confirmed via wetland delineation.
SO-8. Restore approximately 2.32 acres of alkali wetlands.	Approximately 2.32 acres alkali wetlands have been restored and met the annual performance criteria in Table 7 and confirmed via wetland delineation.
SO-9. Create an approximately 0.12 acre California tiger salamander breeding pond in upper tributary.	Same as for SO-7
SO-10. Restore 489 linear feet of stream channel and hydrologically connect Upper Hess Creek from the main stock pond to channel at property boundary.	Same as for SO-4
SO-11. Create 0.12 acres California tiger salamander pond, enhance existing main pond, restore 489 linear feet of channel, restore approximately 2.32 acres of alkali wetlands.	Same as for SO-6, SO-7, and SO-8

[a]Non-native invasive plant species include those species with high impact rankings by the California Invasive Plant Council (Cal-IPC), and any other species determined to threaten successful restoration of the native plant communities onsite (California Invasive Plant Council 2006).

Table 13e. Upper Hess Habitat Restoration Project Performance standands

Year	Criterion	Satisfactory Progress Threshold
1	Average relative percent cover of dominant wetland indicator species	5% Cover
2		10% Cover
3		20% Cover
4		35% Cover
5		50% Cover

Table 13f. Lentzner Springs Wetland Restoration Project Performance Standards for Restoration Plantings

Year	Criterion	Satisfactory Progress Threshold
1	% of plants surviving	75% survival in Good or Fair condition
2		70% survival in Good or Fair condition
3		65% survival in Good or Fair condition
(and subsequent years if necessary)		
4–5	Absolute cover of native wetland vegetation	60% cover
(and subsequent years if necessary)		

Table 13g. Vasco Caves Souza I Pond Project Performance Standards

Year	Criterion	Satisfactory Progress Threshold
1	# of wetland species	3 wetland species established
3	Absolute cover of native vegetation	50-60% cover with dominance by hydrophytic plants
1 and 3	Duration of saturation	Saturation for 60 days annually (in addition to inundation)
1 and 3	Absence of plant species on the California Exotic Pest Plant Council's List A-1: Most Invasive and Damaging Wildland Pest Plants	Species absence
1, 3 and 5	Duration of inundation	Inundation for 30 days annually
5	Absolute cover of native vegetation	Pond edges and margin will be dominated by wetland vegetation (FAC, FACW and/or OBL species).

Table 13h. Souza II Wetland Restoration Project (Phase I) Performance Standards for Restoration Plantings

Year	Criterion	Satisfactory Progress Threshold
1	% of plants surviving	75% survival in Good or Fair condition
2		70% survival in Good or Fair condition
3-5	Cover of native wetland vegetation	60% native cover
1-5	Cover of non-native invasive species	Less than 5% non-native cover

V. PRESERVE MANAGEMENT

The Plan requires that preserve management plans be developed for each preserve to identify management actions necessary for maintaining ecosystem characteristics and functions and for maintaining or improving existing habitat conditions for covered species. Preserve management plans also describe allowed uses such as recreation. This approach ensures that preserve lands management is consistent with the Plan's goals and objectives.

Preserve management plans were originally expected to be prepared within 1 year of land acquisition; however, they have taken longer. This is due to the decision to cover many adjacent properties under one coordinated management plan, the rapid pace of acquisition, and the complexity of developing plans for larger areas. Preserve management plans are working documents and may be modified based on the evaluation of management methods in achieving objectives as well as on results of other outside research. The Conservancy will formally review and systematically revise preserve management plans at least every 10 years, but management measures may be modified prior to plan updates in cases where adaptive management or new research identifies more effective techniques.

The *Vasco Hills/Bryon Vernal Pools Preserve Management Plan* is under development. The Vasco Hills/Bryon Vernal Pools Preserve Management Area is the southeastern portion of the inventory area, covering Acquisition Analysis Zone 5. The management area consists of eight properties that have been acquired for the Preserve System: Vaquero Farms North, Vaquero Farms Central, Vaquero Farms South, Souza I, Souza II, Souza III, Grandma's Quarter, and Martin.

The Conservancy and EBRPD staff collaborated closely on developing the *Vasco Hills/Byron Vernal Pools Preserve Management Plan*, assembling and reviewing numerous iterations of draft materials. A public draft is anticipated to be completed in 2015. This is the first preserve management plan prepared by the Conservancy and can be expanded to include neighboring properties as others in the area are acquired. The Plan will become a template for future preserve management plans prepared for other regions of the Preserve System.

While comprehensive management planning is underway, implementation of management activities have commenced throughout the Preserve System and are described below.

Natural Community Enhancement

This section describes the HCP/NCCP natural community enhancement conservation measures implemented during the 2014 reporting period, and provides an effort-to-date summary of the extent of land cover types enhanced. During the reporting period, several management techniques were applied to enhance natural communities within the Preserve System as part of implementation of Conservation Measure 2.2 *Manage Wetlands and Ponds,* Conservation Measure 2.4 *Manage Grassland,* and Conservation Measure 2.9 *Manage Streams and Riparian Woodland/Scrub*.

Efforts in 2014

Natural Community enhancement has been ongoing since permit issuance. Management techniques have been implemented in support of Conservation Measure 2.2 *Manage Wetlands and Ponds*, Conservation Measure 2.4 *Manage Grassland*, Conservation Measure 3.9 *Conduct Experimental Management to Enhance Covered Plant Populations*, and Conservation Measure 2.9 *Manage Streams and Riparian Woodland/Scrub*.

Natural Resource Maintenance and Enhancement Projects

In 2014, natural resource maintenance and enhancement projects continued on all properties within the Vasco Hills/Bryon Vernal Pools Preserve Management area as well as properties adjacent to Black Diamond Mines Regional Preserve. Projects initiated in previous years continued in 2014.

Invasive Plant Control

There were several invasive plant species sites identified or controlled in 2014 by EBRPD and the Conservancy.

- European mannagrass (*Glyceria declinata*) was hand-pulled and carried out of the pond (restoration project) at Souza I.
- Perennial pepperweed, thistle, and fennel were spot treated with herbicide at the Upper Hess Creek project site.
- Milk thistle was spot treated at Souza II Property as well as on the Souza II restoration site.
- Medusahead grass was treated with an herbicide application and grazing (sheep) in test plots on Vaquero Farms Central.
- Medusahead and barbed goatgrass (*Aegilops triuncialis*) infestations were mapped at Galvin and A. Galvin properties in preparation for management actions in 2015.
- Dittrichia was hand pulled from the Martin property (approximately 2 acres).
- Russian thistle was mowed at the Martin Property (approximately 2 acres).
- Russian knapweed (*Rhaponticum repens*) was identified in Horse Valley area of Roddy Ranch. The infested area was treated by Contra Costa County Agriculture Department. The area will be monitored and follow-up treatments will be completed by EBRPD.

Grazing Management

Livestock grazing and exclusion was used for general weed control and to reduce thatch growth to implement Conservation Measure 2.2 *Manage Wetlands and Ponds,* Conservation Measure 2.4 *Manage Grassland,* and Conservation Measure 2.9 *Manage Streams and Riparian Woodland/Scrub*.

All grazing units were monitored, stocking reports reviewed, and grazing tenants met with in 2014. The grazing leases are based on the EBRPD template and maximize natural resource management. Under this lease structure, rent is based on stocking rate rather than per acre.

The goal is to encourage the use of sustainable stocking rates that maximize resource values rather than maximizing the number of livestock per acre.

Stocking reports were reviewed monthly. In September, residual dry matter samples were taken, grass species identified, and sites photographed. Grazing tenants met with EBRPD staff in October to discuss the past and future grazing season.

Land Management

This section summarizes all land management activities undertaken on the HCP/NCCP preserves during the 2014 reporting period and discusses management issues on the preserves.

For the 2014 reporting period, management consisted of the enhancement actions described above, as well as ongoing maintenance and recreation planning. Currently the primary management issue facing the Conservancy is the pervasiveness of non-native invasive plants. The Conservancy and EBRPD will continue their aggressive approach to controlling invasive plants in the Preserve System. Land management activities conducted in 2014 are summarized below.

Management Activities and Maintenance

General inspections: General inspections and site maintenance by EBRPD were conducted on Preserve System properties. HCP/NCCP Preserve System properties were patrolled bi-weekly and wildlife sightings were documented.

Property-specific activities included the following.

- *Fencing and Gate Repair:* Fences and gates were removed, repaired, or replaced throughout the Preserve System. In 2014 the following activities occurred.
    - A. Galvin Property: Unnecessary cross-fencing was removed. Portions of perimeter fencing were replaced. Preparations were made for new livestock paddock.
    - Souza II: Failing southern perimeter fence was replaced.
    - Alaimo: Minor fence/gate repairs were made to secure the property.
- *Road and Trail Maintenance:* Road and trail maintenance occurred on the Preserve System properties.
- *Water development:* Existing water systems were monitored in 2014. Only one system needed repairs and is noted below.
    - Upper Hess Creek: A pipe leak that developed as the tank/trough system settled was repaired.
- *Security:* Ongoing/regular patrol and security checks continued at all properties.
- *Resource maintenance*
    - Vaquero Farms Central: Erosion control measures (wattles and sandbags) were installed as a temporary measure after a heavy rain to prevent

- Vaquero Farms Central: Erosion control measures (wattles and sandbags) were installed as a temporary measure after a heavy rain to prevent sedimentation of a constructed vernal pool.
- *Debris Removal:* Clean-up efforts continued on all properties in 2014.
  - Roddy Ranch: Approximately 43 tons of debris was removed from creek channels, resulting in the clean-up of 1,264 linear feet of creek as part of the property acquisition.
  - Affinito: A-frame structure was removed from property.
  - Hess/Land Waste Management: After the 2013 fire both EBRPD and Conservancy crews removed debris from the site (debris removal occurred in 2014). Debris was visible as the fire removed all vegetation.

Wood slash removed as part of the Roddy Ranch clean-up effort
Photo Credit: East Contra Costa County Habitat Conservancy

Conceptual Ecological Models

The HCP/NCCP requires annual reports to describe any conceptual ecological models developed to date and any changes to them that have taken place. Development of a grassland conceptual ecological model was initiated during the 2014 reporting period.

VI. MONITORING, RESEARCH, AND ADAPTIVE MANAGEMENT

The Plan provides a framework, guidelines, and specific suggestions to help the Conservancy develop a detailed monitoring program during the initial years of Plan implementation. The purpose of the monitoring and adaptive management program is to inform and improve conservation actions in the Preserve System and to ensure that the Plan achieves its biological goals and objectives. The scope of the monitoring and adaptive management program is limited to habitat restoration and creation and the assembly, management, and monitoring of the Preserve System.

Monitoring

The Plan requires two broad types of monitoring: effectiveness monitoring and compliance monitoring.

Effectiveness Monitoring

Effectiveness monitoring is the measurement of variables that allow the Conservancy to assess the success of the Plan in meeting its stated biological objectives. The Plan divides the effectiveness monitoring program into three main phases: (1) the *initial monitoring design phase*, to lay the foundation of the overarching monitoring program; (2) the *inventory phase*, which focuses on the collection of basic information as the Preserve System is assembled; and (3) the *long-term monitoring phase*, which will use the framework developed during the planning and inventory phases to carry out effectiveness monitoring. Each of these three phases, as well as progress toward completing each phase, is discussed below.

Restoration monitoring is a type of effectiveness monitoring that is specific to restoration projects. Restoration monitoring is discussed above in Section IV, *Habitat Restoration and Creation*.

Monitoring Design Phase

The monitoring design phase occurs during the first 5 years of Plan implementation/preserve management. It involves the development of a comprehensive monitoring strategy that will provide a framework for the inventory and long-term monitoring. This phase includes the development of species conceptual models and monitoring protocols.

The monitoring design is underway and a draft preserve monitoring plan was completed in 2014. Protocols were developed for the Vasco Hills/Byron Vernal Pools Management Area for monitoring the effectiveness of management actions and the status and trends of focal species. Once these protocols are finalized, they will be standardized for implementation throughout the Preserve System.

Inventory Phase

The inventory phase is intended to provide baseline data for monitoring the success of habitat restoration, creation, enhancement, and management actions to meet the Plan's biological goals and objectives. The inventory design includes standardized protocols necessary for implementing the inventory phase so that meaningful and consistent baseline data are collected.

The inventory phase was initiated in early- to mid-2008 in the form of pre-acquisition surveys when the first lands were being considered for acquisition and incorporation into the Preserve System. Since 2010, Nomad Ecology has been inventorying new acquisitions for special-status plant species and for wetland features. An annual report is produced and Conservancy records and GIS data are updated accordingly. The results of these baseline inventory surveys are incorporated into and reflected in the data presented in this Annual Report.

Plants: HCP plant species (covered and no-take species) inventories and focused botanical surveys were conducted in March, April, May, June, and September 2014 (Nomad Ecology 2014c). The 2014 survey effort focused on Smith and Roddy Ranch. Properties acquired during past years—Barron, Roddy Ranch, and Thomas South—were also targeted as they had not been surveyed entirely. These older acquisitions had a high probability of supporting populations of covered plant species needed to meet the conservation objectives (i.e., round-leaved filaree and Brewer's dwarf flax). Although precipitation totals were low during the 2013–2014 wet season, reference populations indicated favorable conditions to survey for covered species, as discussed below. Alkaline habitat identified on Smith was determined unsuitable for halophytic covered species, such as *Atriplex/Extriplex* and *Delphinium recurvatum*, due to the abundance of salt grass cover (*Distichlis spicata*) and distance outside of local distributions.

Surveys for target species were conducted within suitable habitat by walking transects. Visual surveys are considered adequate for determining the presence or absence of covered plant species that have a potential to occur within preserve acquisitions. All plant species in bloom, or otherwise recognizable, were identified to a level necessary to determine their regulatory status. During these surveys an inventory of plant species observed was recorded. If encountered, other special-status species including State-listed and federally listed species or species included in the CNPS rare plant inventory were also recorded.

Data collected in the field conformed to reporting requirements appearing in Chapter 5 of the HCP/NCCP, *Incorporating Covered Plant Populations in the Preserve System.* Accordingly, five relevant characteristics were recorded (physical condition, age structure, reproductive success, availability of suitable habitat, and diversity of suitable habitat). GIS shapefiles of covered species occurrences were created using global positioning system (GPS) point data collected in the field.

During plant surveys conducted in April, May, June, and September 2014, five covered species were observed: big tarplant, round-leaved filaree, Diablo helianthella, Brewer's dwarf flax, and shining navarretia (Table 10). Overall, a total of 13 new populations of covered plant species were confirmed with individual plant counts per population recorded, ranging from 1–2,000

individuals. During the reporting period, a population of Diablo helianthella was observed on the Barron Property; a single population of round-leaved filaree, two populations of diablo helianthella, two populations of Brewer's dwarf flax, and three populations of shining navarretia were observed on Roddy Ranch; a single population of big tarplant and shining navarretia were observed on the Smith Property; and single populations of Brewer's dwarf flax and shining navarretia were observed on Thomas South. There were no observations of no-take species during these surveys. It should be noted that the physical condition and population size and abundance may have been affected by rainfall patterns and drought conditions during the 2013–2014 wet season.


Brewers dwarf flax
Photo Credit: Nomad Ecology

Other special-status plant species were also observed and mapped within acquisition properties. These species include Contra Costa manzanita (*Arctostaphylos manzanita* subsp. *laevigata*; CRPR[9] 1B.2), small-flowered morning glory (*Convolvulus simulans* CRPR 4.2), serpentine bedstraw (*Galium andrewsii* subsp. *gatense* CRPR 4.2), Lime Ridge navarretia (CRPR 1B.1), hogwallow starfish (*Hesperevax caulescens;* CRPR 4.2); sylvan microseris (*Microseris sylvatica;* CRPR 4.2); and Michael's rein orchid (*Piperia michaelii;* CRPR 4.2). Although not covered or no-take species, they are considered rare by CNPS and are therefore included in this inventory.

Wetland Mapping: A wetland assessment and refined mapping was conducted on the Smith Property (Nomad Ecology 2014d). Incidental data on uncommon landscape features and uncommon vegetation types were also collected when encountered in the field during wetlands mapping. The number of wetland features increased from 10 to 31 with an increase of 11.56 acres for a total of 13.57 acres on the recent acquisition. The initial Plan mapping was based on aerial photo interpretation over the entire inventory area at a coarse scale, which resulted in polygons that were drawn roughly around features. Refinement of the polygons to conform to the exact boundaries of the features, at a finer scale, in 2014 resulted in small decreases per feature, and a large increase in wetland acres due to the inclusion of oak riparian woodland as a riparian habitat type. Also noteworthy is the occurrence of alkali features that were not previously known to exist on the Smith Property (Nomad Ecology 2014d).

Long-term Preserve Monitoring Phase

As of December 2014, preserve monitoring had not yet commenced. The long-term monitoring phase will commence once a comprehensive strategy has been developed (monitoring design

[9] CRPR = California Rare Plant Rank

phase) and baseline studies are complete (inventory phase), or before then, if appropriate. Long-term monitoring will use the framework developed during the planning and inventory phases to carry out effectiveness monitoring and to implement adaptive management.

Compliance Monitoring

Compliance monitoring is the process of evaluating Plan implementation and documenting that all requirements of the Plan are being met (i.e., permit compliance). This Annual Report, which describes progress toward Plan implementation, is the documentation for Plan compliance.

To support the development of the Annual Report, the Conservancy developed a project tracking database. This database is capable of tracking covered activities, impacts on land cover types and species habitat, and conditions on covered activities. In addition, a Python-based script was developed to search both the project tracking database and HCP/NCCP GIS database (includes land cover mapping, acquisitions, etc.) and generate information required for the annual report.

Directed Research

Directed research is research that provides new information or direction regarding management actions. The purpose of directed research is to inform management in cases where species and natural community response to management is uncertain. The Plan's Table 7-2 contains a list of potential directed research projects. This list is unchanged from the Plan.

Golden Eagle Research

EBRPD continues its research to study golden eagle behavior in the Altamont Pass Wind Resource Area (APWRA) and map collision hazards. The study includes five main tasks:

Golden Eagle outfitted with a transmitter
Photo Credit: Joe Didonato

- Trap and attach transmitters on up to six golden eagles.
- Track eagles, including mapping using GIS.
- Validate current collision hazard maps (based on only observational data) by comparing newly collected transmitter data against existing collision hazard maps to determine whether eagles use the landscape as modeled.
- Revise collision hazard maps for Tres Vaqueros using new data and developing new golden eagle collision hazard maps for the remainder of the APWRA.
- Develop one or more peer-reviewed, publication-ready papers discussing the outcomes of this research.

Other minor tasks include development of collision hazard maps for red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*) at Buena Vista wind farm and processing of data and samples collected from eagles during trapping (e.g., vital statistics, blood samples) for submittal to the Molecular Ecology Laboratory at the Alaska Science Center. Collision hazard maps for Buena Vista will be developed using observational data collected by biologists performing post-construction monitoring at Buena Vista.

The golden eagle research project will continue and conclude its initial phase in 2015, at which time a final report will be made publically available on the Conservancy's website.

Invasive Plant/Weed Control

EBRPD continued a research effort that was initiated in 2013, comparing the effectiveness of herbicide application to livestock grazing (both sheep and cattle) on reducing medusa head (*Elymus caput-medusae*) and barbed goat grass (*Aegilops triuncialis*) at Vaquero Farms Central. The research will continue in 2015.

Literature Review of Control Methods for Two Invasive Species

In December 2014, Nomad Ecology prepared a technical memorandum[10] summarizing control methods for two invasive species, barbed goat grass and medusa head grass. These species are present in the Preserve System and are showing a generalized increase in distribution and population density state-wide (Nomad Ecology 2014). These species reduce the quality of habitat and degrade rangeland. Both species have shown the ability to adapt to harsh soil conditions on which many of California's endemic plant species grow. The memorandum draws information from scientific literature, land management reference books, and government agency publications. The Conservancy commissioned this study as a first step in understanding the threats to native grass communities and rare plant populations, as well as understanding the tools that are available (and compatible) in combatting these aggressive non-native plants.

Medusa head grass
Photo Credit: Heath Bartosh, Nomad Ecology

Estimation of Site Occupancy and Nesting Success of Golden Eagles in the Diablo Mountains of Central California

A U.S. Geological Survey-led study looking at site occupancy, nesting success, and detection rates of golden eagles was initiated the Diablo Mountains in 2014. The overall objective study is to develop and evaluate survey and monitoring methods for estimating trends in occurrence and nesting success of golden eagles. Specific study objectives are to (1) estimate non-breeding, breeding, and territorial adults that produced ≥1 young; (2) identify factors associated that influence detectability of golden eagles and their young during ground-based surveys and nest

[10] The technical memorandum is posted on the Conservancy's website.

visits; and (3) provide recommendations to improve strategies for monitoring trends in occurrence and nesting success at broad spatial scales.

Surveys of 57 known golden eagle territories were completed within the smaller historical study area in 2013. In 2014, areas within the expanded survey region were visited to obtain landowner permission to access sites randomly selected for occupancy surveys and nest visits. Occupancy surveys of the expanded study were initiated in the 2014 breeding season (December 2013 – July 2014).

Adaptive Management

Based on the best scientific information currently available, it is expected that the Plan's conservation measures will effectively achieve the biological goals and objectives. However, there is uncertainty associated with management techniques, conditions within the inventory area and region, and the status of covered species and natural communities. It is also possible that new and different management measures not identified in the Plan will be identified and proven to be more effective in achieving biological goals and objectives than those currently proposed. Alternatively, results of effectiveness monitoring may indicate that some management measures are less effective than anticipated.

Adaptive management is a method for examining current or alternative strategies for meeting measurable biological goals and objectives and, if necessary, adjusting future management actions according to what is learned. Adaptive management follows initial implementation of effectiveness monitoring and research, but it is an ongoing process utilized throughout Plan implementation.

In 2014, implementation of adaptive management was focused primarily on restoration sites. As discussed in Section IV, *Habitat Restoration and Creation*, each site was monitored to measure progress toward achieving success criteria, and management was adjusted based on monitoring results. In addition to those activities described in Section IV, the adaptive management activities described below were implemented.

Souza II Erosion Repair

Within days of completing the construction of the Souza II Restoration Wetland Restoration Project, the area experienced a large storm that immediately negatively impacted a part of the project site. The high velocity runoff from Vasco Road created an erosive channel feature from the road drainage outlet to the main channel. This feature threatened the stability of the main channel on the project site. The Conservancy has managed the feature using a variety of approaches starting with the less invasive strategies. Initially the Conservancy installed straw bales and wattles to slow water and catch sediment. In subsequent years, the Conservancy installed more straw bales and wattles as well as added saltgrass plugs to help stabilize soils. It was determined that earthwork was necessary to control the infrequent, high velocity run-off events. In 2013 and 2014, the Conservancy worked with Thunder Mountain Enterprises to develop a plan to modify the original restoration design. In October 2014 the project was installed. The small feature is designed to capture and slow the water entering the project site from Vasco Road and direct the water onto the floodplain. Initial rain events of the 2014/2015

season indicate that the new feature will function well. The feature will be monitored as part of the Souza II Wetland Restoration Project.

VII. STAY-AHEAD PROVISION

Stay-Ahead Provision

The Plan's Stay-Ahead provision requires that the Conservancy "stay ahead" by acquiring land for the Preserve System in advance of impacts. The Plan defines two compliance methods: Stay-Ahead Measurement Method #1 and Stay-Ahead Measurement Method #2. Stay-Ahead Measurement Method #1 states that the amount of each land cover type conserved to date as a proportion of the total requirement for each land cover type must be equal to or greater than the impact to date on the land cover type as a proportion of the total anticipated impact under the Maximum Urban Development Area scenario by all covered activities. This option aggregates the following land cover types: cultivated agriculture, annual grassland, alkali grassland, and ruderal. The sum of the acres of these land cover types actually acquired is measured against the sum of the respective acquisition requirements. Other terrestrial land cover types are not aggregated.

Stay-Ahead Measurement Method #2 states that the amount of annual grassland conserved by the Conservancy in Zone 2 as a proportion of the total requirement for annual grassland acquisition in Zone 2 must be equal to or greater than the impact on annual grassland and all cultivated agriculture land cover types (cropland, irrigated pasture, vineyard, orchard) as a proportion of the total impact expected under the Maximum Urban Development Area scenario on these land cover types by all covered activities. This option provides an incentive for the Conservancy to acquire land in Zone 2 early in Plan implementation as land in this zone is likely to be more expensive and at higher risk than land in other zones. The Conservancy must comply with at least one of these methods during the first 10 years. After Year 10, the Conservancy may use only Measurement Method #1.

Stay-Ahead Assessment

Using Stay-Ahead Measurement Method #1, the Conservancy is currently in compliance with the Stay-Ahead Provision (Table 14). For all land cover types, the percent ahead ranges from 0% to over 100%. Overall, the conservancy is 9,966 acres ahead across all land cover types and 270,301 linear feet ahead in stream land cover. The Conservancy is 7,065 acres ahead of the stay-ahead requirement for grassland and irrigated agriculture land cover types (the requirement is 454 acres). For plant occurrences, the Conservancy is meeting the stay ahead requirement (Table 15).

Table 14. Stay-Ahead Assessment: Land Cover

	Conservation			Impacts			Stay-Ahead		
Land Cover Type	**Protection Required (acres)**	**Protection, Creation, Restoration to date (acres)**	**% of Required**	**Estimated Impacts (acres)**	**Impacts to date (acres)**	**% of Impacts**	**Acres Required to be Ahead**	**Acres Ahead**	**% Ahead[3] (Conservation % to Impacts %)**
Terrestrial									
All grassland & irrigated agriculture	18,150	7,368	40.6%	12,148	349	2.5%	454	7,065	38%
Chaparral and scrub	550	210	38.2%	2	0	0.0%	0	210	38%
Oak savanna	500	366	73.2%	165	0	0.0%	0	366	73%
Oak woodland	400	2,224	555.9%	73	0	0.0%	0	2,224	556%
Subtotal terrestrial	*19,600*	*10,168*	52%	*12,388*	*349*	3%	553	9,615	49%
Aquatic									
Riparian woodland/scrub	70	34	49%	35	1	1%	1	34	48%
Perennial wetland[1]	75	5	7%	75	0	0%	0	5	7%
Seasonal wetland	168	19	2%	56	0	1%	5	19	2%
Alkali wetland	93	32	35%	31	0	0%	0	32	34%
Pond	16	11	69%	8	0	0%	0	11	69%
Reservoir (open water)[2]	12	0	0%	12	0	0%	0	0	0%
Slough/Channel	36	0	0%	72	0	0%	0	0	0%
Subtotal aquatic	*470*	*102*	*22%*	*289*	*1*	0%	2	100	21%
Stream (length in linear feet)									
Perennial stream	4,224	10,646	252%	2,112	56	3%	113	10,589	249%
Intermittent stream	2,112	120,630	5570%	2,112	479	23%	360	117,287	5553%
Ephemeral stream[4]	26,400	142,530	540%	26,400	253	1%	106	142,425	539%
Subtotal stream length	*32,736*	*273,805*	836%	*30,624*	*788*	3%	843	270,301	834%
Totals									
Acres	38,820	10,270	26%	24,825	351	1%	460	9,966	25%
Linear feet	32,736	270,822	827%	30,624	788	3%	578	270,301	825%

[1]Perennial wetlands are equivalent permanent wetlands.

[2] Reservoir (open water) is equivalent to aquatic.

[3] The Plan allows a 5% deviation from Stay Ahead requirements. For terrestrial land cover, the Plan provides that Stay Ahead be measured against the following categories: chaparral, oak savanna, oak woodland and the sum of all grassland and irrigigated agricultural land cover types

[4]Many of the streams identified as "classification pending" will ultimatley be classified as ephemeral. As such, they are tracked as ephemeral streams for the purposes of the Stay-Ahead provision.

Table 15. Stay-Ahead Assessment: Plants

Common Name	*Scientific Name*	Conservation	Impacts	Difference	% Ahead
Mount Diablo manzanita	*Arctostaphylos auriculata*	*0*	*0*	*0*	*100%*
Brittlescale	*Atriplex depressa*	*1*	--	*1*	*100%*
San Joaquin spearscale	*Atriplex joanquiniana*	*8*	*[see note [1]]*	*8*	*100%*
Big tarplant	*Blepharizonia plumosa*	*12*	*0*	*12*	*100%*
Mount Diablo fairy lantern	*Calochortus pulchellus*	*3*	*0*	*3*	*100%*
Recurved larkspur	*Delphinium recurvatum*	*0*	*0*	*0*	--
Round-leaved filaree	*Erodium macrophyllum*	*2*	*[see note [2]]*	*2*	--
Diablo helianthella	*Helianthella castanea*	*12*	*0*	*12*	*100%*
Brewer's dwarf flax	*Hesperolinon breweri*	*3*	*0*	*3*	--
Showy madia	*Madia radiata*	*0*	*0*	*0*	--
Adobe navarretia	*Navarretia nigelliformis* ssp. *nigelliformis*	*5*	*0*	*5*	--
Total		**46**	**0**	**46**	**--**

[1] Vasco Project population translocated and impact avoided (2011).

[2] Temporary impacts occurred to round-leaved filaree as part of the PG&E Contra Costa Las Positas Project. The soil was protected from disturbance, the site was returned to pre-project conditions, seeds collected on site were propagated, and monitoring reports document that round-leaved filaree persists on site and is as abundant as before the project.

VIII. CHANGED CIRCUMSTANCES AND REMEDIAL MEASURES

The No Surprises Regulation established by USFWS defines changed circumstances as those circumstances affecting a species or geographic area covered by an HCP that can be reasonably anticipated by the applicant or the USFWS and to which the parties preparing the HCP can plan a response. The changed circumstances identified by the Plan include non-covered species in the inventory area becoming listed, wildfires that result in the large-scale loss of natural communities, pond or wetland control structure failure, or destruction of riparian plantings from flooding, prolonged drought, and vandalism of preserves. Occurrence of a changed circumstance requires the Conservancy to notify USFWS and CDFW to determine the necessity for additional conservation or mitigation measures. If the mitigation or conservation measure has already been identified in the Plan, the Conservancy must comply with the measure. However, if the measure is not currently included in the Plan, USFWS and CDFW will not require additional mitigation or conservation measures.

In the event that an anticipated changed circumstance prohibits or damages a conservation action that meets the goals of the HCP, a remedial measure must be undertaken. Remedial measures are funded by the Plan and must be undertaken by the Conservancy.

Changed Circumstances

Wildfire

A wildfire in May 2014 burned a portion of the Thomas North Property. The small grass fire burned annual grassland and destroyed a small shed that was on the property. No remedial measures were required.

IX. FINANCES

Budget

The Conservancy analyzed cost projections from the HCP, the previous years' actual costs and the anticipated 2014 work plan to develop the 2014 Budget (Table 16). The Conservancy stayed within the budget amount for each cost category as well as the total 2014 Budget. Overall, expenditures were approximately $17.4 million, primarily due to the large land acquisition of the Roddy Ranch property.

During the reporting period, the largest budgeted item was land acquisition followed by program administration, habitat restoration/creation, monitoring/research/adaptive management, and planning and design for restoration/management/recreation. This focus reflects the Conservancy's continued efforts to maintain stay-ahead compliance. In addition, the Conservancy continues to make progress toward restoration requirements. Monitoring, research, and adaptive management budget and expenditures demonstrate the Conservancy's efforts to establish baseline inventories for new and existing properties.

Revenue Sources

Three main revenue sources are anticipated in the Plan.

- Fee collection: Development, wetland, rural road (for certain rural road projects), and temporary impact fees are utilized to mitigate impacts on special-status species, natural communities, and open space.
- Local public funding and foundation grants: Acquisition and management of land by local agencies, primarily EBRPD, but could include partnerships with other local agencies. Voters approved several revenue measures for EBRPD in the prior decade, including Measure WW, which provide funding EBRPD may use to partner with the Conservancy. In addition, Foundation grants (e.g., Gordon and Betty Moore Foundation) are anticipated to help the Conservancy fund acquisition, management, restoration, and monitoring.
- State and federal: Funding from the state and federal governments to assemble, manage, and monitor Preserve System lands.

Revenue sources also include lease income from Preserve System properties and Contribution to Recovery charges on certain covered activities. Contribution to Recovery payments are imposed on Participating Special Entities to contribute funds over and above fee requirements in order to contribute to the recovery of species in the inventory area.

An estimated total of $22,199,027 was received or provided as match in 2014 (Tables 17 and 18). This amount includes development fees from 20 covered activities ($1,014,297), Contribution to Recovery payments from 4 covered activities ($38,298), wetland and stream

fees from 11 covered activities ($225,754), other fees and charges for staff time ($98,189), grants ($16,204,377), and estimated local match funding ($4,618,113).

All grants awarded to date are summarized in Table 19. Since it began implementing the HCP/NCCP through the end of 2014, the Conservancy has been awarded $57,467,914 in grants. Of this amount, $49,544,909 has been spent and $7,832,219 remains. These amounts do not include match funding provided by partners. EBRPD has contributed an estimated $15 million of its own funds or its grant funds.

Funding in Perpetuity

In the HCP/NCCP, annual costs to operate and maintain the Preserve System in perpetuity are estimated to be slightly less than the annual cost for program administration, preserve management, and monitoring estimated during the final funding period of the Plan, or approximately $3.0 million or $3.3 million[11] annually under the initial or Maximum Urban Development Area, respectively. Actual long-term costs may be lower if the Conservancy can develop streamlined procedures for management and monitoring during the permit term, secure partners, or reduce administrative costs. Responsibility for funding long-term management and monitoring rests solely with the Permittees.

The Conservancy is required to develop a detailed plan for the long-term funding of operation and maintenance and to secure all necessary commitments to implement this Plan before using 50% of all authorized take under the Maximum Urban Development Area (this equals 50% of 12,704 acres, or 6,352 acres) or at the end of year 15 of implementation, whichever occurs first. The Conservancy continues to plan for this requirement, and in 2014 the Conservancy Board determined to have a long-term funding plan in place by Year 10. In addition, the Conservancy has begun to secure potential sources for long-term funding. Roddy Ranch, acquired in 2014, will provide lease revenues from existing homes located on the property. The Conservancy and EBRPD have agreed to dedicate a portion of the revenue from the existing leases to long-term management of the Preserve System.

[11] This is equivalent to approximately $125 per acre per year or $110 per acre per year in operational and capital costs for Preserve System operation under the Initial or Maximum Urban Development Areas, respectively.

Table 16. 2014 Conservancy Budget: Expenditures and Comparison to Budget Projections

	Cost Estimate from HCP			Cost Estimate from Fee Audit			2014 Budget by Revenue Source					2014 Expenditures
Cost Category	Years 6-10	Average Cost Per Year (Years 6-10)	% of Total	Years 6-10	Average Cost Per Year (Years 6-10)	% of Total	Development Fee Account	Wetland Mitigation Fee Account	Grant Funding & Contributions to Recovery	TOTAL	% of Total	Total Expenditures for 2014
Program Administration and Permitting Program	$3,460,986	$692,197	7%	$2,672,575	$534,515	6%	$613,923	-	$200,000	$813,923	3%	$768,552
Land Acquisition	$31,742,559	$6,472,707	67%	$23,224,521	$4,644,904	53%	$274,765	-	$22,160,000	$22,434,765	88%	$15,625,154
Management, Restoration and Recreation Planning and Design	$1,137,698	$227,540	2%	$1,365,238	$473,835	5%	$161,937	$80,000	$150,000	$391,937	2%	$45,972
Habitat Restoration/ Creation	$3,507,094	$701,419	7%	$7,015,158	$1,403,032	16%	-	$313,719	$650,000	$963,719	4%	$735,129
Environmental Compliance	$459,000	$91,800	1%	$567,600	$113,520	1%	$73,249	$40,000	$50,000	$163,249	1%	$12,587
HCP/NCCP Preserve Management and Maintenance	$3,589,085	$717,817	7%	$4,772,670	$954,534	11%	$203,630	-	$180,000	$383,630	1%	$9,839
Monitoring, Research, and Adaptive Management	$2,835,248	$567,050	6%	$2,074,364	$414,873	5%	$110,384	$40,000	$150,000	$300,384	1%	$205,469
Remedial Measures	$30,000	$6,000	0%	$30,000	$6,000	0%	$6,000	-	-	$6,000	0%	-
Contingency Fund (5% of non-land acquisition costs)	$723,186	$144,637	2%	$806,197	$161,239	2%	$150,842	-	-	$150,842	1%	-
TOTAL	$47,484,856	$9,621,167	100%	$42,528,323	$8,706,452	100%	$1,594,730	$473,719	$23,540,000	$25,608,449	100%	$17,402,702

Table 17. Summary of All Revenues Received/Approved

Type	Reporting Period Total [1]	Cumulative Total [2, 3]
Mitigation for Terrestrial Impacts (development fees, rural infrastructure fees, and temporary impact fees)	$1,014,297	$6,281,800
Contributions to Recovery	$38,298	$1,274,200
Wetland Mitigation Fees (includes fees on streams and temporary impacts to wetlands)	$225,754	$681,200
Other Fees and Charges for Staff Time[4]	$98,189	$3,630,200
Grants	$16,204,377	$46,253,900
Local Funding[5]	$4,618,113	$23,760,400
Total	*$22,199,027*	*$81,881,700*

[1] Includes revenue received in 2015 (to date at time of release of this annual report) for 2014 projects.

[2] *Cumulative Total* also includes two projects unintentionally omitted from the previous annual reports (one from 2012 and one from 2013). The City of Pittsburg Trash Capture Demonstration Project (2012) resulted in $255.89 mitigation fees for terrestrial impacts and $1,767.19 in wetland mitigation fees. The E-BART Phase II - 3rd Amendment (2013) resulted in $120,458.58 for terrestrial impacts and $60,229.29 for contribution to recovery.

[3] Amounts are rounded.

[4] Includes pre-HCP payments, administrative fees and other changes (in *Cumulative Total*).

[5] Includes grants awarded to local partners. Grants awarded to the Conservancy are shown in the *Grants* row. Estimates of EBRPD land acquisition due diligence costs and preserve management expenditures are also included.

Table 18. Summary Accounting of Fee and Grant Revenues Received in Reporting Period

Type	Date[1]	Amount
Mitigation for Terrestrial Impacts (development fees, rural infrastructure fees, and temporary impact fees)		
Marsh Creek Cell Tower LP13-2069 Marsh Creek Rd Project	2/28/2014	$ 13,906
Chevron Pipeline KLM Site 32 PIM Repair Project	4/2/2014	$ 699
Marsh Creek Road Safety Improvements Project	5/23/2014	$ 32,199
Marsh Creek Detention Center Bridge Replacement Project	6/6/2014	$ 4,879
Deer Valley Shoulder Widening Project	6/6/2014	$ 40,732
Marsh Creek Road Bridge 142 Wingwall Repair Project	6/24/2014	$ 469
City of Brentwood Non-Potable Water Distribution System Phase II Project	6/27/2014	$ 646
Verizon Wireless - Bethel Island LP13-2097	6/30/2014	$ 8,796
Shell Pipeline North 20 ILI Repair Project and First Amendment	7/10/2014	$ 3,999
AT&T Co-Location Project LP13-2111 Marsh Creek Monopine	7/10/2014	$ 9,356
Pacifica Avenue Sidewalk Project	7/15/2014	$ 2,537
Chevron Pipeline KLM Site 32 PIM Repair Project - First Amendment	7/22/2014	$ 111
Marsh Creek Bridge Scour Repair Project	9/2/2014	$ 178
PG&E Contra Costa-Moraga 230 Kilovolt (kV) Reconductoring Project and First Amendment	11/17/2014	$ 309,831
Columbia Solar Project	11/21/2014	$ 42,927
Mount Diablo Recycling Center - 5 Acre Lease Extension	12/8/2014	$ 10,098
East Cypress Corridor Specific Plan/Stockpile Permit	1/14/2015	$ 20,793
Marsh Creek Reservoir Trash Rack Replacement Project	4/7/2015	$ 275
Three Stormwater Basins - Re-establish Low Flow Channel	4/7/2015	$ 162
Ferro/Ronconi Project	4/27/2015	$ 511,703
Development Fees subtotal		*$ 1,014,297*
Wetland Mitigation Fees (includes fees on streams and temporary impacts to wetlands)		
Chevron Pipeline KLM Site 32 PIM Repair Project	4/2/2014	$ 954
Marsh Creek Road Safety Improvements Project	5/23/2014	$ 84,885
Marsh Creek Detention Center Bridge Replacement Project	6/6/2014	$ 64,159
Deer Valley Shoulder Widening Project	6/6/2014	$ 1,039
Marsh Creek Road Bridge 142 Wingwall Repair Project	6/24/2014	$ 7,298
Chevron Pipeline KLM Site 32 PIM Repair Project - First Amendment	7/10/2014	$ 1,552
Pacifica Avenue Sidewalk Project	7/15/2014	$ 35,911
Marsh Creek Bridge Scour Repair	9/2/2014	$ 13,707
Columbia Solar Project	11/21/2014	$ 15,312
Marsh Creek Reservoir Trash Rack Replacement	4/7/2015	$ 232
Three Stormwater Basins - Re-establish Low Flow Channel	4/7/2015	$ 704
Wetland Mitigation Fees subtotal		*$ 225,754*
Contributions to Recovery		
Chevron Pipeline KLM Site 32 PIM Repair Project	4/2/2014	$ 1,653
Shell Pipeline North 20 ILI Repair Project and First Amendment	7/10/2014	$ 3,999
Chevron Pipeline KLM Site 32 PIM Repair Project - First Amendment	7/10/2014	$ 1,664
PG&E Contra Costa-Moraga 230 Kilovolt (kV) Reconductoring Project and First Amendment	11/17/2014	$ 30,983
Contribution to Recovery subtotal		*$ 38,298*
Other Fees and Charges for Staff Time		
Chevron Pipeline KLM Site 32 PIM Repair Project	5/7/2014	$ 5,000
Caltrans State SR 4 Median Buffer and Shoulder Widening Project (2nd Amendment)	6/30/2014	$ 5,000
Shell Pipeline North 20 ILI Repair Project and First Amendment	7/10/2014	$ 5,000
Chevron Pipeline KLM Site 32 PIM Repair Project	7/21/2014	$ 3,500
PG&E Pittsburg-Tesla Reconductoring Project	8/6/2014	$ 20,097
CCTA SR 160/SR 4 Bypass Phase 2 Connectors	8/6/2014	$ 14,470
PG&E's Contra Costa-Moraga 230 Kilovolt (kV) Reconductoring Project and First Amendment	11/17/2014	$ 21,948
Chevron KLM Site 1357 Project	12/8/2014	$ 16,420
Phillips 66 Pipeline Repair Project, Line 200, Spring 2013	1/27/2015	$ 3,904
Phillips 66 Requirement Survey Project, Summer 2013	1/27/2015	$ 2,087
Staff time for CCWD IRWMP Grant	8/28/2014	$ 763
Other Fees and Charges for Staff Time subtotal		*$ 98,189*

Table 18. Summary Accounting of Fee and Grant Revenues Received in Reporting Period

Type		Date[1]		Amount
Grants	**Source**			
DWR IRWMP (Hess Creek Restoration)	State	2/10/2014	$	234,631
CDFW LAG Grant 2011 (Wetland and Rare Plant Baseline Inventory)	State	2/13/2014	$	40,000
Moore Foundation (Roddy Ranch)	Foundation	6/23/2014	$	1,000,000
Section 6 (Smith)	Federal	7/15/2014	$	2,578,125
WCB Prop. 84 (Smith)	State	7/15/2014	$	2,260,275
Section 6 (Roddy Ranch)	Federal	7/24/2014	$	4,841,875
WCB Prop. 84 (Roddy Ranch)	State	7/24/2014	$	4,841,875
CDFW LAG Grant 2013 (Wetland and Rare Plant Baseline Inventory)	State	5/27/2015	$	45,490
DWR IRWMP (Hess Creek Restoration)	State	5/27/2015	$	362,106
Grants subtotal			*$*	*16,204,377*
Local Funding[2]				
EBPRD (Smith)		7/15/2014	$	537,600
EBRPD (Roddy Ranch)		7/24/2014	$	3,561,250
EBPRD Land Acquisition Due Diligence Cost/Funding (estimated)		2014	$	110,753
EBRPD Land Management Cost/Funding (estimated)		2014	$	408,510
Local Funding subtotal			*$*	*4,618,113*
Total			**$**	**22,199,027**

[1] Some revenues received in 2015 are included. These revenues were received by the Conservancy after project was permitted in 2014 or for revenues that will be accrued for 2014.

[2] Local Funding includes grants awarded to local partners. Grants are grants awarded to the Conservancy for conservation strategy implementation.

Table 19. Grants Awarded to Conservancy for Implementation of East Contra Costa County HCP/NCCP[1]

Funding Source	*Agency*	*Purpose*	*Amount*	*Required Match*	*Amount Expended (12/31/14)*[2]	*Remain (12/31/14)*	*Grant Close Date*	*Complete*	*Notes*
Section 6 (2006)	USFWS admin by WCB	Acquisition	$6,531,054	$7,982,399	$6,531,054	$0	June 2010	✓	
Section 6 (2007)		Acquisition	$7,000,000	$8,555,600	$7,000,000	$0	June 2011	✓	
Section 6 (2008)		Acquisition	$6,000,000	$7,333,333	$5,934,114	$0	Feb 2013	✓	
Section 6 (2009)		Acquisition	$2,500,000	$3,055,556	$2,500,000	$0	Aug 2014	✓	Extended twice
Section 6 (2010)		Acquisition	$6,000,000	$7,333,333	$6,000,000	$0	Aug 2014	✓	Extended once
Section 6 (2011)		Acquisition	$4,463,936	$5,455,922	$0	$4,463,936	Oct 2015		Extended once
Section 6 (2012)		Acquisition	$1,000,000	$1,222,222	$0	$1,000,000	Sep 2015		
Section 6 (2014)		Acquisition	$2,000,000	$2,444,444	$0	$2,000,000	2017		
CVPIA - HRP	USBR	Acquisition	$1,241,631	$500,000	$1,241,631	$0	Sep 2010	✓	
IRWMP - Prop 50	SWRCB	Acquisition or restoration	$750,000	$500,000	$750,000	$0	June 2012	✓	
IRWMP - Prop 50	SWRCB	Acquisition or restoration	$1,400,000	$500,000	$1,400,000	$0	Mar 2012	✓	
IRWMP - Prop 84	DWR	Acquisition or restoration	$650,000	$216,667	$650,000	$0	Dec 2014	✓	
NCCP Local Assistance (2006)	CDFW	Start-up staffing	$40,000	-	$40,000	$0	June 2008	✓	
NCCP Local Assistance (2007)	CDFW	Start-up wetlands restoration	$60,000	$120,000	$60,000	$0	Dec 2008	✓	
NCCP Local Assistance (2008)	CDFW	Wetlands restoration at Souza 2	$150,000	-	$125,100	$0	April 2011	✓	
NCCP Local Assistance (2009)	CDFW	Hess Construction	$150,000	$111,000	$150,000	$0	Mar 2012	✓	
NCCP Local Assistance (2010)	CDFW	Wetland and rare plant inventory	$27,000	-	$27,000	$0	April 2013	✓	
NCCP Local Assistance (2010)	CDFW	Restoration project monitoring/maintenance	$85,000	-	$85,000	$0	April 2013	✓	
NCCP Local Assistance (2010)	CDFW	Preserve monitoring plan development	$50,000	-	$50,000	$0	April 2013	✓	
NCCP Local Assistance (2011)	CDFW	Wetland and rare plant inventory (phase 2)	$40,000	-	$40,000	$0	April 2014	✓	
NCCP Local Assistance (2011)	CDFW	Restoration project monitoring/maintenance	$50,000	-	$50,000	$0	April 2014	✓	
NCCP Local Assistance (2011)	CDFW	Preserve management plan development	$75,000	-	$75,000	$0	April 2014	✓	
NCCP Local Assistance (2012)	CDFW	Ang pond restoration	$95,000	-	$0	$95,000	April 2015		
NCCP Local Assistance (2013)	CDFW	Baseline Inventory	$60,157	-	$45,490	$14,667	March 2016		
Environmental Quality Incentives Program	NRCS	Ang riparian planting, fencing and livestock trough systems	$75,585	-	$0	$75,585	Dec 2016		
Gordon and Betty Moore Foundation	-	Acquisition Fox Ridge	$880,000	50% match desired	$880,000	$0	Dec 2009	✓	
Gordon and Betty Moore Foundation	-	Acquisition and research Souza 3	$2,250,000	50% match desired	$2,066,969	$183,031	On-going		Avian research portion on-going
Gordon and Betty Moore Foundation	-	Acquisition Fan, Galvin, Moss Rock & VF Central	$1,300,000	50% match desired	$1,300,000	$0	Jan 2012	✓	
Gordon and Betty Moore Foundation	-	Acquisition of Roddy Ranch	$1,000,000	-	$1,000,000	$0	July 2014	✓	
Prop 84 NCCP account	WCB	Acquisition of Barron	$973,930	-	$973,930	$0	Feb 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Thomas	$1,842,966	-	$1,842,966	$0	June 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Affinito	$1,005,750	-	$1,005,750	$0	Dec 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Vaquero Farms Central	$230,000	-	$230,000	$0	Dec 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Thomas North	$388,755	-	$388,755	$0	Aug 2013	✓	
Prop 84 NCCP account	WCB	Acquisition of Smith	$2,260,275	-	$2,260,275	$0	July 2014	✓	
Prop 84 NCCP account	WCB	Acquisition of Roddy Ranch	$4,841,875	-	$4,841,875	$0	July 2014	✓	
		TOTAL	**$57,467,914**	**$45,330,476**	**$49,544,909**	**$7,832,219**			

[1] Funding from partners not included. EBRPD contributed an estimated $15 million of its own funds or its grants funds to joint land acquisitions and preserve management.
[2] Includes expenditures made by the Conservancy for which reimbursement from the grant source has not yet occurred.

Explanation of Acronyms:
CDFW: California Department of Fish and Wildlife
CVPIA HRP: Central Valley Project Improvement Act Habitat Restoration Program
DWR: Department of Water Resources
EBRPD: East Bay Regional Park District
IRWMP: Integrated Regional Water Management Plan
NCCP: Natural Community Conservation Plan
Section 6: Cooperative Endangered Species Conservation Fund, HCP Land Acqusition subaccount (authorized in Section 6 of federal ESA)
SWRCB: State Water Resources Control Board
USBR: United States Bureau of Reclamation
USFWS: United States Fish and Wildlife Service
WCB: California Wildlife Conservation Board (affiliated with CDFW)

X. PROGRAM ADMINISTRATION

Minor and Major Amendments

The Conservancy made no minor or major amendments to the Plan during the reporting period.

Implementation Policies

The Conservancy, CDFW, and USFWS developed two implementation policies to address issues that were not clearly defined in the Plan. These policies address:

- **Standardized Calculation Guidelines for Contribution to Recovery Charge for Participating Special Entity Projects** The HCP/NCCP allows for the Conservancy to charge Participating Special Entity project proponents a supplemental fee to aid the Conservancy in covering costs associated with the implementation of the HCP/NCCP that are not included in the impact fees. Contribution to Recovery was an approach to funding the Conservancy's requirement to contribute to the recovery of covered species and other costs not covered by the fees. This policy provides a tiered, standardized structure for calculating Contribution to Recovery charges. This policy ensures consistency and creates more certainty for Participating Special Entities in predicting overall permitting costs.

- **The Conservancy Governing Board reviewed and referred to the Public Advisory Committee the first draft of a report titled *Assessment of Plan Effects on CEQA Species*.** As set forth in the HCP/NCCP (Section 1.3.4), the Conservancy is responsible for preparing a document that will analyze the benefits that Plan implementation will have on special-status species that are not explicitly covered by the Plan. This report provides an assessment of the effects of the Plan on 59 special-status species that were not covered by the Plan but are often addressed in California Environmental Quality Act (CEQA) analyses ("CEQA species"), 41 plant and 18 animal species. The purpose of the assessment is to provide a programmatic, cumulative CEQA effects analysis for CEQA species taking into account impacts of all covered activities, including all adverse and beneficial effects of covered development activities and conservation measures. The cumulative effect on each species was determined to be beneficial, neutral, or adverse but less than significant, by considering the number of known populations and extent of suitable habitat that could be adversely affected within areas of anticipated development as well as those that would benefit from being in areas that may be preserved, enhanced, and managed for covered species and communities by the Plan. The final report could be referenced in future CEQA documents for individual covered projects and may enable these analyses to be completed more efficiently and effectively. This report will be finalized in early 2015.

Coordinated Wetland Permitting

Background and 2014 Achievements

The HCP/NCCP was designed to conserve not only endangered species, but wetlands and waters that provide habitat for these species and support other natural resource functions and values. This approach was intended, in part, to enable permit streamlining to extend beyond endangered species and to include regional permitting under state and federal laws for impacts on jurisdictional wetlands and waters. The interest in integrating federal and state wetland permitting into the HCP/NCCP process is the same as the articulated purpose of the Plan—to benefit stream and wetland resources by conserving these resources in a more coordinated and comprehensive fashion on a regional scale and to provide an integrated, coordinated approach to permitting in lieu of the often inefficient and costly project-by-project approach.

Discussions with U.S. Army Corps of Engineers (Corps), U.S. Environmental Protection Agency (EPA), State Water Resources Control Board (State Water Board), the Regional Water Quality Control Boards (Regional Water Boards), CDFW, and USFWS regarding this parallel approach to compliance with wetlands regulations started in 2002 during the early stages of developing the HCP/NCCP. Coordinating wetlands regulation with HCPs is a difficult process in part because there is no precedent.

On May 4, 2012, the Corps issued a Regional General Permit (RGP) related to the HCP/NCCP. On April 30, 2012, USFWS issued a Biological Opinion on the RGP. The issuance of the RGP and Biological Opinion are important milestones for the overall goals of the HCP/NCCP. To date, 10 covered projects and 2 Conservancy restoration projects have received permit coverage through the RGP.

Summary of Regional General Permit and Associated Biological Opinion

The RGP is designed to streamline wetland permitting in the HCP/NCCP Plan Area by coordinating the avoidance, minimization, and mitigation measures in the Plan with the Corps' wetland permitting requirements. Projects eligible to apply for the RGP are those covered by the HCP/NCCP that meet specified wetland impact limitations (i.e., wetland impacts are less than 1.5 acres). The RGP has a greater impact threshold than the Corps' existing Nationwide permit program, which limits wetland impacts to 0.5 acre.

The USFWS Biological Opinion for the RGP relies on the HCP/NCCP for mitigation measures and eliminates the need for the Corps to consult individually with USFWS for each project covered by the RGP. The term of the Biological Opinion corresponds with the 30-year term of the HCP/NCCP. By regulation, RGPs must be renewed every 5 years, but in this case a new Biological Opinion would not be needed.

With the RGP in place, project proponents will still apply directly to the wetland agencies for their wetland permits. However, due to the close match between HCP/NCCP and RGP permit

conditions, the process will be expedited and improved. Key improvements include the following.

- Consistent mitigation ratios and offsite mitigation requirements, which makes it possible to satisfy Corps requirements with HCP/NCCP fees (see *Proposed In-Lieu Fee Instrument/Program* below).
- Consistent emphasis on regional avoidance to avoid "postage-stamp" conservation on project sites that can hinder projects and compromise the functions and values of conserved resources.
- Consistent, regional, watershed approach to conserving wetlands, waters, and species, which will maximize the value and sustainability of conservation actions.

Currently, the RGP only relates to Clean Water Act (CWA) Section 404 permits, those issued by the Corps, but discussions are ongoing with the State Board and RWQCBs to coordinate their requirements with the RGP and HCP/NCCP. This coordination would lead to further permitting assurances and streamlining.

Proposed In-Lieu Fee Instrument/Program

The In-Lieu Fee (ILF) Instrument is the agreement with the Corps and EPA (and possibly other agencies such as the State Water Board and Regional Water Boards) that will sanction payment of HCP/NCCP fees as eligible mitigation under the RGP. The ILF Instrument will also provide the Corps and other signatories with oversight of the Conservancy's use of the fees. The resulting ILF program would comply with the recent federal *Compensatory Mitigation for Losses of Aquatic Resources* (Mitigation Rule; 33 CFR Part 332). The proposed ILF program would be implemented in conjunction with the RGP and HCP/NCCP. Until the ILF program is in place, an interim mitigation strategy is needed to enable payment of HCP/NCCP fees to satisfy RGP requirements.

Interim Strategy

With the RGP issued, but the ILF program not yet in place, an interim strategy is needed to coordinate mitigation required under the RGP with HCP/NCCP mitigation fees. The Corps' proposed approach is *permittee-responsible compensatory mitigation*, an option defined in Mitigation Rule 33 CFR Part 332. Under this approach, until the ILF is approved, the Conservancy will designate a portion of its existing wetland restoration sites as compensatory mitigation for an applicant's project, and this will fulfill the applicant's Section 404 compensatory mitigation requirements under the RGP. The Corps initially approved using this interim strategy for up to 1 year. In 2014, the Corps approved extending the interim strategy until the ILF program is approved to replace it. Before one or more of the Conservancy's existing wetland restoration sites is deemed eligible by the Corps for permittee-responsible mitigation purposes, the Conservancy must submit detailed information to the Corps on the site. This information includes point-by-point documentation of how the site complies with each requirement of the Mitigation Rule for a final mitigation plan (33 CFR 332.4[c] 2-14). For the Conservancy's existing wetland restoration projects, the required documentation already

exists in the form of construction plans and mitigation and monitoring plans for each project. The Corps will, however, require detailed quarterly and annual monitoring reports on the performance of the restoration projects used by the interim strategy.

Mitigation Fee Audit and Update

The HCP/NCCP requires automatic annual adjustments to HCP/NCCP mitigation fees based on economic indices as well as periodic audits in years 3, 6, 10, 15, 20, and 25 of Plan implementation. These periodic audits assess whether changes in HCP/NCCP implementation costs over time require additional fee adjustment. A periodic audit was completed in 2011 to assess HCP/NCCP costs through Year 3 of Plan implementation.

The Conservancy Board originally approved the changes to HCP/NCCP mitigation fees on July 22, 2011, after first considering the item on March 21, 2011. However, on May 10, 2012, after the Pittsburg City Council's consideration of the Conservancy's 2011 fee recommendations generated concern and comment, the Conservancy Board considered detailed, critical comment on fee changes and response from staff and the original economic team. On July 26, 2012, the Conservancy Board commissioned a new Periodic Fee Audit and directed staff to solicit proposals. On August 20, 2012, the Board approved the selection of a team assembled by Willdan Financial services and led by Robert Spencer of Urban Economics to perform the Periodic Fee Audit, including the information necessary to support the nexus findings the participating cities and the County may make under the Mitigation Fee Act. The Willdan team completed the *East Contra Costa County HCP/NCCP Mitigation Fee Audit* (Willdan Financial Services 2012a) and *HCP Fee Burden Analysis* (Willdan Financial Services 2012b). Staff posted these materials on the Conservancy website and notified the Conservancy mailing list on December 22, 2012.

On January 23, 2013, the Board considered the fee item and received a presentation on it from Mr. Spencer. The Board received public comment on the matter, authorized Conservancy staff to perform additional work in the interim, and scheduled action on it for the next meeting. Prior to the April 4, 2013, Board meeting, the Board received an updated version of the fee audit report entitled, *East Contra Costa County HCP/NCCP Mitigation Fee Audit and Nexus Study, Final Report*, March 2013 (2013 Fee Report). The changes made to the Report between December and March were minor. The 2013 Fee Report recommended a reduction to development fees, a reduction in stream fees, and increases to other wetland mitigation fees. The Conservancy Board approved 2013 Fee Report and other related actions at the June 27, 2013, Board meeting. Adoption of fees by participating cities and the County is pending.

Other Activities

Visit by U.S. Secretary of the Interior, Sally Jewell

U.S. Secretary of the Interior Sally Jewell hosted a discussion with East Contra Costa County community leaders and other experts from around the state to discuss the importance of partnerships between the federal government, states, private landowners, and other stakeholders when it comes to conserving threatened and endangered species and supporting smart economic development. The discussion, hosted at EBRPD's Black Diamond Mines Regional Preserve, included a tour and hike through the Conservancy's preserve-system properties.


Photo Credit: Scott Hein

Found Largest Population of Lime Ridge Navarretia

A new, and now largest known, population of the Lime Ridge navarretia was discovered in the Black Diamond Mines Regional Preserve on a property recently acquired by the Conservancy. Lime Ridge navarretia had formerly only been known to occur at two locations in Contra Costa County, both in the Lime Ridge Open Space in Walnut Creek. David Gowen, a botanist associated with CNPS, originally discovered the previously undescribed species in 1998 and later identified the population as its own species in 2008.

Public Outreach/Engagement

Public Hikes

- In 2014, Save Mount Diablo led three hikes on Conservancy preserve properties. Two spring hikes were in Chaparral Springs and one in Irish Canyon. There was a total of 85 attendees.
- The Conservancy's Public Advisory Committee, open to the public, convened at the Vaquero Farms property and featured a driving and hiking tour of the property.

Volunteer Engagement

- Volunteers working with Save Mount Diablo collected acorns and buckeye nuts for installation at the Hess Creek Channel Restoration Project.
- Volunteers working with Save Mount Diablo continued to monitor and maintain the riparian plantings at the Irish Canyon Restoration sites.

XI. REFERENCES

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XII. LIST OF PREPARERS

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APPENDIX A: GLOSSARY

Definitions of Key Terms and Concepts

Adaptive management. A method for examining alternative strategies for meeting measurable biological goals and objectives and, if necessary, adjusting future conservation management actions according to what is learned (*65 Federal Register 106*; June 1, 2000). (See also Chapter 7 for alternative but similar definitions of adaptive management.)

Anthropogenic. Caused or produced through human agency.

Baseline. The existing environmental state, which includes past and present impacts as well as the anticipated impacts of all permitted projects in the inventory area.

Biological opinion. The document stating the opinion of the U.S. Fish and Wildlife Service and/or the National Oceanic and Atmospheric Administration's National Marine Fisheries Service regarding whether a federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat (*50 Code of Federal Regulations* [CFR] *402.02*). A biological opinion is one of the decision documents of a consultation under Section 7 of the federal Endangered Species Act (ESA).

Biodiversity. The variety of organisms considered at all levels, from genetic variants of a single species through arrays of species to arrays of genera, families, and higher taxonomic levels; includes the variety of ecosystems.

Buffer areas. Designated zones of agricultural lands, grassland, or other habitat types adjacent to preserves that are intended to prevent or reduce the undesired intrusion of biota, harmful materials, or disturbances into the preserve, as well as the movement of covered wildlife species from preserve areas into adjoining areas.

Conservation. According to the federal ESA (Section 3[3]), the terms *conserve*, *conserving*, and *conservation* are defined as the methods and procedures necessary to bring any endangered or threatened species to the point at which the measures provided under the Act are no longer necessary. Such methods and procedures include, but are not limited to, activities associated with resource management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transportation. The Natural Community Conservation Planning Act defines *conserve*, *conserving*, and *conservation* as the use of methods and procedures within the plan area that are necessary to bring any covered species to the point at which the measures provided pursuant to Chapter 1.5 are not necessary, and for covered species that are not listed pursuant to Chapter 1.5 to maintain or enhance the condition of a species so that listing pursuant to Chapter 1.5 will not become necessary.

Conservation measure. A management action that, when implemented, will partially or wholly achieve Plan objectives for covered species, natural communities, biodiversity, or ecosystem function.

Conserved habitat. Species habitat that is protected, enhanced, and/or restored under the Plan.

Construction monitoring. Monitoring by biologists of construction activities to ensure that conservation measures are implemented and impacts on biological resources are avoided or minimized in accordance with Plan requirements.

Contribute to recovery. Actions that measurably increase the baseline conditions necessary to support covered species and contribute to the eventual de-listing of a listed species or prevention of listing of an unlisted species. A contribution to recovery does not include actions necessary to avoid, minimize, or mitigate impacts of covered activities.

Cover (e.g., canopy cover, areal cover). The area of ground covered by vegetation of particular species or vegetation type, generally expressed as a percentage.

Covered species. Those species addressed in the Plan for which conservation measures will be implemented and for which the permittee seeks authorization for take under Section 10 of the federal Endangered Species Act and Section 2081 of the California Endangered Species Act.

Critical habitat. An area designated as critical habitat by the U.S. Fish and Wildlife Service pursuant to the federal Endangered Species Act. Critical habitat areas are specific geographic areas, whether occupied by listed species or not, that are determined to be essential for the conservation and management of listed species, and that have been formally described and designated in the Federal Register.

Dominance. The extent to which a given species predominates a community by virtue of its size, abundance, or coverage.

Ecosystem. A community of organisms and their physical environment interacting as an ecological unit.

Ecosystem function. The sum total of processes operating at the ecosystem level, such as the cycling of matter, energy, and nutrients.

Ecosystem restoration. The reestablishment of ecological functions within an area that historically supported those functions.

Environmental gradient. A shift in physical and ecological parameters, as characterized by transition zones between land cover types and natural communities or topographic gradients across a landscape.

Ephemeral stream. A stream that flows only in response to rain events and receives no groundwater input.

Executive Director. The Executive Director leads the Implementing Entity, and is responsible for Plan implementation, staff management, funding acquisition, and other managerial duties.

Extinct species. A species no longer in existence.

Extirpated species. A species no longer surviving in regions that were once part of its range.

Fossorial. Adapted for digging or burrowing into the ground.

Geographic Information System (GIS). Computer-based mapping technology that manipulates geographic data in digital layers and enables one to conduct a wide array of environmental analyses.

Goal. A broad, guiding principle that identifies an expected outcome of the Plan. Conservation strategy goals describe the desired future condition for each covered species with full implementation of the Plan.

Habitat. The environmental conditions that support occupancy of a given organism in a specified area (Hall et al. 1997). In scientific and lay publications, habitat is defined in many different ways and for many different purposes. For the purpose of the Plan, habitat is defined as the specific places where the environmental conditions (i.e., physical and biological conditions) required to support occupancy by individuals or populations of a given species are present. Habitat may be occupied (individuals or population of the species are, or have recently been, present) or unoccupied (see *unoccupied habitat* below).

Habitat creation. The establishment of a vegetation community in an area that did not previously support it. For example, stock ponds can be created in areas that previously did not support them by grading and installing a check dam.

Habitat enhancement. The improvement of an existing degraded vegetation community. Enhancement involves improving one or more ecological factors, such as species richness, species diversity, overall vegetative cover, or wildlife value. Enhancement activities typically occur on substrates that are largely intact.

Habitat-limited. A habitat-limited species is one whose abundance, distribution, or reproduction is limited by the availability or quality of suitable habitat. See *suitable habitat*.

Habitat quality. The ability of the environment to provide conditions that support the persistence of individuals and populations. The precise meaning of quality varies by species and depends on the subject species' specific needs in the context of a particular area. High-quality habitat for some species comprises only foraging and resting elements; for others it comprises foraging, resting, and nesting elements; for still others it may encompass all elements needed for the species to complete its lifecycle. Low-quality habitat would include only the minimal elements that support occurrence of the species. High-quality habitat tends to support larger numbers of species than low-quality habitat.

Habitat quantity. The area of the environment that supports or could support occupancy of a given organism.

Habitat replacement. To replace habitat is to mitigate habitat loss by enhancing or restoring habitat equivalent to or greater than the habitat lost.

Habitat restoration. The establishment of a vegetation community in an area that historically supported it, but no longer supports it because of the loss of one or more required ecological factors. Restoration may involve altering the substrate to improve a site's ability to support the historic vegetation community.

Harass. An intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (*50 CFR 17.3*).

Harm. An act that actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (*50 CFR 17.3*).

Hydrology. The movement of surface and subsurface water flows in a given area. The hydrology of an area is intimately connected with its precipitation, soils, and topography.

Incidental take. Any taking otherwise prohibited, if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity (*50 CFR 17.3*).

In-kind/like-value creation. Establishing the same vegetative community that would provide the same ecological values over time as the vegetation community affected. For example, creating an artificial vernal pool that supports species similar to those found in an affected vernal pool would be in-kind/like-value creation.

Intermittent stream. A stream that is supplied by both rainfall runoff and groundwater. Intermittent streams tend to be seasonal, flowing during the rainy season and into the late spring or early summer.

Jurisdictional wetlands and waters. State and federally regulated wetlands and other water bodies that cannot be filled or altered without permits from either the Corps under Section 404 of the Clean Water Act, the State Water Resources Board, or the Regional Water Quality Control Boards under either Section 401 of the CWA or the Porter-Cologne Water Quality Control Act, or the CDFW under Fish and Game Code Section 1602, as of the date the Plan takes effect.

Land cover type. The dominant feature of the land surface discernible from aerial photographs and defined by vegetation, water, or human uses.

Land-use designation. The designation, by parcel, in an adopted city or county General Plan of the allowable uses.

Loss of habitat. A reduction in habitat quality or quantity that results from an adverse change in an environmental condition. Environmental conditions may include cover, substrate, channel type, interacting species, river area, reservoir area, water quality, and groundwater depth.

Metapopulation. A group of partially isolated populations belonging to the same species that are connected by pathways of immigration and emigration. Exchange of individuals occurs between such populations, enabling recolonization of sites from which the species has recently become extirpated.

No-take species. Species for which take is not authorized under this Plan. In order to comply with the terms of the Plan, applicants for coverage under the Plan must avoid all direct and indirect impacts on no-take species. See Table 5-3 of the HCP/NCCP for a list of no-take species.

Out-of-kind/like-value. Establishing a similar, but not identical, vegetative community with some of the same ecological functions and values as the affected vegetative community over time.

Ordinary high water mark (OHWM). A line on the shore established by the fluctuations of water and indicated by physical characteristics, such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; or the presence of litter and debris.

Perennial stream. A year-round stream that is supplied by both rainfall runoff and groundwater, as well as by substantial dry-season inputs.

Performance indicator. The environmental variables that are quantitatively measured over time to determine if enhanced/created/restored natural communities have successfully met Plan biological goals and objectives.

Performance objective. In monitoring, the optimal desired value for each performance indicator. Performance objectives establish a higher threshold for each indicator than that established for performance standards. Funding, design, and management objectives for enhanced/created/restored natural communities are established at levels that are designed to ensure that the performance objectives are achieved. Failure to meet a performance objective would not constitute a changed circumstance or require remedial measures.

Performance period. In monitoring, the time over which performance standards must be met.

Performance standard. In monitoring, a minimum requirement necessary to achieve biological goals and objectives. Failure to achieve a performance standard could constitute a changed circumstance and require that remedial measures be implemented.

Permittees. Those entities requesting a Section 10(a)(1)(B) incidental take permit from the USFWS and a take permit under the NCCPA from the CDFW for the species and activities covered in the accompanying HCP/NCCP.

Planning surveys. Surveys conducted by applicants for Plan coverage and used in the project-planning process to identify constraints and determine which Plan conservation measures are applicable. Planning surveys also include surveys conducted by the Implementing Entity on potential preserve lands to evaluate whether these lands will meet Plan requirements.

Population. A group of individuals of the same species inhabiting a given geographic area, among which mature individuals reproduce or are likely to reproduce. Ecological interactions and genetic exchange are more likely among individuals within a population than among individuals of separate populations of the same species.

Range. The geographic area a species is known to occupy or believed to occupy.

Practicable. Practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purpose (45 FR 85344, December 24, 1980: U.S. Environmental Protection Agency, *40 CFR 230.3,* Definitions).

Preconstruction surveys. Surveys conducted by applicants for Plan coverage for certain biological resources immediately prior to construction to ensure that species and habitat avoidance and minimization measures can be effectively implemented during construction of covered projects or implementation of covered activities.

Preserves. Discrete areas of conserved habitats managed as single units under the Plan.

Preserve System. All Plan preserves considered collectively.

Protect habitat. To maintain the existing or enhanced extent of species habitat through acquisition, easements, or other practicable processes for bringing unprotected sites under protected status.

Recovery. The process by which the decline of an endangered or threatened species is arrested or reversed or threats to its survival neutralized so that its long-term survival in nature can be ensured. Recovery entails actions to achieve the conservation and survival of a species (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998), including actions to prevent any further erosion of a population's viability and genetic integrity, as well as actions to restore or establish environmental conditions that enable a species to persist (i.e., the long-term occurrence of a species through the full range of environmental variation).

Recovery Plan. A document published by the USFWS that lists the status of a listed species and the actions necessary to remove the species from the endangered species list.

Riparian habitat. Vegetation associated with rivers, streams, lake banks, and floodplains.

Ruderal. A species or plant community that occurs on a highly disturbed site.

Signature. Characteristic value, color, or texture on an aerial photograph that correlates to a particular land cover type.

Stream, perennial. A stream that flows throughout the year.

Stream, intermittent. A stream that flows only at certain times of the year, generally in response to precipitation runoff or groundwater input.

Stream, ephemeral. A stream that flows only briefly in direct response to precipitation in the immediate vicinity, and that does not receive groundwater input.

Succession. The change in the composition and structure of a biological community over time. Successional patterns often shift dramatically following a major disturbance (e.g., fire, flood, anthropogenic clearing of land).

Suitable habitat. Habitat that exhibits the characteristics necessary to support a given species.

Take. According to the federal Endangered Species Act (Section 3[18]), to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. According to the California Endangered Species Act (Section 86 of the California Fish and Game Code), *take* means to hunt, pursue, catch, capture, or kill.

Take Coverage. Is defined in the HCP/NCCP in terms of land cover types lost as a result of covered activities. See HCP/NCCP Chapter 3 of for definition of land cover types and Chapter 4 for an estimate of loss of these land cover types.

Umbrella species. A species whose range and habitat requirements are large and broad enough to encompass the range and habitat requirements of other species.

Unoccupied habitat. Habitat that exhibits all the constituent elements necessary for a species, but where surveys have determined that the species is not currently present. The lack of individuals or populations in the habitat is assumed to be the result of reduced numbers or distribution of the species such that some habitat areas are unused. It is expected that these areas would be used if species numbers or distribution were greater. See also definition of *suitable habitat*.

Urban-wildland interface. The narrow zone (<100 feet) between dense urban development and natural land cover in which structures can be built to minimize the damaging indirect effects on covered species or habitats of activities within urban areas.

Vegetation community. A natural or artificial terrestrial community defined by the dominant vegetation and the vegetation structure. This term is used synonymously with the regulatory term *natural community* under the Natural Community Conservation Planning Act of 2002.