East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan Annual Report 2013

April 2014

East Contra Costa County Habitat Conservancy

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Acronyms and Abbreviations

APWRA	Altamont Pass Wind Resource Area
BMP	best management practice
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
Conservancy	East Contra Costa County Habitat Conservancy
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DEM	Digital Evaluation Model
EBRPD	East Bay Regional Park District
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act
FAC	Facultative
FACW	facultative wetland
GIS	geographic information system
gps	global positioning system
HCP/NCCP	Habitat Conservation Plan/Natural Community Conservation Plan
HCPA	Habitat Conservation Plan Association
ILF	In Lieu Fee
kV	Kilovolt
NCCPA	Natural Community Conservation Planning Act
OBL	obligate wetland

OHWM	ordinary high water mark
Permittees	Contra Costa County, Contra Costa County Flood Control and Water Conservation District, City of Brentwood, City of Clayton, City of Oakley, City of Pittsburg, East Bay Regional Park District, and East Contra Costa County Habitat Conservancy
Plan	East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan
RGP	Regional General Permit
RWQCB	Regional Water Quality Control Board
State Board	State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service
WCB	Wildlife Conservation Board

EXECUTIVE SUMMARY

This is the fifth 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, 2013, and December 31, 2013, per the conditions of the Plan and Implementing Agreement.

The HCP/NCCP proactively addresses the long-term conservation needs in the region 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 regional conservation and development framework that protects natural resources while improving and streamlining the permit process for take coverage of state and federally listed species and impacts to sensitive habitat 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.

[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.

Covered Activities

Projects approved as covered activities under the Plan provide a number of benefits to the communities in eastern Contra Costa County. For example, one significant project covered under the Plan in 2013 was the Emerson Ranch project. The project consists of 567 residential lots, a 23.74-acre commercial parcel, 10-acre park stormwater detention pond/basin, and other trails and open space. This project is the first major subdivision project covered under the HCP/NCCP. The Emerson Ranch project required Central Valley Project (CVP) inclusion and approval from the Bureau of Reclamation (BOR). As part of the BOR approval process and as a federal agency, BOR had to initiate a Section 7 consultation with USFWS. Because the project could be covered through the Section 10 permit through the Plan, the Section 7 process was streamlined.

Also in 2013, the Contra Costa Transportation Authority (CCTA) State Route 160/State Route 4 Bypass Phase 2 Connectors project was covered under the Plan. This is a significant transportation project for East Contra Costa County and the second phase of the State Route 4 Bypass project covered through the Plan. The project includes overpasses enabling direct connections between Route 160/the Nejedly Bridge and the Cities of Brentwood and Oakley and other points south and east on Highway 4. Coverage of this project through the HCP/NCCP is another example of how the HCP/NCCP helps to streamline and facilitate major infrastructure projects in the County.

Another project of note in 2013 is another important infrastructure project, the Pacific Gas & Electric (PG&E) Pittsburg-Tesla Re-Conductoring project. The project provides increased power transmission capacity to meet increased demand. Although the project spanned Contra Costa and Alameda counties, the portion of the project in Contra Costa County was covered under the Plan, whereas the portions outside of the HCP/NCCP inventory area, required a Biological Opinion from USFWS.

Altogether, 12 projects received take coverage under the Plan in 2013, including 3 urban development projects, 8 rural infrastructure projects, and a single rural operations and maintenance project, totaling 157.2 acres of permanent impacts and 17.2 acres of temporary impacts on terrestrial land cover types. There were no linear feet of permanent or temporary impacts on streams.

As required by the HCP/NCCP, impacts resulting from covered activities were tracked by land cover type and covered plant occurrences. Impacts on aquatic land cover types and streams

were tracked by watershed. Impacts on aquatic land cover types during the reporting period were limited to the Brushy watershed and Upper Marsh watershed.

Land Acquisition and Stay-Ahead

The first 6 years of Plan implementation achieved significant progress toward acquisition goals (see Figures ES-1 through ES-4). As of December 31, 2013, 25 properties were acquired for the Preserve System, totaling over 9,210 acres. This includes 2 properties acquired in 2013. All acquisitions to date have been completed in partnership with the East Bay Regional Park District (EBRPD) (i.e. EBRPD will own and manage Preserve System lands). Highlights of the acquisitions include the following achievements.

- 300 acres of annual chaparral acquired, and more than 133 acres acquired to date (24% of the annual chaparral preservation requirement achieved).
- More than 84 acres of oak woodland acquired, and nearly 250 acres protected to date (312% of the oak woodland preservation requirement).
- Purchase of a key in-holding downstream of the Conservancy's Upper Hess Creek Restoration Project which itself has significant stream and riparian restoration potential.


A. Galvin Property acquired in 2013

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 6 years of implementation toward many of the Plan's Year-30 conservation requirements. For example, all of the oak woodland required to be conserved during the Plan has already been conserved. There have been no impacts on two land cover types, chaparral scrub, and oak woodland, so each acre conserved to date is in excess of the Stay-Ahead requirement. Conservation of other land cover types is also ahead of impacts incurred (see Figures ES-1, ES-2, ES-3, and ES-4 for details). Likewise, the Stay-Ahead Provision only reflects land cover requirements and does not reflect geographical requirements intended to ensure Preserve System connectivity. As shown in Figure ES-4, the Conservancy is ahead of the average pace necessary to assemble the 30,300-acre Preserve System estimated to be required by Year 30, but it still has a long way to go.

Habitat Restoration and Creation

The Plan requires stream and wetland restoration and pond creation to compensate for impacts on streams, wetlands, and ponds covered by the Plan. Over the 30-year life of the Plan, the Conservancy anticipates restoring or creating as much as 500 acres of wetlands and ponds,

and 6 miles of streams (this figure assumes maximum impacts occur; the ultimate requirement may be much less). During the reporting period, no new restoration projects were constructed by the Conservancy but two major projects were planned and designed in 2013 for construction in 2014. To date, seven restoration projects have been constructed, and each is now being monitored and adaptively managed. These seven restoration projects were designed to restore or create the following.

- 2.4 acres of alkali wetlands.
- 8.3 acres of seasonal wetland.
- 0.2 acres of perennial wetlands.
- 0.9 acres of riparian woodland.
- 0.4 acres of ponds.
- 3,666 feet of intermittent stream.

The seven restoration projects constructed to date provide a range of benefits to covered species. Each of the seven projects benefit covered amphibian species (California red-legged frog and California tiger salamander). Wetland restoration in 2009 and 2012 at Souza II and in 2012 at Vaquero Farms South increased habitat for covered vernal pool crustaceans. Restoration on Lentzner and Souza II also increased rare alkali grassland and now supports habitat for alkali wetland plant species. In 2013, the Vasco Caves Souza I pond creation project (one of the first two projects constructed) met the hydrology success criterion. It also met one of two vegetation success criteria. The project will continue to be monitored in 2014.

Coordinated Wetland Permitting

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.

Discussion with Corps, U.S. Environmental Protection Agency, State Water Resources Control Board, the Regional Water Quality Control 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 in 2012 and 2013 are as follows.

- On May 4, 2012, the Corps issued an 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 the Clean Water Act Section 404 permits, but discussions are ongoing with the State

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

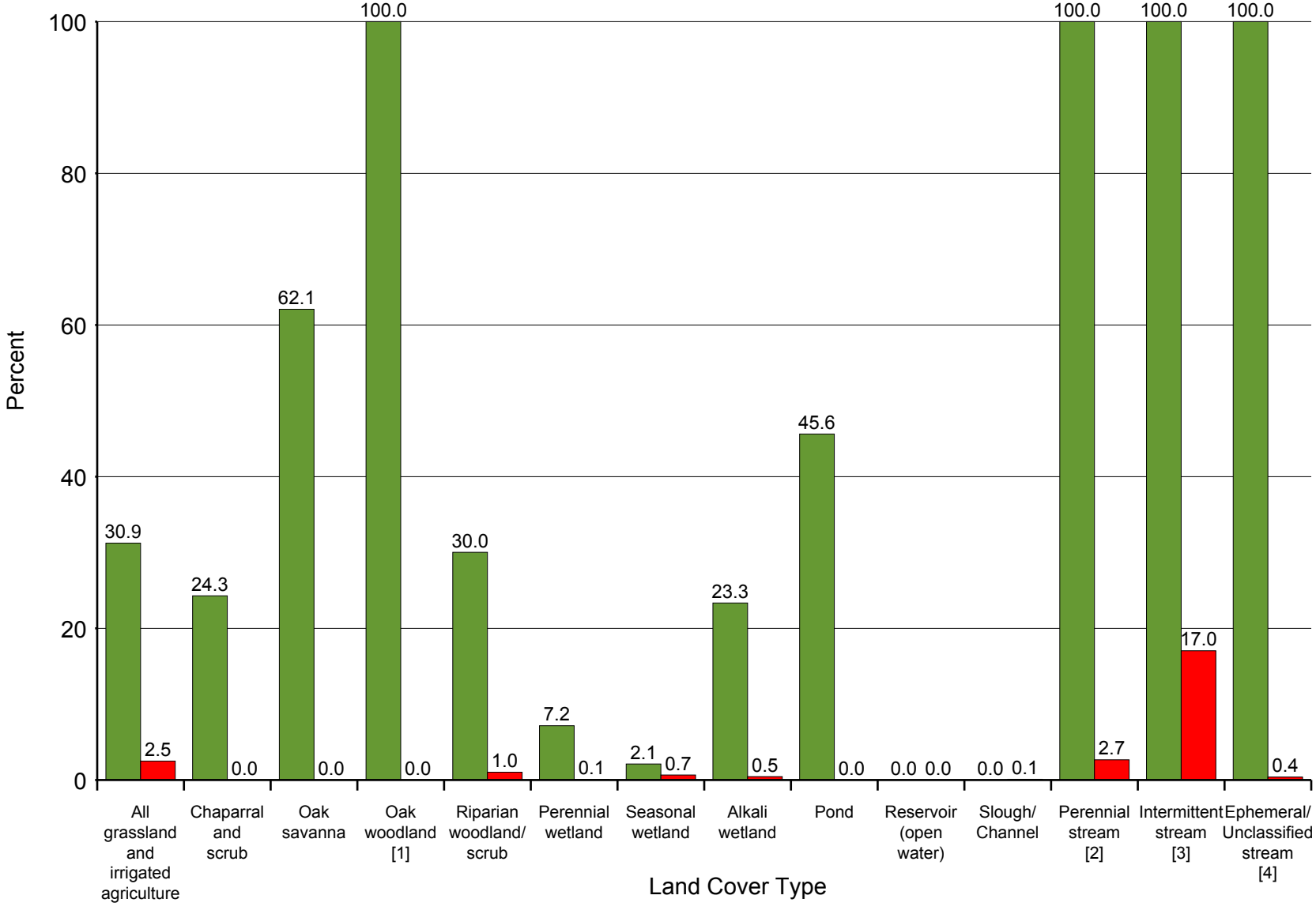
- On April 30, 2012, the USFWS issued a Biological Opinion on the RGP. The Biological Opinion for the RGP relies on the HCP/NCCP for mitigation measures and eliminates the need for the Corps to consult individually with the USFWS for each project covered by the RGP. The term of the Biological Opinion corresponds with the 30-year term of the HCP/NCCP.
- The Conservancy is seeking to establish an In-Lieu Free (ILF) program to comply with the recent federal "Mitigation Rule" (Code of Federal Regulations [CFR], Title 33, Part 332). The proposed ILF program would be implemented in conjunction with the RGP and HCP/NCCP. The 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.
- As an interim strategy until the ILF program is in place, the approach is "permittee-responsible compensatory mitigation," an option defined in federal Mitigation Rule 33 CFR Part 332. Under this approach, until the ILF is approved, the Conservancy will represent for the Corps that applicants receiving authorization under the RGP would fulfill compensatory Section 404 mitigation requirements by designating a portion of one or more of the Conservancy's existing wetland restoration sites as the compensatory mitigation for an applicant's project. 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.
- Over 10 projects have been permitted under the RGP since it was issued.

Funding

The Conservancy has successfully pursued grants. Various federal, state, and private funding sources generously granted $1,487,100 during 2013 to Conservancy activities. Fees and other payments from project proponents totaled $2,280,919. Local matching funds, which include grants awarded to local partners, totaled an estimated $696,500.

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 312% of the total.

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

[3] Intermittent stream has exceeded the conservation requirement: it is 3562% of the total.

[4] Ephemeral/Unclassified stream has exceeded the conservation requirement: it is 364% of the total.

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

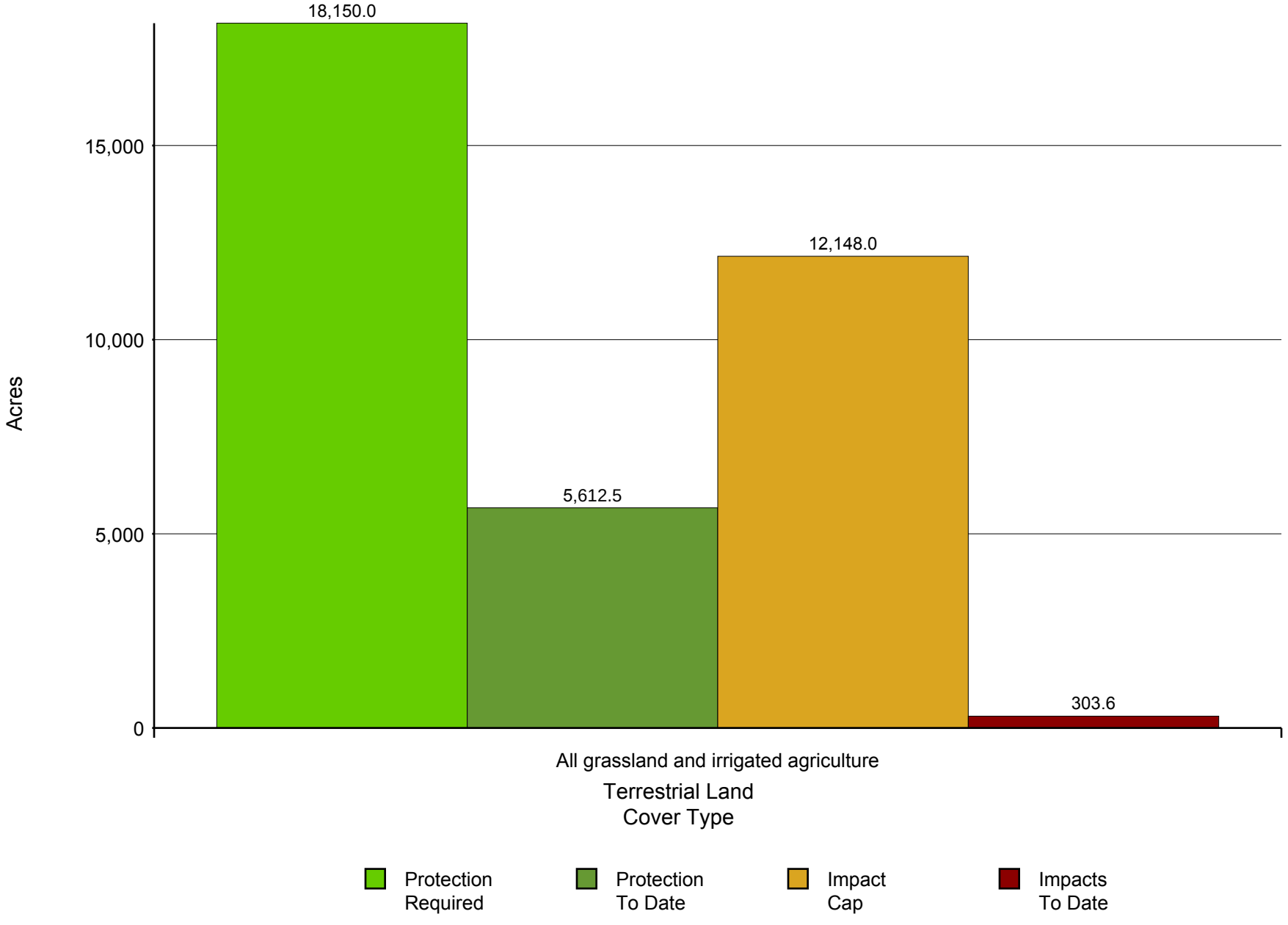


Figure ES-2b. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Terrestrial Land Cover Types

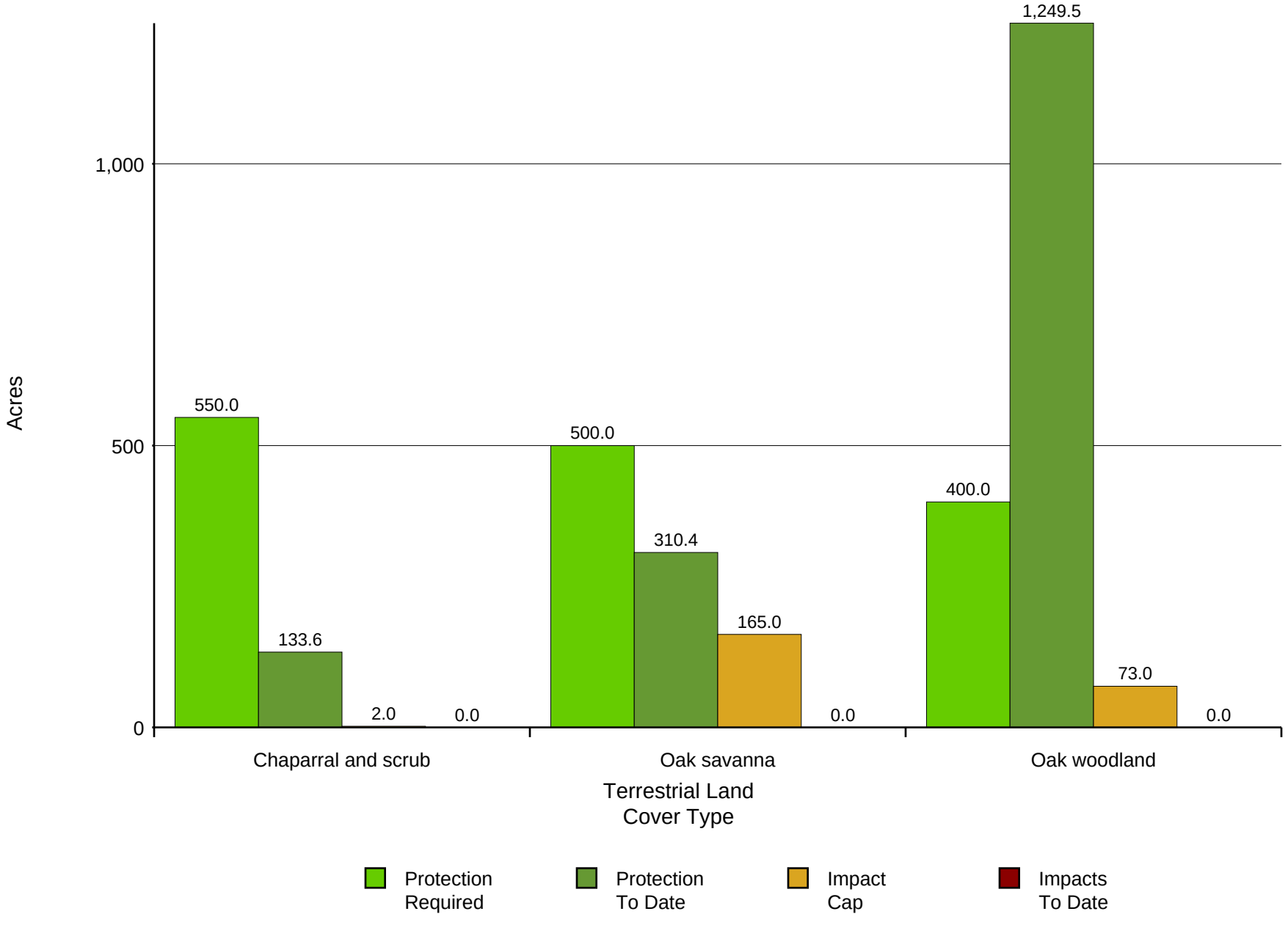


Figure ES-3a. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Aquatic Land Cover Types

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.

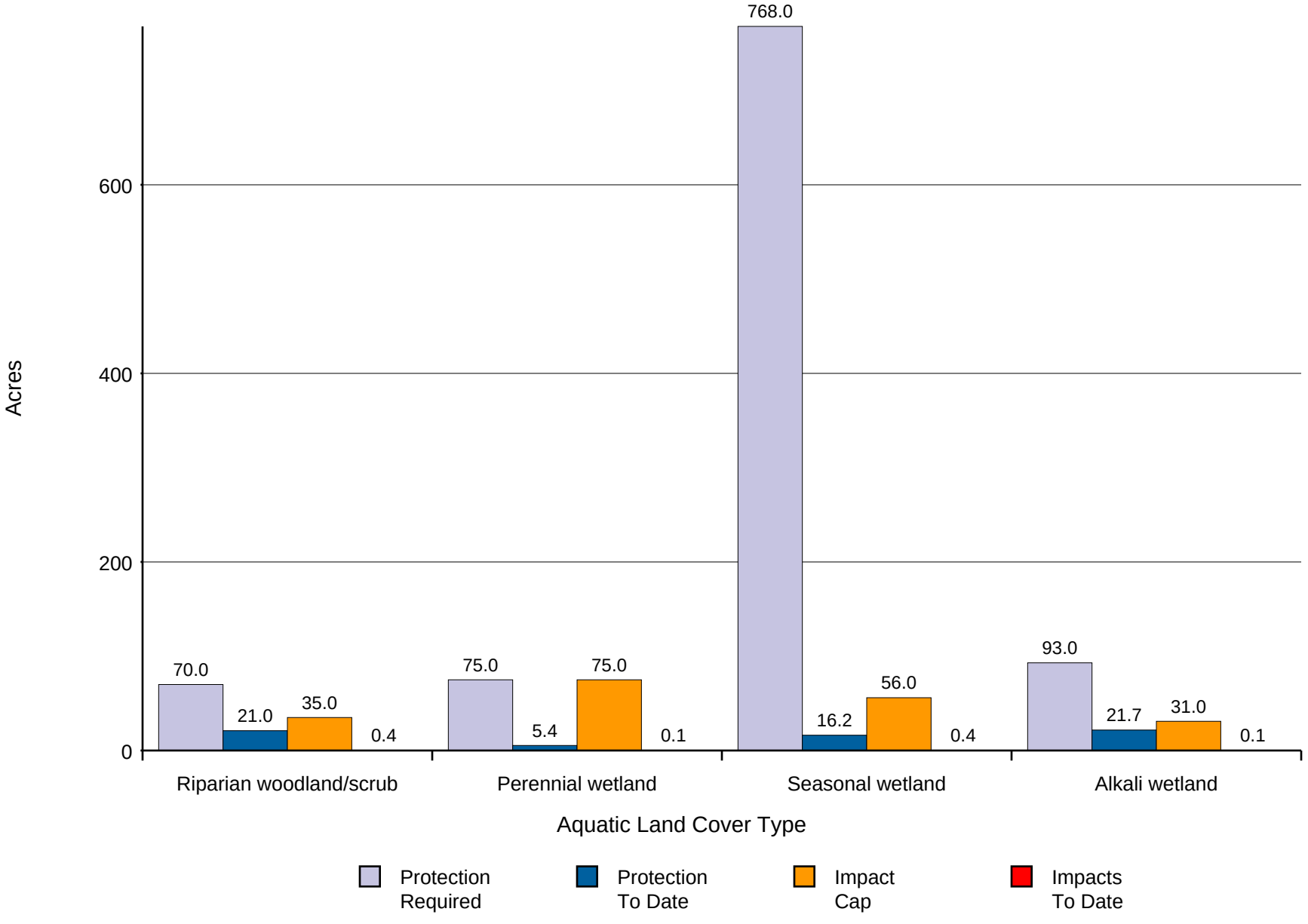


Figure ES-3b. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Aquatic Land Cover Types

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.

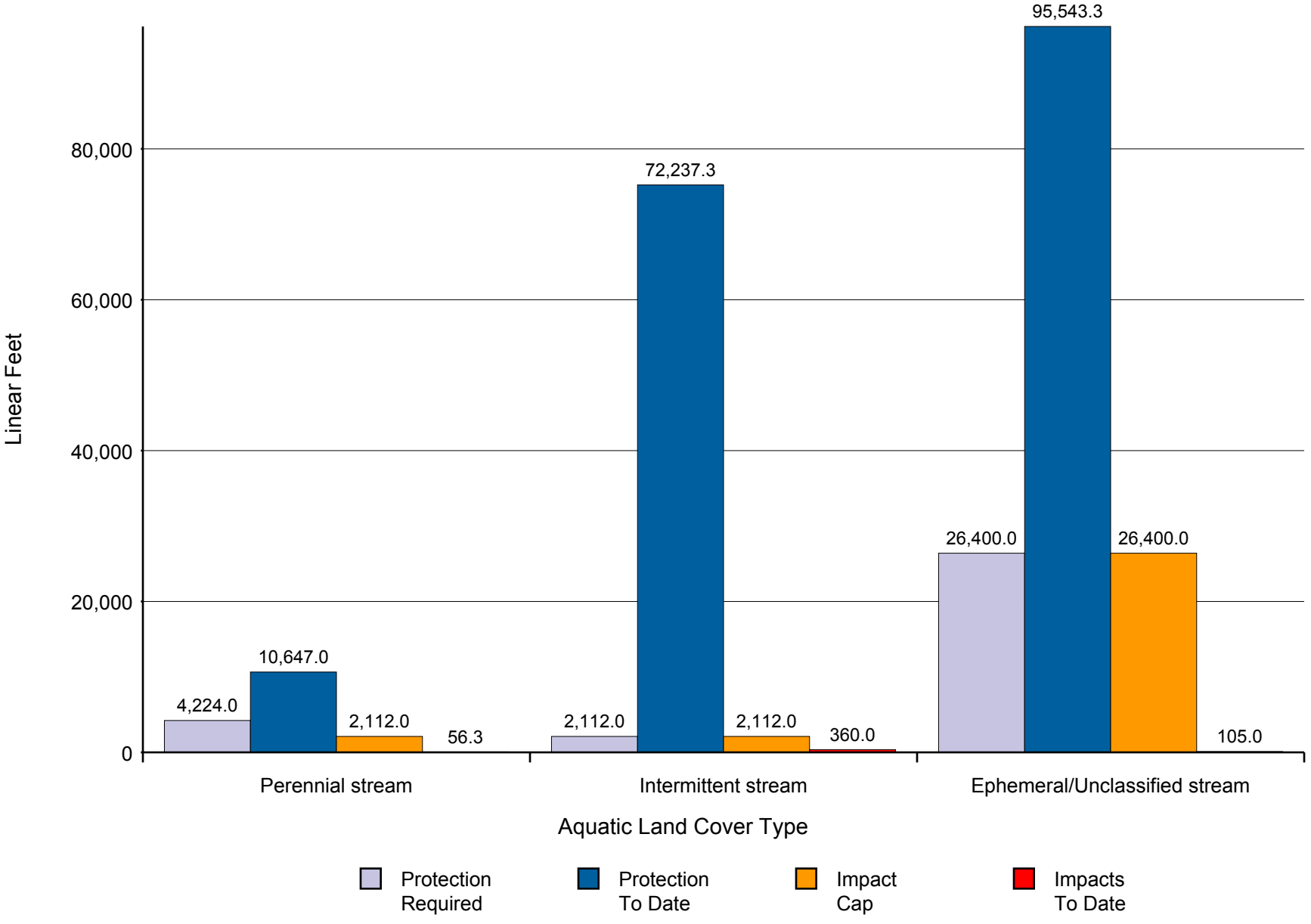
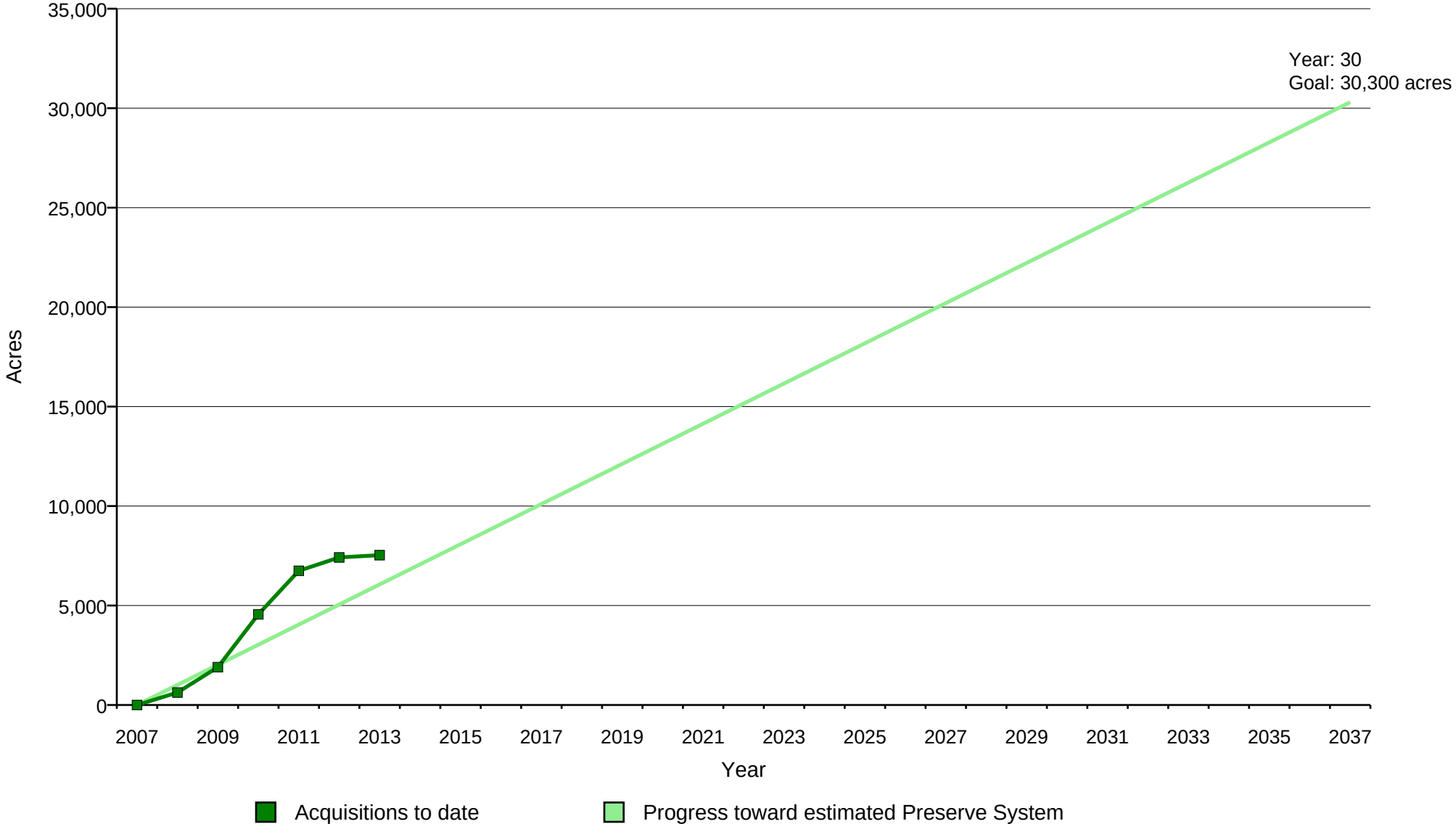


Figure ES-4. Progress Toward Assembling the Preserve System

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 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 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 California Department of Fish and Game) and the U.S. Fish and Wildlife Service (USFWS) in 2007. The Plan will allow 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) (collectively, 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 will help 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 permits issued provide take authorization under the state and federal Endangered Species Acts (ESAs) for between 8,670 and 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. The Preserve System will encompass approximately 23,800 acres to 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 East Contra Costa County Habitat Conservancy (Conservancy) is the Implementing 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 the CDFW and the USFWS and supporting the Governing Board and advisory committees.

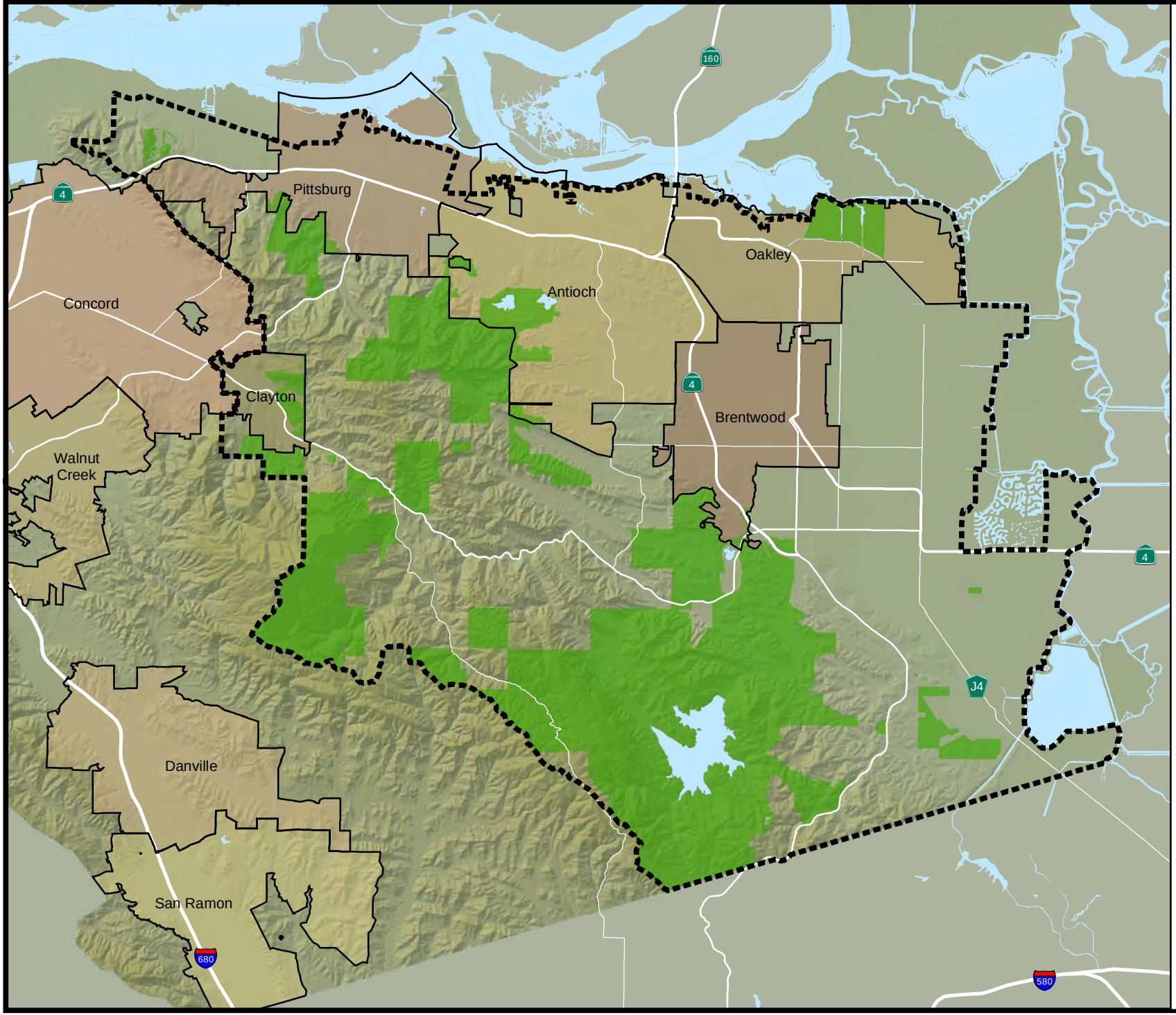
The EBRPD is expected to be a primary landowner and land manager for the Preserve System, and so far all land acquisitions have been performed by the EBRPD. The EBRPD has more than 75 years of experience managing public open space lands and now owns more than 114,000 acres. HCP/NCCP Preserve System lands 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, the USFWS, the 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 the CDFW and the USFWS that implementation is proceeding according to the Plan, the Implementing Agreement, and the permits.
- Disclosing and documenting issues with Plan implementation that require consultation and resolution with the CDFW, the 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.

Figure 1 East Contra Costa County Habitat Conservation Plan Inventory Area



Legend

- Inventory Area
- Non-urban Parks, Public Watershed Lands, and Deed Restricted Open Space in the Inventory Area (as of 2006 when the HCP/NCCP was completed)
- City Limits

Miles

2 1 0 2

03/19/2014

This is the fifth 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, 2013 through December 31, 2013. However this Annual Report also summarizes the Plan implementation activities undertaken from the full start of Plan Implementation on January 18, 2008 (when the last set of local ordinances took effect[2]) to December 31, 2013. 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 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.

[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.

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.

Monitoring, Research, and Adaptive Management

Section VI summarizes the monitoring, research, and adaptive management 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).


Highway 4- State Route 160 connector

- **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 12 projects received take coverage under the Plan during the reporting period (Table 1 and Figure 3a and Figure 3b). Covered activities include the following.

- 3 Urban Development Area Projects
- 8 Rural Infrastructure Projects
- 1 Rural Operations and Maintenance Project

Of the 12 covered activities, 1 received coverage from the City of Oakley, 1 received coverage from the City of Pittsburg, 1 received coverage from the City of Brentwood, 2 received coverage from Contra Costa County Public Works, and 7 received coverage from the Conservancy. All covered activities mitigated for impacts through the payment of HCP/NCCP fees. These covered

projects paid a total of $2,266,133 in HCP/NCCP fees and contributions to recovery in 2013. 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 the 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 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, 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.

Numerous landscape-, natural community-, and species-level conditions on covered activities were applied during the reporting period as shown in Tables 2 and 3. Of the 12 covered activities implemented during the reporting period, landscape-level conditions on covered activities were applied 27 times (2 to 4 conditions applied per covered activity). Natural community–level conditions on covered activities were applied 4 times (0 conditions to 1 condition applied per covered activity). Species-level conditions on covered activities were applied 200 times (2 conditions to 27 conditions applied per covered activity).

Impacts on Land Cover Types and Covered Plants

Impacts of covered activities were tracked by land cover type (Table 4), covered plant occurrences (Table 5), and aquatic and stream by watershed (Table 6). During the reporting period there were a total of 157.2 acres of permanent impact and 17.2 acres of temporary impact (Table 4). There were no permanent or temporary impacts on uncommon vegetation[3], uncommon features, or habitat elements.[4] No covered plant occurrences were removed by covered activities (Table 5).

[3] Uncommon vegetation types are subtypes of land cover types. They include specific native grasses, alkali grasses, and other uncommon vegetation types.

[4] Uncommon features or habitat elements include rock outcrops, caves, springs/seeps, sand deposits, mines, buildings (bat roosts), and potential nest sites (trees or cliffs).

Impacts on aquatic land cover types during the reporting period were limited to two watersheds (Table 6). In the Brushy Creek watershed there was 0.01 acre of permanent impacts and 0.6 acre of temporary impacts on alkali wetlands. In the Upper Marsh Creek watershed, there was 0.01 acre of permanent impacts and 0.04 acre of temporary impacts riparian woodland/scrub.

Table 1. Reporting Summary of Covered Activities for 2013

Activity Type	Covered By	Project Name	Location	Description
Activities within Urban Development Area[a]				
Commercial	City of Brentwood	AutoZone Store 4136 Project	Northwest of the intersection of Technology Way and Brentwood Avenue within the northern portion of the City of Brentwood	The development of a new AutoZone Store #4136. A 7,842 square foot building surrounding by parking and landscaping.
Residential	City of Oakley	Emerson Ranch Project	Northwest Intersection of Sellers Avenue and East Cypress Road.	The Emerson Ranch Project obtained an approved Tentative Map, Tract 9032, on September 14, 2010. The Project consists of 567 residential lots, a 23.74 acre commercial parcel, 10 acre park & storm water detention pond/basin, and other trails and open space.
Utility	City of Pittsburg	PSEP California Avenue Valve Automation Project	680 California Avenue, Pittsburg, CA 94565	The project involves involves the temporary use of the eastern portion (375 feet by 180 feet, with a total area of 67,500 sq. ft.) of an undeveloped parcel for a construction staging yard for the purpose of storing construction materials, equipment and parking vehicles.
Rural Infrastructure Projects				
Other	Contra Costa County-Public Works	Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project	Located at the Clayton Regency Mobile Home Park on Marsh Creek Road in unincorporated Clayton.	The Project will restore a severly eroded storm drain outfall which transports stormwater into Marsh Creek.
Transportation	ECCC Habitat Conservancy	SR 160/SR 4 Bypass Phase 2 Connectors	Intersection of State Route 160 & State Route 4 Bypass Road	Primary components of the Phase II connectors project include construction of the additional lanes, widening of existing roadway to accommodate auxiliary lanes, construction of a new bridge over the SR 4 Bypass, a new bridge over the existing SR 4-SR 160 connector, and a new bridge over the Union Pacific Railroad (UPRR) right of way.
Utility	ECCC Habitat Conservancy	Phillips 66 Pipeline Repair Project 196,920.27.22	Near Vasco Caves Regional Park in East Contra Costa County.	The Project consists of operational and safety repairs at a single repair site (Site ID 196,920.27.22) that is located along the existing Line 200 Mainline trunk pipeline.
Utility	ECCC Habitat Conservancy	Chevron Pipeline KLM Site 1357 Repair Project	In eastern Contra Costa County, south of the Byron Airport and north of Byron Hot Springs Road at Byron Airport.	Routine pipeline maintenance at Site 1357 on the Chevron KLM pipeline.

Activity Type	Covered By	Project Name	Location	Description
Utility	ECCC Habitat Conservancy	Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013	East Contra Costa County, Marsh Creek Road Corridor and Altamont Wind Resources Area	Phillips 66 preformed operational and safety repairs at three repair sites (Site IDs 193,220.16.33; 204,220.12.21; and 216,780.15.92) that are located along the existing Line 200 Mainline trunk pipeline.
Utility	ECCC Habitat Conservancy	Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment	Marsh Creek Road near Clayton	Repair 216,780.15.92 resulted in a larger impact area than was anticipated and described in the initially-approved PSR. It was not until the initial excavation was complete that crews were able to discover and rectify the disparity, which increased the impact area from 0.15-acre to 0.95-acre.
Utility	ECCC Habitat Conservancy	Phillips 66 Pipeline Requirement Survey Project, Summer 2013	East Contra Costa County, west of Vasco Road, within Vasco Caves Regional Park on Vaquero Farms South.	Project consists of a current survey to determine the extend of cathodic protection needed for the Phillips 66 Line 200 mainline trunk pipeline running through east Contra Costa County.
Utility	ECCC Habitat Conservancy	PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project	Originates at Pittsburg Substation in the City of Pittsburg in Contra Costa and goes to Alameda County.	As part of the Pittsburg-Tesla 230 kV Transmission Line Reconductoring Project, PG&E will reconductor 31 miles of existing 230kV electric transmission line in Contra Costa and Alameda counties. Approximately 24 miles are located in Contra Costa County.
Rural Operations and Maintenance				
Other	Contra Costa County-Public Works	Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road	Marsh Creek Road at Morgan Territory Road	The emergency work was completed in January 2013. The project consisted of replacement of an existing corrugated metal pipe culvert beneath Marsh Creek Road that failed due to high storm flows.

[a] The Mission Grove Project in the City of Brentwood paid fees in 2013 but was not constructed and was not a covered activity in 2013.

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

	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
AutoZone Store 4136 Project							✓	✓			
Emerson Ranch Project							✓	✓			
PSEP California Avenue Valve Automation Project							✓	✓			
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project		✓					✓	✓			
SR 160/SR 4 Bypass Phase 2 Connectors							✓	✓			
Phillips 66 Pipeline Repair Project 196,920.27.22				✓			✓	✓			
Chevron Pipeline KLM Site 1357 Repair Project		✓					✓	✓			
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013							✓	✓			
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment							✓	✓			
Phillips 66 Pipeline Requirement Survey Project, Summer 2013							✓	✓			
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project		✓	✓	✓			✓	✓			
Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road		✓					✓	✓			

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			
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
AutoZone Store 4136 Project														X	X	X		X	X					
Emerson Ranch Project		X	X	X										X	X	X		X	X	X	X	X	X	X
PSEP California Avenue Valve Automation Project														X	X									
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project						X	X			X	X			X	X			X	X					
SR 160/SR 4 Bypass Phase 2 Connectors						X	X	X		X	X	X		X	X	X		X	X	X				
Phillips 66 Pipeline Repair Project 196,920.27.22						X	X	X						X	X	X								
Chevron Pipeline KLM Site 1357 Repair Project						X	X	X						X	X	X								
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013						X	X	X		X	X	X		X	X	X								
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment						X	X	X						X	X	X								
Phillips 66 Pipeline Requirement Survey Project, Summer 2013						X	X	X		X	X			X	X	X								
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project						X	X	X		X	X	X		X	X	X		X	X	X	X			
Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road							X				X				X									

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

Table 3. Continued

					Species-Level Measures[1]																			
	CA Tiger Salamander		CA Red-Legged Frog		Covered Shrimp				Alkali milkvetch				Big Tarplant				Brewers dwarf flax				Contra Costa goldfields			
Project Name	Planning Surveys	Minimization	Planning Surveys	Minimization	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
AutoZone Store 4136 Project																								
Emerson Ranch Project	X																							
PSEP California Avenue Valve Automation Project																								
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project		X				X								X				X				X		
SR 160/SR 4 Bypass Phase 2 Connectors														X				X				X		
Phillips 66 Pipeline Repair Project 196,920.27.22		X				X								X		X		X		X		X		X
Chevron Pipeline KLM Site 1357 Repair Project		X				X				X	X	X		X				X				X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013														X				X				X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment																								
Phillips 66 Pipeline Requirement Survey Project, Summer 2013														X				X				X		
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project		X				X								X				X				X		
Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road																								

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

					Species-Level Measures[1]																			
	Diamond-petaled poppy				Large-flowered fiddleneck				Mount Diablo buckwheat				Mount Diablo fairy-lantern				Round-leaved filaree				Showy madia			
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
AutoZone Store 4136 Project																								
Emerson Ranch Project																								
PSEP California Avenue Valve Automation Project																								
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project		X				X	X			X	X			X				X	X			X	X	
SR 160/SR 4 Bypass Phase 2 Connectors		X				X				X				X				X				X		
Phillips 66 Pipeline Repair Project 196,920.27.22		X		X		X		X		X		X		X		X		X		X		X		X
Chevron Pipeline KLM Site 1357 Repair Project		X				X				X				X				X				X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013		X				X				X				X				X				X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment																								
Phillips 66 Pipeline Requirement Survey Project, Summer 2013		X				X				X				X				X				X		
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project		X				X				X				X				X	X	X		X		
Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road																								

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

Table 3. Continued

					Species-Level Measures[1]															
	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
AutoZone Store 4136 Project																				
Emerson Ranch Project																				
PSEP California Avenue Valve Automation Project																				
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project																				
SR 160/SR 4 Bypass Phase 2 Connectors																		X		
Phillips 66 Pipeline Repair Project 196,920.27.22																		X		X
Chevron Pipeline KLM Site 1357 Repair Project		X				X	X	X	X									X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013														X				X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment																				
Phillips 66 Pipeline Requirement Survey Project, Summer 2013														X				X		
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project														X				X		
Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road																		X		

[1] The implementation of these conditions and their results can be found in the planning survey reports and are available 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
AutoZone Store 4136 Project												
Emerson Ranch Project												
PSEP California Avenue Valve Automation Project												
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project												
SR 160/SR 4 Bypass Phase 2 Connectors												
Phillips 66 Pipeline Repair Project 196,920.27.22												
Chevron Pipeline KLM Site 1357 Repair Project		X								X		
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013												
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment												
Phillips 66 Pipeline Requirement Survey Project, Summer 2013												
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project												
Marsh Creek Road Emergency Culvert Repair at Morgan Territory Road												

[1] The implementation of these conditions and their results can be found in the planning survey reports and are available 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	12.5	9.0	79.2	102.6
Alkali grassland	0.0	0.1	0.8	1.5
Ruderal	27.8	6.0	70.8	128.8
Chaparral and scrub	0.0	0.0	0.0	0.0
Oak savanna	0.0	0.1	0.0	0.7
Oak woodland	0.0	0.0	0.0	0.0
Subtotal terrestrial	40.3	15.2	*150.7*	*233.7*
Aquatic				
Riparian woodland/scrub	0.01	0.04	0.4	1.1
Perennial wetland[1]	0.00	0.00	0.1	0.6
Seasonal wetland	0.00	0.00	0.4	2.2
Alkali wetland	0.01	0.60	0.1	0.8
Pond	0.00	0.00	0.0	0.0
Reservoir (open water)[2]	0.00	0.00	0.0	0.0
Slough/Channel (includes stream)	0.00	0.00	0.1	0.1
Subtotal aquatic	*0.02*	0.64	*1.0*	*4.9*
Stream (length in linear feet)				
Total stream length	0.0	0.0	521.3	4205.2
Stream length by width category	0.0	0.0	0.0	0.0
$\leq$ 25 feet wide	0.0	0.0	434.0	4020.5
> 25 feet wide	0.0	0.0	87.3	184.7
Stream length by type and order	0.0	0.0	0.0	0.0
Perennial	0.0	0.0	56.3	321.2
Intermittent	0.0	0.0	360.0	3794.0
Ephemeral, 3rd or higher order	0.0	0.0	0.0	0.0
Ephemeral, 1st or 2nd order	0.0	0.0	105.0	90.0
Subtotal stream length	*0.0*	*0.0*	*521.3*	*4205.2*
Irrigated agriculture				
Cropland	116.8	0.0	128.1	6.6
Pasture	0.0	1.4	0.0	1.4
Orchard	0.0	0.0	1.7	0.0
Vineyard	0.0	0.0	23.1	5.6
Subtotal irrigated agricultural	*116.8*	*1.4*	*152.9*	*13.5*
Other				
Nonnative woodland	0.0	0.0	0.1	1.4
Wind turbines	0.0	0.0	0.0	0.6
Subtotal other	*0.0*	*0.0*	*0.1*	*1.9*

	Reporting Period Impacts (acres, unless otherwise noted)		Cumulative Impacts (acres, unless otherwise noted)	
Land Cover Type	**Permanent**	**Temporary**	**Permanent**	**Temporary**
Uncommon Vegetation Types (subtypes of above land cover types)				
Purple needlegrass grassland	0.0	0.04	0.0	0.1
Wildrye grassland	0.0	0.00	0.0	0.0
Wildflower fields	0.0	0.00	0.0	0.0
Squirreltail grassland	0.0	0.00	0.0	0.0
One-sided bluegrass grassland	0.0	0.00	0.0	0.0
Serpentine grassland	0.0	0.00	0.0	0.0
Saltgrass grassland (alkali grassland)	0.0	0.14	0.2	0.3
Alkali sacaton bunchgrass grassland	0.0	0.00	0.0	0.0
Other uncommon vegetation types	0.0	0.00	0.1	0.0
Subtotal uncommon vegetation types	*0.0*	*0.2*	*0.3*	*0.4*
Uncommon Landscape Features or Habitat Elements				
Rock outcrop	0.0	0.0	0.2	0.1
Cave	0.0	0.0	0.0	0.0
Springs/seeps	0.0	0.0	0.0	0.0
Scalds	0.0	0.0	0.0	0.0
Sand deposits	0.0	0.0	0.0	0.0
Mines (number)	0.0	0.0	0.0	0.0
Buildings (number)	0.0	0.0	0.0	0.0
Potential nest sites (number)	0.0	0.0	0.0	0.0
Subtotal uncommon landscape features (acres)	0.0	0.0	0.2	0.1
Subtotal uncommon landscape features (number)	*0.0*	*0.0*	*0.0*	*0.0*
Totals (excludes subtypes)				
Acres	157.2	17.2	304.9	254.2
Linear feet	0.0	0.0	521.3	4205.2

[1] Perennial wetlands are equivalent to 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 Road Project avoided impacts and translocated soils where a small number of individuals had been located (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

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		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	0.01	0.60	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	*0.01*	*0.60*	*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	--	--	--	--
	Perennial wetland[1]	--	--	--	--
	Seasonal wetland	--	--	--	--
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water)[2]	--	--	--	--
	Slough/Channel[3] (includes stream)	--	--	--	--
	Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
	Stream (linear feet)				
	Total stream length	--	--	47.00	112.00
	Stream length by width category				
	≤ 25 feet wide	--	--	0.00	0.00
	> 25 feet wide	--	--	47.00	112.00
	Stream length by type and order				
	Perennial	--	--	0.00	0.00
	Intermittent	--	--	47.00	0.00
	Ephemeral, 3rd or higher order	--	--	0.00	112.00
	Ephemeral, 1st or 2nd order	--	--	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*47.00*	*112.00*

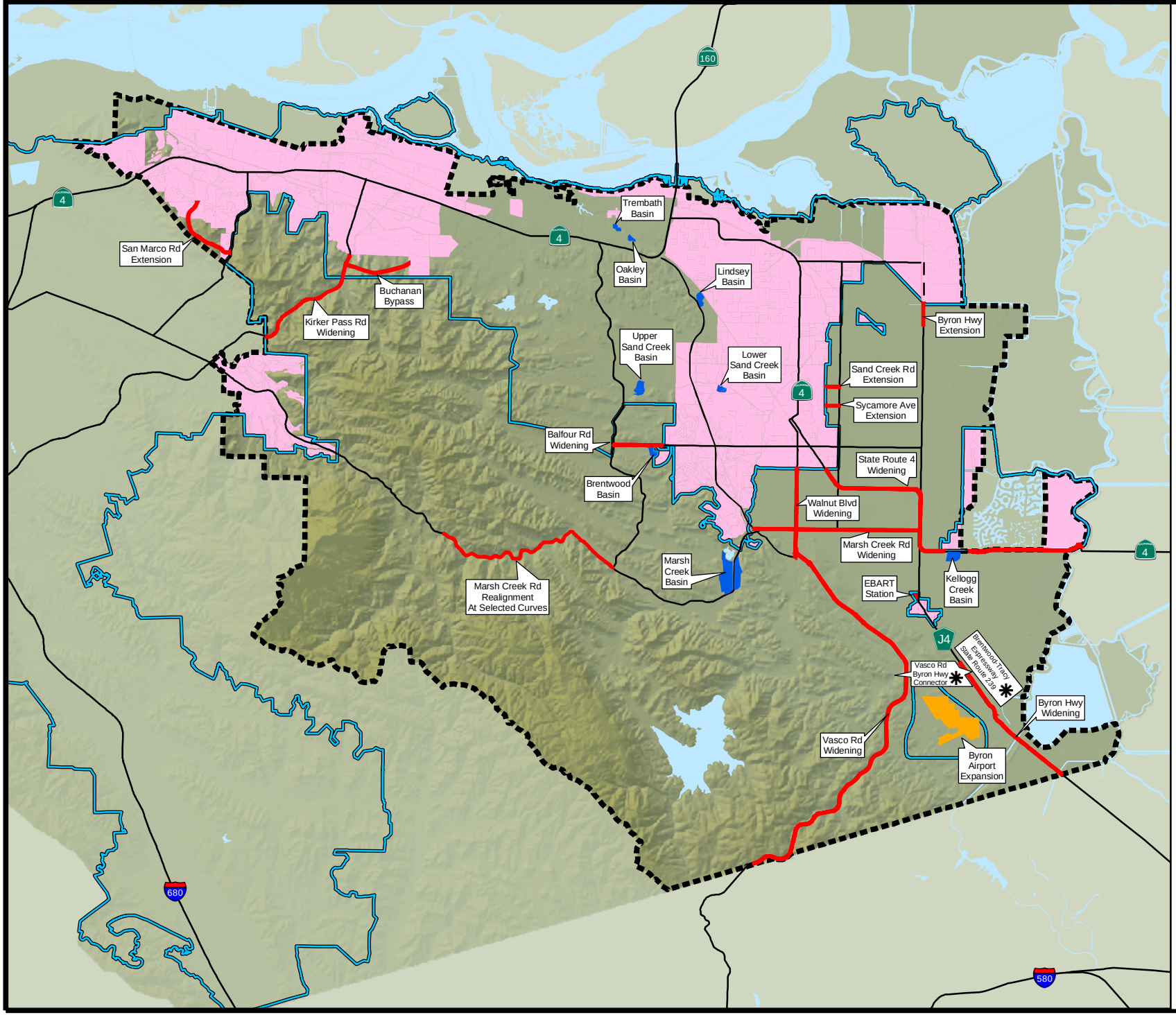
Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Deer	**Aquatic (acres)**				
	Riparian woodland/scrub	--	--	--	--
	Perennial wetland[1]	--	--	--	--
	Seasonal wetland	--	--	--	--
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water)[2]	--	--	--	--
	Slough/Channel[3] (includes stream)	--	--	--	--
	Subtotal aquatic	*0.00*	*0.00*	*0.00*	*0.00*
	Stream (linear feet)				
	Total stream length	--	--	12.00	43.00
	Stream length by width category				
	≤ 25 feet wide	--	--	0.00	15.00
	> 25 feet wide	--	--	12.00	28.00
	Stream length by type and order				
	Perennial	--	--	0.00	0.00
	Intermittent	--	--	12.00	43.00
	Ephemeral, 3rd or higher order	--	--	0.00	0.00
	Ephemeral, 1st or 2nd order	--	--	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*12.00*	*43.00*
Kellogg	**Aquatic (acres)**				
	Riparian woodland/scrub	--	--	0.05	0.31
	Perennial wetland[1]	--	--	0.00	0.00
	Seasonal wetland	--	--	0.29	0.01
	Alkali wetland	--	--	0.00	0.00
	Pond	--	--	0.00	0.00
	Reservoir (open water)[2]	--	--	0.00	0.00
	Slough/Channel[3] (includes stream)	--	--	0.07	0.14
	Subtotal aquatic	*0.00*	*0.00*	*0.41*	*0.46*
	Stream (linear feet)				
	Total stream length	--	--	6.00	--
	Stream length by width category				
	≤ 25 feet wide	--	--	0.00	--
	> 25 feet wide	--	--	6.00	--
	Stream length by type and order				
	Perennial	--	--	0.00	--
	Intermittent	--	--	6.00	--
	Ephemeral, 3rd or higher order	--	--	0.00	--
	Ephemeral, 1st or 2nd order	--	--	0.00	--
	Subtotal stream length	*0.00*	*0.00*	*6.00*	*0.00*

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Lower Marsh	**Aquatic (acres)**				
	Riparian woodland/scrub	--	--	0.00	0.04
	Perennial wetland[1]	--	--	0.00	0.00
	Seasonal wetland	--	--	0.00	0.00
	Alkali wetland	--	--	0.13	0.23
	Pond	--	--	0.00	0.00
	Reservoir (open water)[2]	--	--	0.00	0.00
	Slough/Channel[3] (includes stream)	--	--	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.13*	*0.27*
	Stream (linear feet)				
	Total stream length	--	--	0.31	38.70
	Stream length by width category				
	≤ 25 feet wide	--	--	0.00	0.00
	> 25 feet wide	--	--	0.31	38.70
	Stream length by type and order				
	Perennial	--	--	0.31	38.70
	Intermittent	--	--	0.00	0.00
	Ephemeral, 3rd or higher order	--	--	0.00	0.00
	Ephemeral, 1st or 2nd order	--	--	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*0.31*	*38.70*
Sand	**Aquatic (acres)**				
	Riparian woodland/scrub	--	--	0.30	0.73
	Perennial wetland[1]	--	--	0.04	0.47
	Seasonal wetland	--	--	0.02	2.18
	Alkali wetland	--	--	0.00	0.00
	Pond	--	--	0.00	0.00
	Reservoir (open water)[2]	--	--	0.00	0.00
	Slough/Channel[3] (includes stream)	--	--	0.00	0.00
	Subtotal aquatic	*0.00*	*0.00*	*0.36*	*3.38*
	Stream (linear feet)				
	Total stream length	--	--	295.00	3639.00
	Stream length by width category				
	≤ 25 feet wide	--	--	0.00	0.00
	> 25 feet wide	--	--	295.00	3639.00
	Stream length by type and order				
	Perennial	--	--	0.00	0.00
	Intermittent	--	--	0.00	0.00
	Ephemeral, 3rd or higher order	--	--	295.00	3639.00
	Ephemeral, 1st or 2nd order	--	--	0.00	0.00
	Subtotal stream length	*0.00*	*0.00*	*295.00*	*3639.00*

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Upper Marsh	**Aquatic (acres)**				
	Riparian woodland/scrub	0.01	0.04	0.01	0.04
	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	0.00	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	*0.01*	*0.04*	*0.07*	*0.07*
	Stream (linear feet)				
	Total stream length	--	--	29.00	24.00
	Stream length by width category				
	≤ 25 feet wide	--	--	29.00	24.00
	> 25 feet wide	--	--	0.00	0.00
	Stream length by type and order				
	Perennial	--	--	0.00	0.00
	Intermittent	--	--	0.00	0.00
	Ephemeral, 3rd or higher order	--	--	0.00	0.00
	Ephemeral, 1st or 2nd order	--	--	29.00	24.00
	Subtotal stream length	*0.00*	*0.00*	*29.00*	*24.00*
Willow	**Aquatic (acres)**				
	Riparian woodland/scrub	--	--	0.00	--
	Perennial wetland[1]	--	--	0.02	--
	Seasonal wetland	--	--	0.00	--
	Alkali wetland	--	--	0.00	--
	Pond	--	--	0.00	--
	Reservoir (open water)[2]	--	--	0.00	--
	Slough/Channel[3] (includes stream)	--	--	0.00	--
	Subtotal aquatic	*0.00*	*0.00*	*0.02*	*0.00*
	Stream (linear feet)				
	Total stream length	--	--	--	--
	Stream length by width category				
	≤ 25 feet wide	--	--	--	--
	> 25 feet wide	--	--	--	--
	Stream length by type and order				
	Perennial	--	--	--	--
	Intermittent	--	--	--	--
	Ephemeral, 3rd or higher order	--	--	--	--
	Ephemeral, 1st or 2nd order	--	--	--	--
	Subtotal stream length	*0.00*	*0.00*	*0.00*	*0.00*

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Total	**Aquatic (acres)**				
	Riparian woodland/scrub	0.01	0.04	0.36	1.12
	Perennial wetland[1]	0.00	0.00	0.07	0.59
	Seasonal wetland	0.00	0.00	0.37	2.22
	Alkali wetland	0.01	0.60	0.14	0.83
	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
	Total aquatic	***0.02***	***0.64***	***1.01***	***4.90***
	Stream (linear feet)				
	Total stream length	0.00	0.00	521.31	4205.20
	Stream length by width category				
	≤ 25 feet wide	0.00	0.00	139.00	269.50
	> 25 feet wide	0.00	0.00	382.31	3935.70
	Stream length by type and order				
	Perennial	0.00	0.00	56.31	321.20
	Intermittent	0.00	0.00	65.00	43.00
	Ephemeral, 3rd or higher order	0.00	0.00	295.00	3751.00
	Ephemeral, 1st or 2nd order	0.00	0.00	105.00	90.00
	Total stream length	***0.00***	***0.00***	***521.31***	***4205.20***

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.

N

Miles

2 1 0 2

05/04/2010

Figure 3a. Location and impact acreage for Projects that Received Coverage in 2013

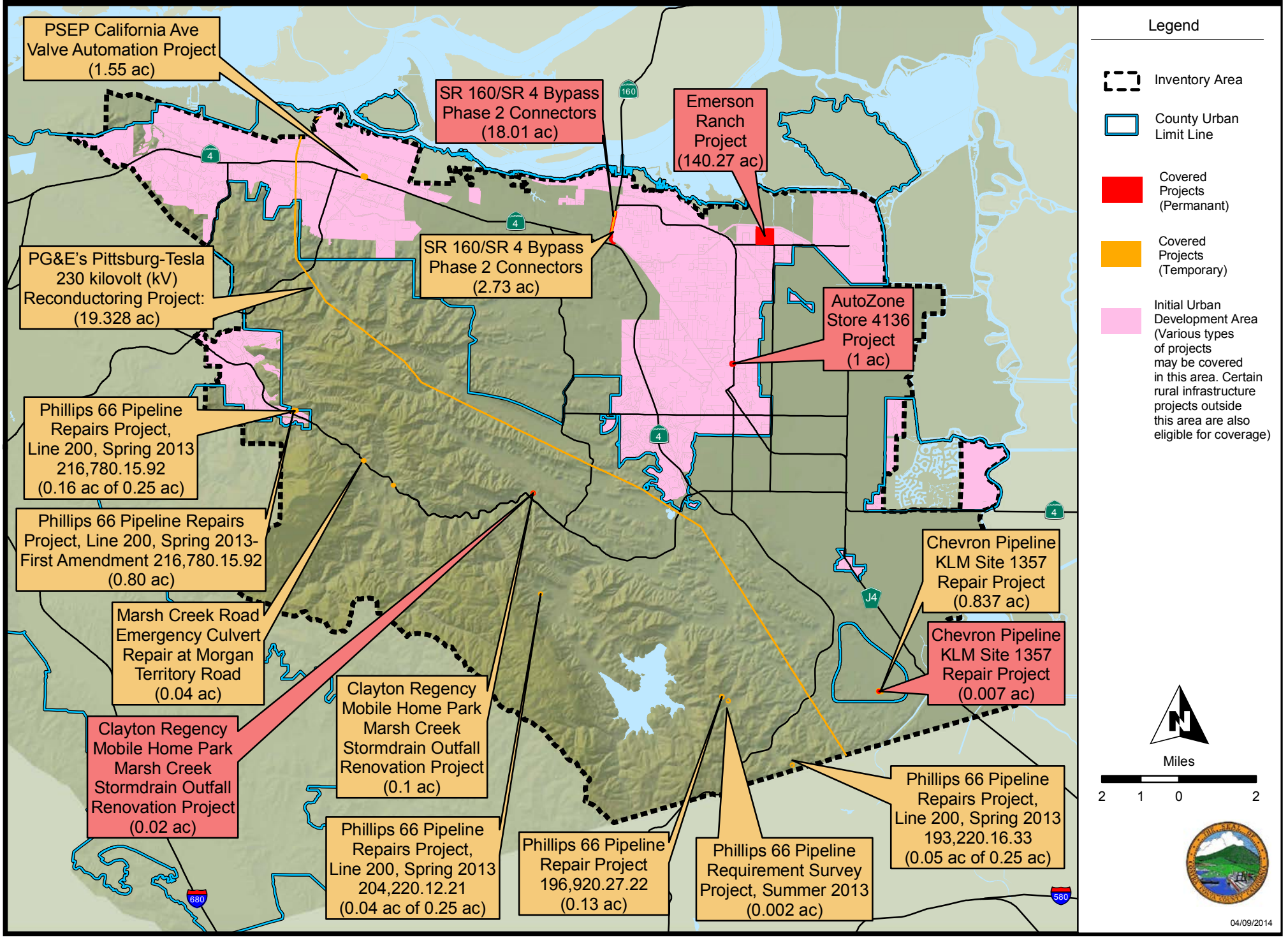
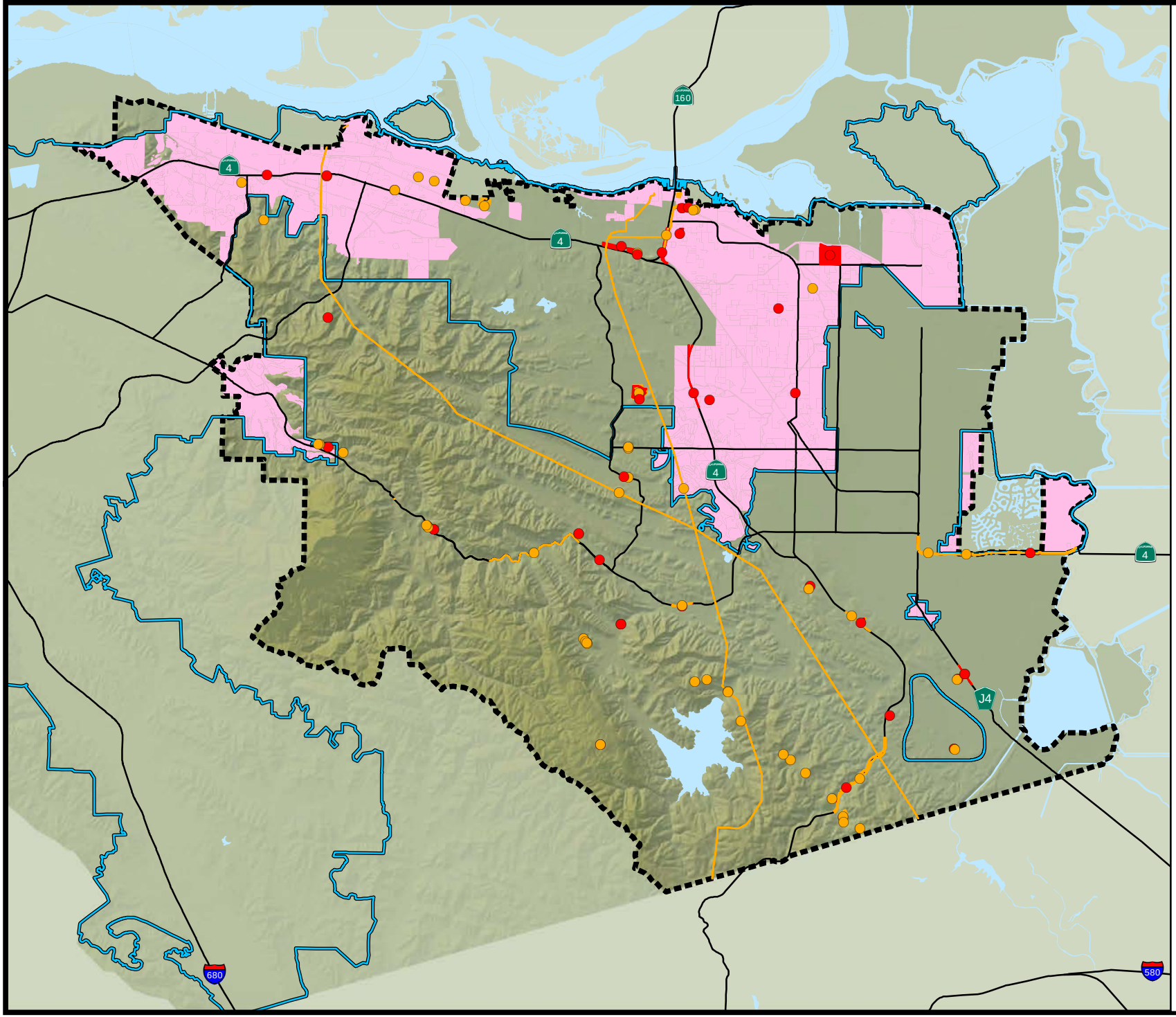


Figure 3b. Location of Covered Projects to-date (2008-2013)



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

03/25/2014

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 contribute to the overall ecosystem function. The following principles guide the development of the Preserve System.

- Maximize Size
- Preserve the Highest-Quality 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.*

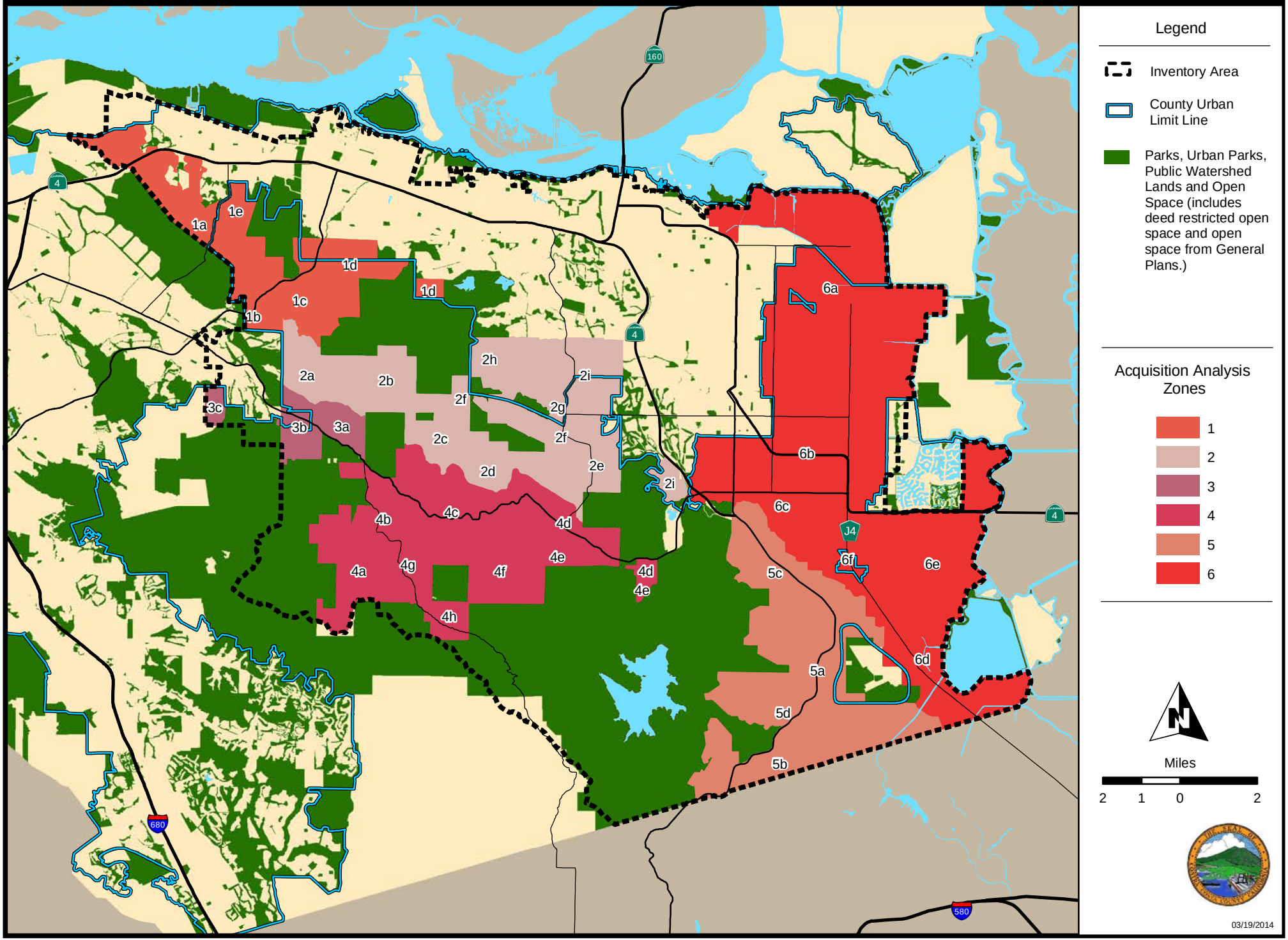
Acquisition Analysis Zones

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



Legend

Inventory Area

County Urban Limit Line

Parks, Urban Parks, Public Watershed Lands and Open Space (includes deed restricted open space and open space from General Plans.)

Acquisition Analysis Zones

1
2
3
4
5
6

N

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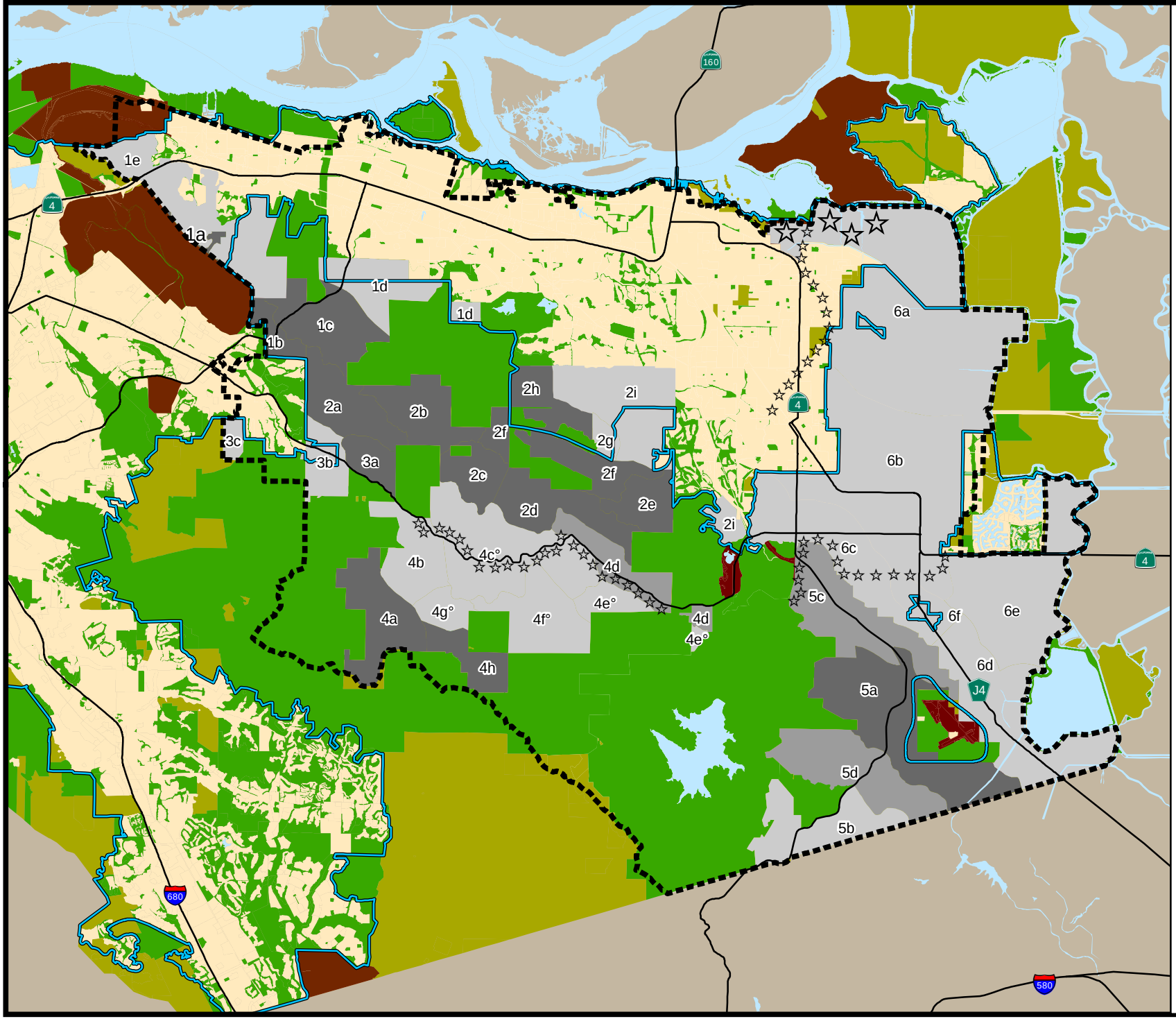
2 1 0 2

03/19/2014

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

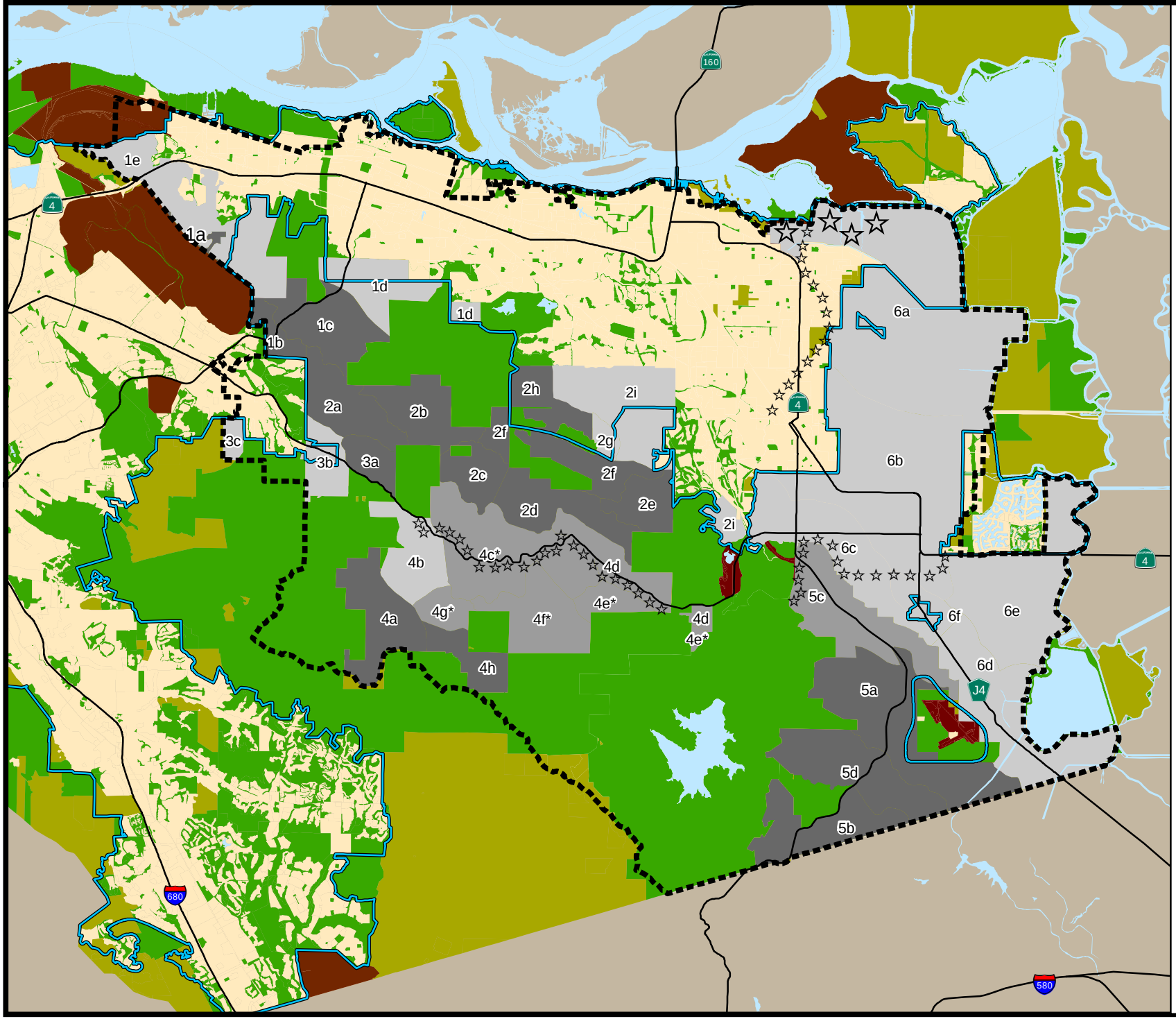
Some acquisitions in subzones 4c, 4e, 4f, 4g are interchangable

Miles

2 1 0 2

03/19/2014

Figure 6 Acquisition Priorities with Maximum 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

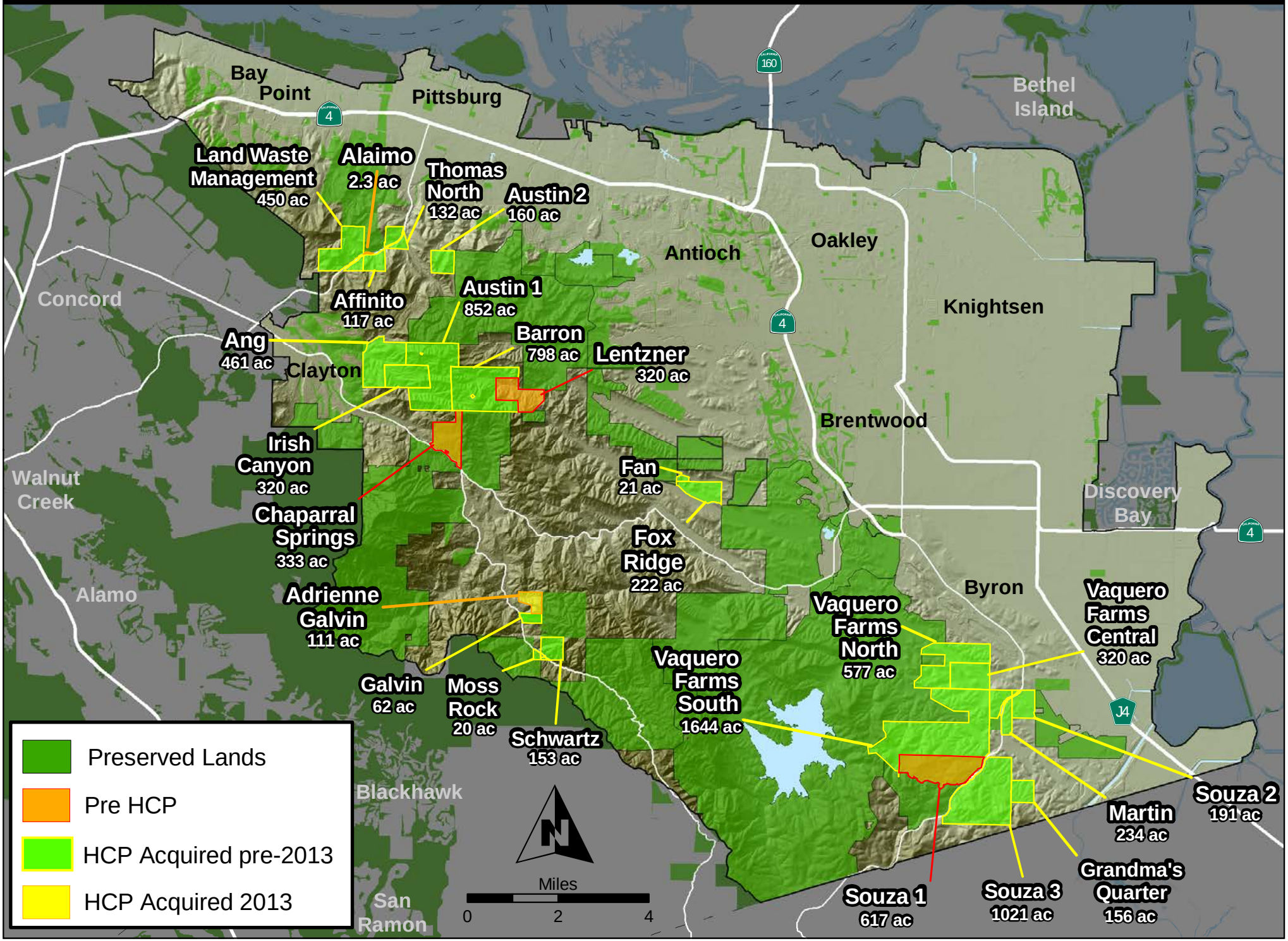
Some acquisitions in subzones 4c, 4e, 4f, 4g are interchangable

Miles

2 1 0 2

03/19/2014

Figure 7. EBRPD Acquisitions Completed under HCP as of December 31, 2013



In addition to numeric 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.

2013 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 2013 for the Preserve System, totaling 113 acres: Adrienne Galvin (111 acres) and Alaimo (2 acres) (Tables 7 and 8b). Final enrollment of these properties into Preserve System is pending recording of deed restrictions (see Plan Section 8.6 *Land Acquisition*). All acquisitions during the reporting period are shown in Figure 7 and summarized in the following section.

The 2013 Preserve System acquisitions are all in high priority acquisition areas and in two of six Acquisition Zones. The size and extent of contiguous protected areas increased in the northeastern portion of the Inventory Area with the Alaimo acquisition. This acquisition provides opportunities for stream and riparian restoration in the Kirker Creek Watershed (Zone 1), a high priority area for the Conservancy. Protection of Marsh Creek headwaters, as well as expansion of the habitat linkage between Mount Diablo State Park and the conserved lands around Los Vaqueros Reservoir, occurred with the acquisition of the Adrienne Galvin property (Zone 4). Together these properties allowed continued progress toward the assembly of the Preserve System.

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

- Approximately 3 acres of chaparral acquired during the reporting period with more than 133 acres acquired to date (24% of the chaparral preservation requirement achieved).
- More than 84 acres of oak woodland acquired during the reporting period with nearly 1,250 acres acquired to date (312% of the oak woodland preservation requirement achieved).
- Purchase of a key inholding downstream of the Conservancy's Upper Hess Creek Restoration Project which itself has significant stream and riparian restoration potential.

Table 10 summarizes progress toward preservation requirements of covered plant populations[5]. During the reporting period, 2012 and 2013 acquisitions were surveyed for covered plants. Two populations of Mount Diablo fairy lantern were observed on the Adrienne Galvin property. One population was discovered in the understory of coast live oak (*Quercus*

[5] 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.

Table 7. Cumulative Summary of Acquired Properties and their Funding Sources.
Calculation of Non-Federal match for Section 6 Grants

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
Key land cover: Annual grassland, oak savanna, oak woodland, chaparral, alkali grassland, seasonal wetland, alkali wetland, pond
Acres: 317.05
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
Key land cover: Annual grassland, oak savanna, oak woodland, chaparral, seasonal wetland, pond
Acres: 329
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:	$83,235

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	$159,210
Moore Foundation	$2,000,000
EBRPD (tax revenues)	$839,245
TOTAL	$2,998,455
Excess match:	$83,235

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

To be Acquired by:	EBRPD
Escrow proposed to close on:	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
EBRPD (tax revenues)	$50,000
TOTAL	$968,000
Excess match:	$0

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)		$324,000	10%	yes
WCB Proposition 84		$1,562,166	48%	yes
Section 6 Grant	(FY07)	$695,425	21%	no
Section 6 Grant	(FY08)	$658,409	20%	no
TOTAL		$3,240,000	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
Excess match:	$231,480

Thomas Southern/Austin 1 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	
EBRPD (tax revenues)	$53,000
Match from prior acquisitions	$530,001
TOTAL	$583,001
Excess match:	$0

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
TOTAL	$343,200.00
Excess match:	$0

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
EBRPD (tax revenues)	$223,500
TOTAL	$1,229,250
Excess match:	$0

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
EBRPD (tax revenues)	$240,000
G&B Moore Foundation	$850,000
TOTAL	$1,320,000
Excess match:	$0

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
G&B Moore Foundation	$166,500
TOTAL	$203,500
Excess match:	$0

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
G&B Moore Foundation	$184,500
TOTAL	$225,500
Excess match:	$0

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
G&B Moore Foundation	$99,000
TOTAL	$121,000
Excess match:	$0

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
EBRPD (tax revenues)	$86,390
TOTAL	$475,145
Excess match:	$0

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
In-kind match*	$185,500
TOTAL	$204,000
Excess match:	$0

* Prior due dilligence and habitat enhancement

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[6]	$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
TOTAL	$1,386,489
Excess match:	$0

* Prior due dilligence and habitat enhancement

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	--	--	19.0	-	-	-	5,449.9	1,441.6	-	0.04	33%	--	--
Alkali grassland	1,250	--	--	0.0	-	-	-	162.6	17.5	-	0.02	13%	--	--
Ruderal	-	--	--	4.3	-	-	-	56.8	22.5	-	-	-	--	--
Chaparral and scrub	550	--	--	3.0	-	-	-	133.6	-	-	-	24%	--	--
Oak savanna	500	--	165	-	-	-	-	310.4	23.9	-	-	62%	--	0%
Oak woodland	400	--	--	84.1	-	-	-	1,249.5	130.8	-	-	312%	--	--
Subtotal terrestrial	*19,200*	--	*165*	*110.4*	-	-	-	*7,362.7*	*1,636.3*	-	*0.06*	38%	--	0%
Aquatic														
Riparian woodland/scrub	70	--	55	0.3	-	-	-	20.1	0.2	-	0.9	29%	--	2%
Perennial wetland[1]	75	--	85	-	-	-	-	5.2	5.8	-	0.2	7%	--	0%
Seasonal wetland	168	--	163	0.0	-	-	-	7.9	1.4	-	8.3	5%	--	5%
Alkali wetland	93	--	67	-	-	-	-	19.3	4.3	-	2.4	21%	--	4%
Pond	16	16	--	0.0	-	-	-	6.9	2.7	0.4	-	43%	3%	-
Reservoir (open water)[2]	12	6	--	-	-	-	-	-	-	-	-	0%	0%	-
Slough/Channel	36	--	72	-	-	-	-	-	-	-	-	0%	--	0%
Subtotal aquatic	*470*	--	*442*	*0.4*	-	-	-	*59.4*	*14.4*	*0.4*	*11.8*	*13%*	--	*3%*
Stream (length in linear feet)														
Perennial	4,224	--	2,112	-	-	-	-	10,647.0	889.1	-	-	252%	--	0%
Intermittent	2,112	--	2,112	2,719.8	-	-	-	72,237.3	24,378.6	-	2,983.4	3420%	--	141%
Ephemeral[4]	26,400	--	26,400	3,443.7	-	-	-	14,016.3	877.8	-	-	53%	--	0%
Classification pending[4]	--	--	--	-	-	-	-	81,527.0	16,445.3	-	683.2	--	--	--
Subtotal stream length	*32,736*	--	*30,624*	*6,163.5*	-	-	-	*178,427.6*	*42,590.8*	-	*3,666.6*	545%	--	*12%*
Irrigated agriculture														
Cropland								-	-	-	-	0%	--	--
Pasture								-	-	-	-	--	--	--
Orchard								-	-	-	-	--	--	--
Vineyard								-	-	-	-	--	--	--
Subtotal irrigated agricultural	*0*	--	--	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	--	--	--
Other														
Nonnative woodland			--	--	--	--	-	0.7	-	-	-	--	--	--
Wind turbines	--	--	--	--	--	--	-	64.0	25	-	-	--	--	--
Subtotal other	--	--	--	*0*	*0*	*0*	*0*	*64.8*	*25.1*	*0*	*0*	--	--	--
Developed														
Urban	--	--	--	2.7	--	--	-	19	1	-	-	--	--	--
Subtotal developed	--	--	--	*2.7*	*0*	*0*	*0*	*19*	*1*	*0*	*0*	--	--	--
Uncommon Landscape Features or Habitat														
Rock outcrop	--	--	--	--	--	--	-	13	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*	*0*	13	5	0.00	0.00	--	--	--
Totals (excludes subtypes)														
Acres	--	--	--	113.5	-	-	-	7,518.5	1,681.1	0.4	11.8	--	--	--
Linear feet	--	--	--	6,163.5	-	-	-	178,427.6	42,590.8	-	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)							
	Adrienne Galvin				Alaimo			
Land Cover Type	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Terrestrial								
Annual grassland	19.0	-	-	-	-	-	-	-
Alkali grassland	-	-	-	-	0.0	-	-	-
Ruderal	3.9	-	-	-	0.4	-	-	-
Chaparral and scrub	3.0	-	-	-	-	-	-	-
Oak savanna	-	-	-	-	-	-	-	-
Oak woodland	84.1	-	-	-	-	-	-	-
Subtotal terrestrial	*110.0*	*0.0*	*0.0*	*0.0*	*0.4*	*0.0*	*0.0*	*0.0*
Aquatic								
Riparian woodland/scrub	-	-	-	-	0.3	-	-	-
Perennial wetland[1]	-	-	-	-	-	-	-	-
Seasonal wetland	0.0	-	-	-	-	-	-	-
Alkali wetland	-	-	-	-	-	-	-	-
Pond	0.0	-	-	-	-	-	-	-
Reservoir (open water)[2]	-	-	-	-	-	-	-	-
Slough/Channel	-	-	-	-	-	-	-	-
Subtotal aquatic	*0.1*	*0.0*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*
Stream (length in linear feet)								
Total stream length	5,895.3	-	-	-	268.1	-	-	-
Stream length by width category	-	-	-	-	-	-	-	-
≤ 25 feet wide	-	-	-	-	-	-	-	-
> 25 feet wide	-	-	-	-	-	-	-	-
Stream length by type and order	-	-	-	-	-	-	-	-
Perennial	-	-	-	-	-	-	-	-
Intermittent	2,451.7	-	-	-	268.1	-	-	-
Ephemeral	3,443.7	-	-	-	-	-	-	-
Classification pending	-	-	-	-	-	-	-	-
Subtotal stream length	*5,895.3*	*0.0*	*0.0*	*0.0*	*268.1*	*0.0*	*0.0*	*0.0*
Irrigated agriculture								
Cropland	-	-	-	-	-	-	-	-
Pasture	-	-	-	-	-	-	-	-
Orchard	-	-	-	-	-	-	-	-
Vineyard	-	-	-	-	-	-	-	-
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	1.1	-	-	-	1.6	-	-	-
Aqueduct	-	-	-	-	-	-	-	-
Turf	-	-	-	-	-	-	-	-
Landfill	-	-	-	-	-	-	-	-
Subtotal developed	*1.1*	*0.0*	*0.0*	*0.0*	*1.6*	*0.0*	*0.0*	*0.0*

	Reporting Period Land Acqusitions (acres)							
	Adrienne Galvin				Alaimo			
Land Cover Type	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Uncommon Landscape Features or Habitat Elements								
Rock outcrop	-	-	-	-	-	-	-	-
Cave	-	-	-	-	-	-	-	-
Springs/seeps	-	-	-	-	-	-	-	-
Scalds	-	-	-	-	-	-	-	-
Sand deposits	-	-	-	-	-	-	-	-
Mines (number)	-	-	-	-	-	-	-	-
Buildings (number)	-	-	-	-	-	-	-	-
Potential nest sites (number)	-	-	-	-	-	-	-	-
Subtotal uncommon landscape	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	-
Totals (excludes subtypes)								
Acres	111.2	0.0	0.0	0.0	2.3	0.0	0.0	0.0
Linear feet	5,895.3	0.0	0.0	0.0	268.1	0.0	0.0	0.0

[1] *Perennial wetlands are equivalent to 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, which may significantly overestimate the amount of impact that ultimately occurs.*

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	0.34	20.11	29%
Preserve-wide Perennial wetland (acres)	75.0	0.00	5.21	7%
Preserve-wide Seasonal wetland (acres)	168.0	0.02	7.94	5%
Preserve-wide Alkali wetland (acres)	93.0	0.00	19.26	21%
Preserve-wide Pond (acres)	16.0	0.04	6.89	43%
Preserve-wide Reservoir (open water) (acres)	12.0	0.00	0.00	0%
Preserve-wide Slough/Channel (acres)	36.0	0.00	0.00	0%
Preserve-wide stream length (feet)	32,736.0	6,163.50	96,900.58	296%
Stream length by type and order				
Perennial (feet)	4,224.0	0.00	10,647.00	252%
Intermittent (feet)	2,112.0	2,719.80	72,237.28	3420%
Ephemeral[2] (feet)	26,400.0	3,443.70	14,016.30	53%
Classification Pending[2] (feet)	15,921.0	0.00	81,526.98	88%

[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, which may significantly overestimate the amount of impact that ultimately occurs.*

[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[2]**	**Cumulative**	**% Complete**
Mount Diablo manzanita	*Arctostaphylos auriculata*	2	0	0	0%
Brittlescale	*Atriplex depressa*	2 (4)[3]	0	1	50% (25%)
San Joaquin spearscale	*Atriplex joaquiniana*	0	1	8	--
Big tarplant	*Blepharizonia plumosa*	3	0[4]	3	100%
Mount Diablo fairy lantern	*Calochortus pulchellus*	1	2	3	300%
Recurved larkspur	*Delphinium recurvatum*	2	0	0	0%
Round-leaved filaree	*Erodium macrophyllum*	2	0	1	50%
Diablo helianthella	*Helianthella castanea*	2	4	10	500%
Brewer's dwarf flax	*Hesperolinon breweri*	1	0	0	0%
Showy madia	*Madia radiata*	0	0	0	0%
Adobe navarretia	*Navarretia nigelliformis* ssp. *nigelliformis*	1	0	0	0%
Total		16 (18)	7	26	

[1]For the 2013 Annual Report, we are recording sightings confirmed in 2013. Surveys will continue at part of the inventory phase.

[2] Includes occurences discovered in 2013 on properties acquired prior to 2013.

[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] In June 2013, HCP/NCCP staff indicated that acquisition of the 1,875 acre Roddy Ranch was in the beginning stages. During this early stage of the acquisition process permission to access the property to conduct covered plant surveys was granted by the Roddy family. Eight occurrences of big tarplant (*Blepharizonia plumosa*) were recroded onsite.

agrifolia var. *agrifolia*) woodland in the southeast corner of the. This population is represented by a very small number of individuals (two total) covering a very small area. It was observed on a northwest-facing slope in filtered light at approximately 1,400 feet in elevation. The second population of Mount Diablo fairy was observed on chaparral and coast live oak woodland in the east-central portion property. This population is represented by a very small number of individuals (four total), but these individuals are spread out over 500 linear feet of habitat on the south side of the chaparral patch

Two populations of Diablo helianthella were also observed on the Adrienne Galvin property. The first was observed in the understory of coast live oak woodland in the southeast corner of the property. This population totals an estimated 154 individuals and occupies 1.6 acres. It was observed in the shade of coast live oak woodland on a steep north-facing slope in filtered sunlight between 1,400 to 1,400 feet in elevation. The second population of Diablo helianthella was observed on chaparral and blue oak (*Quercus douglasii*) woodland along the north-central as well as the eastern boundary of the property. This population totals an estimated 128 individuals, occupies approximately 20,890 square feet (0.48 acre), and is represented by two colonies, west and east.

To date, 26 known occurrences of covered plant populations have been preserved: 1 occurrence each round-leaved filaree (*Erodium macrophyllum*) and brittlescale (*Atriplex depressa*), 3 occurrences of Mount Diablo fairy lantern (*Calochortus pulchellus*) and big tarplant, 10 occurrences of Diablo helianthella, and 8 occurrences of San Joaquin spearscale.

The 2013 acquisitions are known to support or have a strong potential to support several covered species, including the following:

- Alameda whipsnake
- California tiger salamander
- California red-legged frog
- western pond turtle (*Actinemys marmorata*)
- western burrowing owl
- golden eagle (*Aquila chrysaetos*)
- tri-colored black bird
- yellow-legged frog
- San Joaquin kit fox
- vernal pool fairy shrimp
- big tar plant
- brittlescale
- spearscale

- Mount Diablo fairy lantern
- Diablo helianthella

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.
- 17% 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.
- 29% of the estimated minimum overall land acquisition requirement and 22% of the estimated maximum requirement were met.

Each property acquired during the reporting period is briefly described below.

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 reported in deeds and legal descriptions. Because the pre-existing parcel GIS is not necessarily accurate in rural areas, the Conservancy used a variety of techniques to better map the boundaries of the acquired properties. These techniques included aerial photography and descriptions of meets and bounds. Following these refinements, the GIS measure of acreage and the measure reported in deeds may still differ. Remaining discrepancies probably relate to discrepancies in GIS Township and range maps, inaccurate fence line placement, and errors made in original and sometimes very old surveys. GIS acreages are used in this section because the GIS is the only practical means for measuring the amount of certain land cover and the other features within each property.

A Note on Land Cover Mapping Refinements and Cumulative Acreages

The Conservancy revises its GIS mapping of land cover in the Preserve System as survey and inventory of these lands progresses. 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.

Adrienne Galvin Property

The Adrienne Galvin property is a 111.2-acre parcel located approximately 5.5 miles southeast of the city of Clayton, about 0.3 mile east of Morgan Territory Road at the end of a private road easement (Figures 8 and 9). It is bound to the east by Morgan Territory Ranch (a 1-square mile private property encumbered by a conservation easement), to the south by the 61.7-acre former Galvin Ranch (acquired in early 2012 by EBRPD for the Preserve System), and by private property to the north and west. The property is mostly oak woodland (84.2 acres, 75.7% of the site) with 3.0 acres of chaparral/scrub, and 19.0) acres of annual grassland. The property is also located in close proximity to the Schwartz property purchased in 2009 for the Preserve System.

Alameda whipsnake on A. Galvin property
Photo Credit: Heath Bartosh

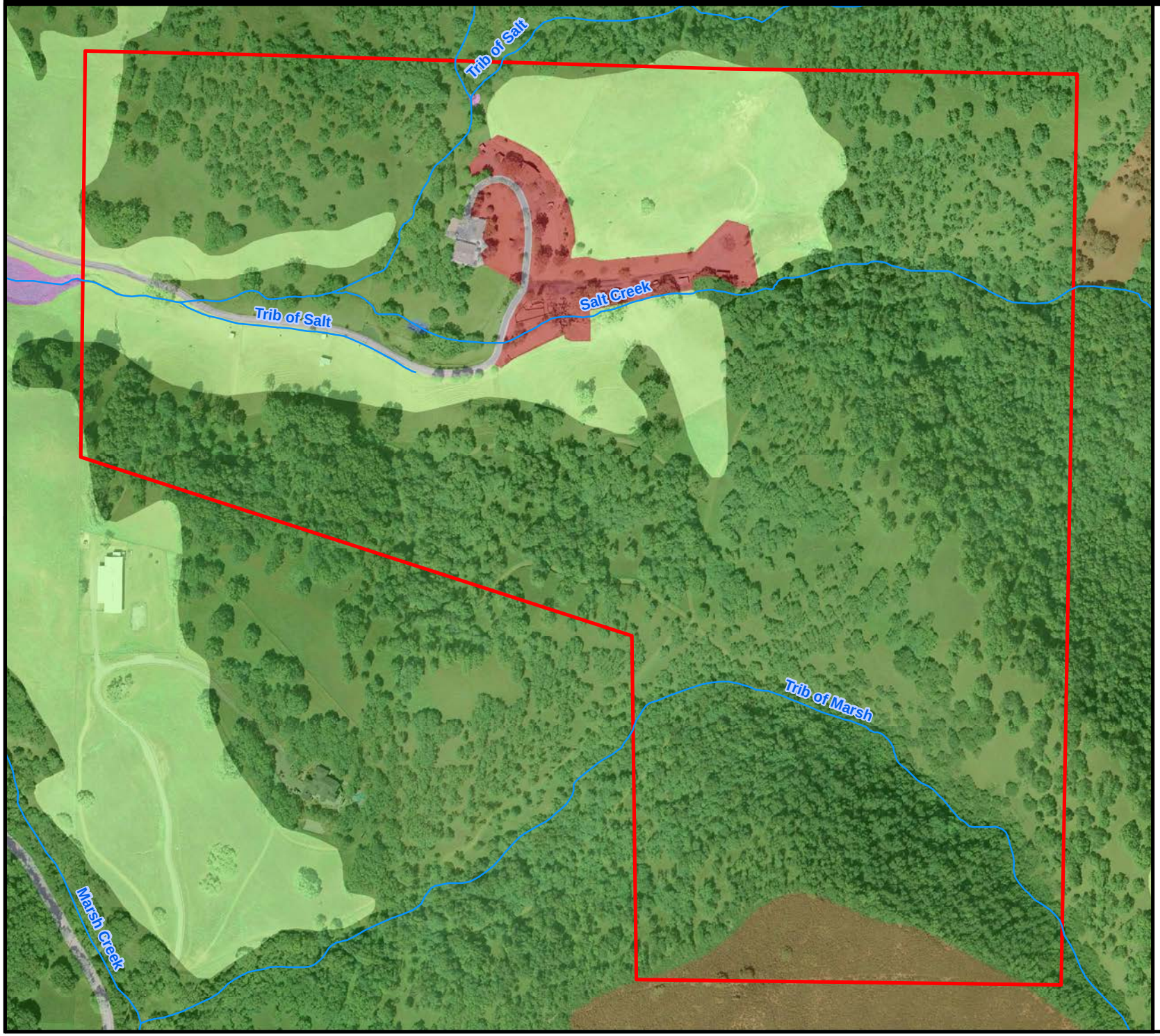
The Adrienne Galvin property is located in the Upper Marsh Creek watershed. A seasonal tributary to Marsh Creek known as Salt Creek crosses the small valley from east to west. A second unnamed seasonal tributary drains a narrow ravine between two hills located at the south end of the property.

Conservation of the property will achieve a number of the HCP/NCCP's goals and objectives for species. The property contains habitat types known to support the Alameda whipsnake, California red-legged frog, California tiger salamander, and golden eagle. In addition, it supports two populations of Mount Diablo fairy lantern and two populations of Diablo helianthella.

The property is mostly located in an area designated as a medium priority for acquisition for the Preserve System (acquisition analysis subzone 4g), with a small portion located in subzone 4h, which is designated as high priority for acquisition. Zone 4 (14,338 acres) was designed to incorporate the area at the highest elevations of Mount Diablo foothills not in public ownership. This area is dominated largely by oak woodland, chaparral, and mixed evergreen forest. Land acquisition in the Upper Marsh Creek watershed is required to help to achieve goals for preservation of core and movement habitat for Alameda whipsnake; to benefit California tiger salamander, California red-legged frog, and foothill yellow-legged frog; to protect important linkages between existing conserved lands; and to expand protection of the headwaters of Marsh Creek.

This site would constitute a key piece of the Preserve System by conserving rich habitat important for many HCP/NCCP covered species and by expanding a conservation corridor as required by the HCP/NCCP between Mount Diablo State Park and the block of conserved lands around Morgan Territory Regional Preserve, Round Valley Regional Preserve and the Los Vaqueros Reservoir.

Figure 8. Adrienne Galvin Property - Landcover Map



Legend

Property Boundary

Landcover

Grassland
- grassland (18.98 acres)
- alkali grassland
- ruderal (3.91 acres)

Wetland
- permanent wetland
- seasonal wetland (0.02 acre)
- alkali wetland

Aquatic
- stream (5895.33 feet)
- aquatic/open water
- pond (0.04 acre)
- riparian
- chaparral (3.01 acres)
- oak savanna
- oak woodland (84.1 acres)
- rock outcrops

Irrigated Agriculture
- pasture
- cropland
- vineyard

Developed
- urban (1.12 acres)
- aqueduct
- wind turbines

Feet

0 300 600

03/19/2014

Figure 9. Adrienne Galvin: Representative Photographs

Photo 1: Ranch Road

Photo 2: Galvin Ranch Barn; view of Mt Diablo

Photo 3: Hillside, Oak Grasslands

Photo 4: Oak Woodland Canyon

Photo 5: View of Mt Diablo

Photo 6: Galvin Ranch

Alaimo Property

The 2.3-acre Alaimo property is located in the Kirker Creek Watershed in the northwest portion of the inventory area, approximately 1.5 miles south of Pittsburg (Figures 10 and 11). The property is irregularly shaped and has an approximate maximum width of 240 feet and an estimated length of 1,150 feet. The northern edge is bound by dedicated open space associated with the Keller Canyon Landfill. The southern edge is bound by Kirker Pass Road. The site is directly north of the Affinito property (acquired in 2012 by EBRPD in partnership with the Conservancy), and adjacent to the eastern border of the Land Waste Management property (which was also acquired recently by EBRPD in partnership with the Conservancy). The Thomas North property, also purchased by EBRPD in partnership with the Conservancy, lies approximately 2,000 feet east and downstream.

The entire property is located in acquisition Zone 1, which encompasses all undeveloped and unprotected lands in the northwest corner of the inventory area. Within Zone 1, the property lies within subzone 1c. Subzone 1c is designated as a high priority for acquisition for the HCP/NCCP Preserve System. High priority Zone 1 acquisitions are of critical importance to the HCP/NCCP because they support high quality habitat for several key species including California tiger salamander and California red-legged frog, include rare habitat found nowhere else, and serve a critical connectivity function. Restoration within the Kirker Creek watershed is also a high priority for the Conservancy, due in part to the anticipated impacts of HCP/NCCP covered activities elsewhere in the watershed and the importance of demonstrating to state wetland permitting agencies that the Conservancy is implementing a watershed approach to mitigation and restoration.

Within Zone 1, specific targets exist for land cover and species habitat. The parcel contains 0.2 acre of grassland land cover that contributes to land cover acquisition targets for subzone 1c and to the overall acquisition requirement for grassland. The presence of alkali grasslands also contributes to zone-specific and preserve-wide acquisition targets. While the site is currently dominated by the urban land cover type, restoration would increase the amount of grassland, alkali grassland, riparian, and stream habitat contributed to the Preserve System by this site.

In addition to supporting conservation targets, the Alaimo property supports the HCP/NCCP goals of restoration of grassland, streams, and riparian habitat and the protection of long, contiguous reaches of stream. Due to the location of the site (surrounded by protected lands, including Conservancy preserves), the historic relocation of Hess Creek, associated erosion issues occurring immediately downstream of the site, and the fact that the Conservancy has already pursued stream and wetland restoration in the upper reaches of this stream system, the property presents a good restoration opportunity for the Conservancy. The presence of riparian vegetation on the site, as well as upstream and downstream, indicates that the site may be capable of supporting not only a stream restoration project, but riparian restoration as well. Finally, the acquisition and restoration of the Alaimo property provides an opportunity to enhance connectivity among preserved lands within and outside of the inventory area.

Figure 10. Alaimo Property - Landcover Map

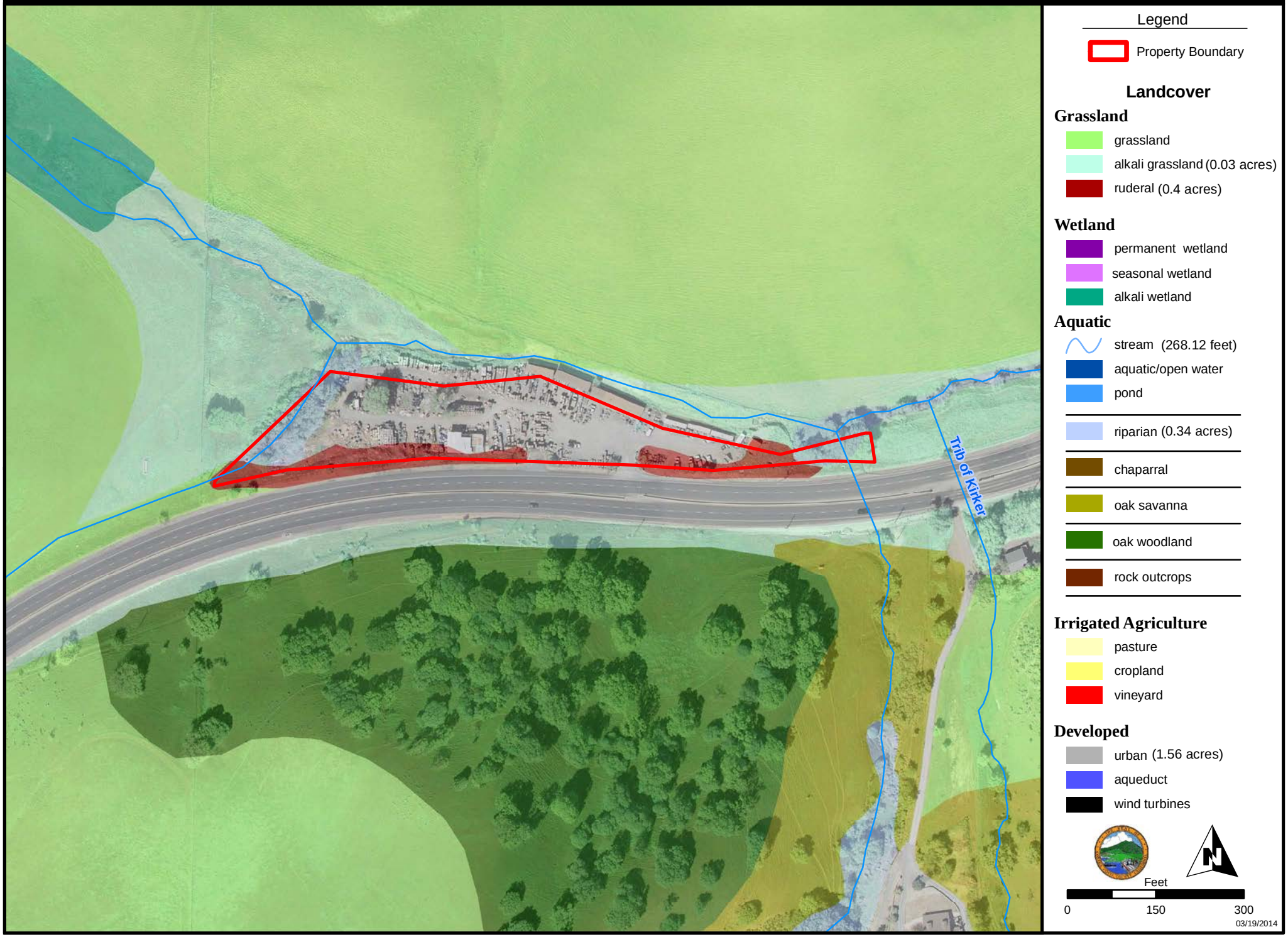


Figure 11. Alaimo: Representative Photographs

Photo 1: Riparian area

Photo 2: Looking NW from the riparian area

Photo 3: Looking NW across main gravel pad

Photo 4: Looking SE across main gravel pad

Photo 5: Looking NW across main gravel pad

Photo 6: Groundwater well.

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	37%
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	2.3	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	0.0	7.7	2%
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	0.0	0.0	--
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	0.0	138.3	17%
2d	Known occurrence of round-leaved filaree (number)	1	1	0.0	0.0	0%
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	0.0	0.0	0%
2f	San Joaquin kit fox movement corridor	--	--	0.0	0.0	--
2f	Land for SJKF Movement must include 2 occurrence	--	--	0.0	0.0	--
2f	Land for SJKF Movement must include 1 occurrence	--	--	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	0.0	0.0	0%
2h	Two occ. of big tarplant (number)	2	2	0.0	0.0	0%

Zone/ Subzone	Requirements[1]	Acres	Min. Acres Required (MUDA)	Aquired Reporting Period	Acquired Cumulative To date	Percent Achieved
2h	Known occ. of Mt. Diablo manzanita and Brewer's dwarf flax (number)	2	2	0.0	0.0	0%
2h	San Joaquin kit fox (75%)			0.0	0.0	--
2h	Silvery legless habitat, if present			0.0	0.0	--
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	0.0	5.5	5%
2e/2f/2h	Annual grassland, combined	2,400	2,400	0.0	79.5	3%
All	Vernal pool invertebrate suitable habitat, wherever possible			Yes (not quantified)	Yes (not quantified)	--
All	Estimated minimum requirement	7,500	7,500	0.0	2,628.0	35%
All	Estimated maximum requirement	9,550	9,550	0.0	2,628.0	28%
All	Alternative Stay Ahead Measurement for Zone 2		4,900	0.0	2,628.1	54%
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	292.7	73%
All	Estimated maximum requirement	750	750	0.0	292.7	39%
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	5.3	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	3.0	33.7	17%
4c/4e/4f/4g	18%/IDA or 39%MDA of natural land cover types in	1,400	3,000	0.0	0.0	0%

Zone/ Subzone	Requirements[1]	Acres	Min. Acres Required (MUDA)	Aquired Reporting Period	Acquired Cumulative To date	Percent Achieved
All	Chaparral/Scrub	270	270	3.0	33.2	12%
All	Estimated minimum requirement	4,900	6,050	345.7	345.7	6%
All	Estimated maximum requirement	6,150	8,350	111.2	345.7	4%
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	3,051.6	43%
All	Grassland	5,300	8,100	0.0	3,052.6	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			Yes (not	8.8	
All	Estimated minimum requirement	6,100	9,050	0.0	3,359.9	37%
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	113.5	7,518.5	29%
All	Estimated maximum requirement	27,050	34,350	113.5	7,518.5	22%

[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.

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	8.3	--	--	--	--	8.4	--	2,074.6	--	334.8	2,409.4
Creation	--	--	--	--	0.3	--	--	0.3	--	--	--	--	0.0
subtotal	*0.0*	*0.2*	*8.3*	*0.0*	*0.3*	*0.0*	*0.0*	*8.7*	*0.0*	*2,074.6*	*0.0*	*334.8*	*2,409.4*
Kirker Creek													
Restoration	--	--	--	2.4	--	--	--	2.4	--	--	--	348.3	348.3
Creation	--	--	--	--	0.1	--	--	0.1	--	--	--	--	0.0
subtotal	*0.0*	*0.0*	*0.0*	*2.4*	*0.1*	*0.0*	*0.0*	*2.5*	*0.0*	*0.0*	*0.0*	*348.3*	*348.3*
Sand Creek Sub Basin													
Restoration	--	--	--	0.1	--	--	--	0.1	--	--	--	--	0.0
Creation	--	--	--	--	--	--	--	0.0	--	--	--	--	0.0
subtotal	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Upper Mt. Diablo Creek													
Restoration	0.9	--	--	--	--	--	--	0.9	--	908.8	--	--	908.8
Creation	--	--	--	--	--	--	--	0.0	--	--	--	--	0.0
subtotal	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.9*	*0.0*	*908.8*	*0.0*	*0.0*	*908.8*
Total for Inventory Area	**0.9**	**0.2**	**8.3**	**2.5**	**0.4**	**0.0**	**0.0**	**12.3**	**0.0**	**2,983.4**	**0.0**	**683.2**	**3,666.6**

[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.*

IV. HABITAT RESTORATION AND CREATION

Habitat restoration and creation is a critical 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.

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 diversity of these land cover types. Restoration of wetlands ensures no net loss of wetlands in the Plan inventory area and replaces the functions of land cover types lost to covered activities.

Alkali Wetlands

Alkali wetlands are particularly rare in the Plan 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

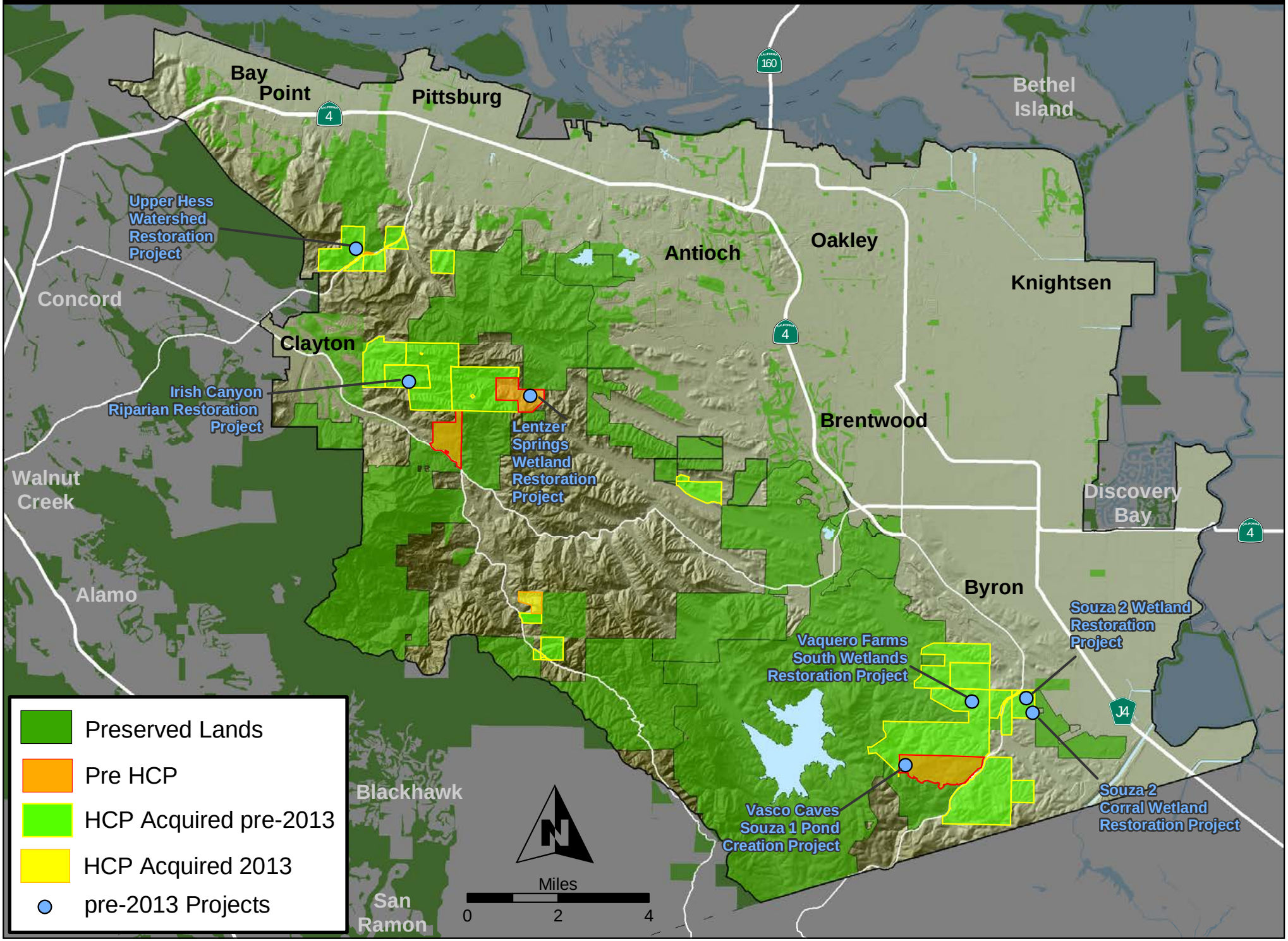
Conservation Measure 2.1 in the Plan requires wetland restoration and pond creation to compensate for future impacts on these land cover types caused by development activities. Likewise, the Plan requires wetland restoration and creation actions over and above mitigation requirements to contribute to recovery of covered species. Restoration or creation activities must stay ahead of impacts, as required by the NCCPA.

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 exceed 500 acres. A more likely but still-conservative projection is 300 acres, which amounts to 10 acres of restoration/creation per year.

During the reporting period, the Conservancy did not construct any restoration projects. However, two projects were planned and designed in 2013 and planned for construction in 2014. The Conservancy continues to monitor seven prior restoration projects. The projects are as follows.

- Souza II Corral Vernal Pool Restoration (constructed in 2012).
- Vaquero Farms South Vernal Pool Restoration (constructed in 2012).

Figure 12. Location of Habitat Restoration and Creation Projects



- Upper Hess Creek Watershed Habitat Restoration Project (constructed 2011).
- Irish Canyon Riparian Restoration Project (constructed 2010).
- Souza II Restoration Project (constructed 2009).
- Lentzner Springs Restoration Project (constructed 2008).
- Souza I Restoration Project (constructed 2008).

For each project, a discussion of goals and objectives, contribution to restoration and creation requirements, and performance criteria and monitoring is provided below. Table 8b provides natural community-level and property-specific restoration and creation summaries. Table 12 provides a summary of aquatic and stream land cover restoration and creation by watershed.[6]

The seven restoration projects constructed to date provide a range of benefits to covered species. Each of the seven projects benefit covered amphibian species (California red-legged frog and California tiger salamander). Wetland restoration in 2009 and 2012 at Souza II and in 2012 at Vaquero Farms South increases habitat for covered vernal pool crustaceans. Restoration on Lentzner and Souza II also increases rare alkali grassland and supports habitat for alkali wetland plants.

Overall, 2013 monitoring demonstrated advancement toward achievement of site-specific restoration objectives; however, low rainfall during the past two rainy seasons have influenced plant survival and wetland feature performance at most of the restoration project sites.

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 (*Branchinecta lynchi*). Design features were also included to ensure the ponding duration was sufficient for successful California tiger salamander (Ambystoma californiense) breeding[7]. To do this, 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

[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] This project feature was include to ensure that the wetland does 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.

"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 the Deer Valley Road Widening Project.

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 three monitoring elements: vegetation survey and general site assessment, wetland delineation, and vernal pool fairy shrimp surveys. Monitoring occurs once a month from October (or start of inundation) until the wetland feature is dry. Vernal pool fairy shrimp surveys occur annually, and wetland delineation will occur in year 5. All monitoring components include photo-documentation. Photographs and written descriptions are completed annually at the same time of year and measured against baseline assessments completed prior to project construction.

Monitoring and Adaptive Management to Date

Monitoring was conducted to determine achievement of Year 1 restoration success criteria and site-specific restoration objectives. In addition, monitoring was used to determine if seasonal wetland supports vernal pool fairy shrimp.

The wetland exceeded the annual performance criteria for hydrology in the 2013 wet season (Year 1 monitoring period). Hydrologic monitoring was conducted in December 2012, and in January, February, March, and April 2013. The wetland was inundated in its entirety for over 30 days and within the dimple wetland for approximately 2 months. It was fully inundated in early December 2012. In the middle of January water levels in the wetland declined relatively rapidly until just the dimple was barely inundated on February 1, 2013. The depth of water ranged from a low of about 4 inches in the dimple wetland in November to approximately 14 inches in mid-December 2012 into early January 2013.

An annual vegetation survey was conducted on May 28, 2013. A total of eight plant species were observed in the wetland, and four of these were wetland plants. Ryegrass (*Festuca perennis*) was the dominant species in the wetland; it accounted for approximately 22% of the cover along each transect. Bare ground was the other dominant land cover type, constituting greater than 70% of the cover along each transect. This lack of plant cover during Year 1 monitoring is attributable to the relatively recently graded wetland not having sufficient time to be colonized by hydrophytic vegetation and owing to the unusual timing of the rainfall in 2012–2013 (i.e., most rain fell before December 31).

All wildlife using the created seasonal wetland and adjacent areas were noted during all hydrology and vegetation monitoring efforts. During the 2012–2013 monitoring season, one mammal species and seven bird species were observed in the vicinity of the wetland. The early rapid drying of the pool prevented biologist from definitely determining fairy shrimp presence.

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). Two wetland features—0.07 acre and 0.15 acre—were created in what is suspected to be an abandoned road bed, down slope of an existing vernal pool occupied by vernal pool fairy shrimp. A small topographical low area that was graded into the landscape many years ago to channel stormwater is evident adjacent to the wetland creation sites, but remained unaffected by the wetland creation project.

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.

Performance Criteria and Monitoring


CA tiger salamander

Site-specific restoration objectives and performance criteria were set for the project (Table 13b). Progress toward meeting the restoration objectives and achieving the performance criteria are monitored annually using three monitoring elements: vegetation survey and general site assessment, wetland delineation, and vernal pool fairy shrimp surveys. Monitoring occurs once a month from October (or start of inundation) until the wetland features are dry. Vernal pool fairy shrimp surveys occur annually, and wetland delineation will occur in year 5. All monitoring components include photo-documentation. Photographs and written descriptions will be completed annually at the same time of year and measured against baseline assessments completed prior to project construction.

Monitoring and Adaptive Management to Date

First year monitoring of two seasonal wetlands was conducted in December 2012, and in January, February, March, and April 2013. During Year 1 hydrologic monitoring, water was first observed in the seasonal wetlands on December 7, 2012. Water above the surface was recorded in both seasonal wetlands through March 2013, totaling approximately 4 consecutive months of inundation. The depth of water in the created seasonal wetlands ranged from a high of approximately 10 inches in December 2012, to a low of about 1 inch in

Table 13a. 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 13b. 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.

March 2013. Accordingly, Year 1 hydrology success criteria were exceeded for monitoring Year 1.

To determine if the wetland vegetation cover met performance criteria, a vegetation survey was conducted on May 28, 2013. However, due to the relatively dry winter, there was no vegetative cover recorded in the created seasonal wetlands—likely resulting from poor hydroseed germination.

All wildlife using the created seasonal wetlands and adjacent areas were noted during all hydrology and vegetation monitoring efforts. During the 2012–2013 monitoring season six bird species, four mammal species, and one amphibian species were observed in the vicinity of the created seasonal wetlands. In 2013 no shrimp were documented in the pools, however California tiger salamander were found using the pool.

Upper Hess Creek Watershed Habitat Restoration Project

Project Overview

The Upper Hess Creek Watershed 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 five restoration sites using existing site features. The five 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 edges 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.

Performance Criteria and Monitoring

Site-specific restoration objectives and performance criteria were set for the project (Tables 13c and 13d). 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. Photo-documentation (includes photographs and written descriptions) are taken from a number of fixed locations (photo-documentation points) established to measure specific success criteria. Photographs and written descriptions are completed annually at the same time of year and measured against baseline assessments completed prior to project construction.

Monitoring and Adaptive Management to Date

The restoration site was monitored throughout 2013 to determine achievement of Year 2 restoration success criteria and site-specific restoration objectives. Hydrologic monitoring in Year 2 was conducted monthly between December 2012 and August 2013. Vegetation monitoring occurred at each restoration site using a point intercept method to determine achievement of objective SO-1, while general site assessments evaluated the achievement of objectives SO-2, -3, -5, -6, and -8. Wildlife observed within four restoration sites (alluvial valley wetlands, the California tiger salamander pond, the channel restoration area, and the main stock pond) were recorded during each site visit. The annual performance restoration goal for Year 2 was that each restoration area, be colonized by 10% relative percent cover of native wetland vegetation at the alluvial valley wetlands, main stock pond, channel restoration area, and California tiger salamander pond.

Annual performance criterion SO-1 was met in Year 2 at the alluvial valley wetlands, main stock pond, and the channel restoration area. Along Transect 1 a native, obligate wetland plant became established, seacoast bulrush (*Bolboschoenus robustus*), which accounted for 6.1% of the relative native vegetation cover along this transect. The other large percentage increase in Year 2 was the 60.1% relative cover of meadow barley (*Hordeum brachyantherum*) along Transect 2. In the main stock pond, ocular estimates show that the native vegetation cover in and around the stock pond increased in Year 2, easily meeting the 10% native vegetation cover criterion.

Also met in Year 2 monitoring were criteria SO-2, Reduce Erosion along Upper Hess Creek; SO-3, *Increase Wetland and Pond Capacity and Water Duration in the Project Area*; SO-4, *Hydrologically Reconnect the Upper Hess Creek from Lower Stock Pond [also referred to as the "Main Stock Pond"] to Channel at Property Boundary*; and S0-5, *Reduce Non-native Plant Species in Restored Wetlands*.

SO-6 and SO-8, *Restore Approximately 2.16 Acres of Alluvial Valley Wetlands*, were not met during Year 2. Approximately 0.26 acre of the proposed 2.16 acres of constructed/restored seasonal wetlands exhibited hydrology in the 2012/2013 wet season.

SO-7 and SO-9, *Create an Approximately 0.06-acre California Tiger Salamander Breeding Pond*, was changed. As stated in Year 1's annual monitoring report (Monk & Associates 2013), SO-7 is to construct a 0.12-acre pond that would provide breeding habitat for California tiger salamander. However, the constructed size of the pond is 0.06 acres. Thus, the site-specific restoration objective has been changed to reflect the actual constructed acreage: 0.06 acre. The California tiger salamander pond was inundated during the 2012–2013 wet season and held water from December 7, 2012, through March 2013. By the time of our April 18, 2013, monitoring visit it was completely dry. This inundation period is not long enough to support breeding California tiger salamander. The pond was dip netted on March 11, 2013, and biologists did not identify any amphibian larvae, including California tiger salamander. The pond had dried by April. The poor hydrologic performance of the California tiger salamander pond can be attributed to far lower than normal rainfall amounts in the 2012–2013 wet season.

SO-10, *Restore 226 Linear Feet of Stream Channel and Hydrologically Connect Upper Hess Creek from the Main Stock Pond to Channel at Property Boundary*, was met in Year 2. Approximately 226 feet of restored stream channel functioned during the 2012–2013 monitoring year. Additionally, the Main Stock Pond was also observed being hydrologically connected with the Lower Channel at the property boundary as intended for 3 months of the year.

Two remedial activities were completed in 2013: (1) the addition of erosion control material (straw) along the dirt road leading down to the main stock pond and (2) the planting of 40 willow poles in the Lower Channel pools. The dirt "road" referred to above was constructed along the south side of the upper creek channel and the main stock pond during implementation of the site restoration activities to provide an equipment access route. The rains of 2011–2012 resulted in rill erosion along this road, which never fully recovered in 2012; hence, straw needed to be added to the eroded portions of the road. The Conservancy was notified of two invasive weeds that appeared onsite: perennial pepperweed and fennel. The Conservancy was proactive about getting someone to the site right away to spray these plants. Willow poles were planted in 2011 and 2012; however, cattle accessed the area and those previous plantings had not survived the grazing pressure. In March 2013, maintenance crews replanted 40 willow poles, 10 per pool, along the Lower Channel.

Recommendations/Future Actions

Continue to monitor for noxious weed infestations. If any invasive species are observed immediately notify the Conservancy so that a licensed herbicide applicator can be dispatched to the site quickly to control/treat the infestation.

Irish Canyon Riparian Restoration Project

Project Overview

The Irish Canyon Riparian Restoration Project was installed in 2009/10. 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 restoration was initiated in late 2009 and completed in March 2010. 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.

The project is expected to result in the restoration of 0.91 acre of riparian habitat and 688.5 linear feet of stream.

Performance Criteria and Monitoring

The Irish Canyon Restoration Project will be monitored for 3 years, and all failed plantings will be replaced during this period. After 3 years, the site will be adaptively managed by EBRPD consistent with the long-term management plan for the site.

Monitoring and Adaptive Management to Date

The restoration project continues to demonstrate high seedling recruitment and sapling survival during Year 4. By the end of August a few 4-foot oaks had been girdled but the total number of occupied sites in all planting areas was 126 trees (plan called for 122 established sites, but to overplant to 145 total trees). Watering continued every 3 weeks through the end of the year. Late in the season the fencing around channel enhancement area 1 was reinforced because cattle had rubbed up against a few support posts. Healthy saplings occupied 122 of the 150 sites in December 2013 across the three channel enhancement areas. There were 49 oaks and 32 buckeyes in channel enhancement area one, 13 oaks and 6 buckeyes in channel enhancement area two, and 11 oaks and 11 buckeyes in channel enhancement area three (Save Mount Diablo 2013).

The restoration site was managed to improve tree record keeping, growth, and survival. Tree tubes and rebar identifying tree sites were planted to improve record keeping (instead of replacement of irrigation flags). In March a significant amount of time was spent thoroughly weeding the planting areas. A 3-foot radius of bare ground around each site made subsequent watering days faster and decreased the thatch cover for rodents to hide in at the base of the plantings. In addition to removing weeds within each individual planting site, yellow star thistle, bull thistle, medusa head, and purple star thistle adjacent to the planting sites were targeted to the extent possible.

Sites were watered every 3 weeks from March through October, but 2013 saw the lowest annual rainfall on record in most Bay Area locations. Although there were several significant storms in late 2012, dry conditions required watering to begin in March. Throughout the year it became clear that many of the mature plantings had reached ground water and were no longer reliant solely on supplemental water, so late summer and fall watering efforts were focused on the smaller saplings. Acorns and buckeye nuts were collected along Irish Creek in anticipation of replanting a number of seedlings that did not survive the past year. All management was completed by Save Mount Diablo staff and volunteers.

Recommendations/Future Actions
Weeding, watering, and replanting will continue in 2014.

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 (Table 8b).

Performance Criteria and Monitoring

The restored seasonal alkali wetlands are being monitored using a number of performance criteria (Table 13e). These criteria are based on survivorship and health of individual plants during the 3 years following construction. If performance criteria for survivorship are not met during this time, adaptive management actions will be triggered and annual monitoring of survivorship of planted plants will continue until performance criteria are met.

After survivorship performance criteria are met, absolute cover of native wetland vegetative cover will be monitored and evaluated annually for 2 additional years. After 2 years, if vegetative cover performance criteria have been met each year, monitoring will cease and the project will be considered successful. If performance criteria have not been met each year, adaptive management actions will be taken to supplement existing plantings and/or to modify the site grading. In this case, monitoring will continue until the criteria are met for 2 consecutive years.

Monitoring and Adaptive Management to Date
The restoration project is nearing its Year 4–5 performance criterion of 60% cover of native wetland vegetation. Monitoring activities are to occur during the early to mid-spring, after or during the end of the rainy season. Year 5 monitoring was conducted on May 24, 2013 (Nomad Ecology 2013a).

Performance criteria for the alkali wetland during performance period Year 5 was not close to the 60% absolute cover target of native wetland vegetation. Total absolute cover of native wetland plants was 10.0%., 4.1%, 18.4%, and 40.0% absolute cover at the four selected monitoring locations. While none of the locations were close to meeting 60% absolute cover target, other measurements such as relative cover and qualitative assessment of planted species suggest a trend toward the establishment of alkali wetland at two of the four locations. Of the planted species, there was an overall increase in the number of Great Valley gumweed individuals and an overall decrease in the number of saltgrass individuals from 2012 to 2013. However, qualitatively it appeared that individuals of saltgrass were larger and had greater cover than in previous years. Alkali heath and bulrush continue to be absent from transects. The health of the saltgrass and Great Valley gumweed was good with most plants showing vigorous growth.

Recommendations/Future Actions

Because vegetation performance standards were not met at the end of the Year 5 monitoring period, additional planting of portions of all of the transects with wetland adapted native plants such as saltgrass, meadow barley, and dwarf peppergrass is recommended. The amount of plantings should target a higher percentage than the 60% performance standard to assume some mortality of remedial plantings. Saltgrass and meadow barley may be sourced from downstream of the restoration site. Since the performance standards were not met at the conclusion of the 5-year monitoring period, monitoring should be continued for an additional 2 years after remedial planting is completed. Provided remedial plantings are put in place during the 2013/2014 rainy season, the monitoring period should be continued in 2014 and 2015. The monitoring should only include percent cover evaluations.

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 was about 60 acres and included 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 flood plain 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. As a result, suitable in-stream and pond habitat was 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. More

than 15,000 plant plugs were planted at the project, grown from locally collected seeds at the Watershed Nursery in Richmond. A native upland and wetland seed mix was also applied.

Performance Criteria and Monitoring

The restored wetlands and pond are being monitored using a number of performance criteria (Table 13g). Vegetation monitoring is occurring during the first 3 years early to mid-spring, after or during the end of the rainy season. During this time vegetation will be monitored for plant survival and health. Throughout the 5-year monitoring period, the percent cover of non-native invasive plant species will be considered satisfactory if less than 5% of the project site is covered with non-native invasive plants. Progress of the restoration plantings will be considered satisfactory if the criteria are met or exceeded.

Adaptive management measures will be implemented if the restoration project fails to meet the performance criteria. Measures that may be implemented include additional plantings or installation of erosion control structures/devices. Failure of the adaptive management measures to meet the performance criteria may result in the reduction of restoration acreages counted toward the Plan requirements.

Monitoring and Adaptive Management to Date

Nomad Ecology monitored the restoration site throughout 2013 to determine achievement of Year 3 restoration success criteria and project objectives (Nomad Ecology 2013b). Monitoring types included vegetative, erosion, wetland and pond acreage, hydrologic connectivity, depth and duration, milk thistle, atriplex, in-stream pool, and grazing monitoring. Monitoring was used to determine if project objectives and performance criteria were met and if adaptive management should be implemented.

During the spring 2013 monitoring, plant survival and health was recorded for each species within 5 meters on either side of the 10 transects. Overall, plants had 26% survival, which is well below the performance standard of at least 60% survival for the third performance period. Plant survival saw a decrease between 2010 and 2011 (43% and 13%, respectively) and then an increase through 2012 and 2013 (22% and 26%, respectively). The increase is due to planting of saltgrass and natural recruitment of gumplant and salt heliotrope. Gumplant and salt heliotrope both had greater than 100% survival due to natural recruitment. Alkali heath had moderate survival onsite (46%) due to the conditions onsite, which include alkaline soils and very low moisture in the summer. Mexican rush did moderately well in the deeper portions of the wetlands but was also planted in wetland transition areas where it did not survive.

Similar to 2012, the below normal rainy season, alkali soil characteristics, and the site hydrology contributed to the low plant survival. Several of the plant species, common rush (*Juncus effusus*), iris-leaved rush (*Juncus xiphioides*), narrowleaf milkweed (*Asclepias fascicularis*), and spikerush (*Eleocharis macrostachya*), require wetter conditions than were present in 2013. In the alkaline wetland areas, there are large areas of bare soil, typical of alkali wetlands in the region. These areas of alkaline scalds are not likely to grow dense vegetation. In addition, some

of the wetland features did not hold water long enough for the establishment of wetland obligate plants. All of these factors contributed to low plant survival.

Overall, erosion continued to decrease in 2013 as the vegetation has become established. During monitoring visits in Year 4, the straw bales used to reduce erosion in the unnamed tributary, had silt pooled behind them upstream which shows they captured some sediment from the flowing water before it flowed into the creek. The portion of the drainage above the sediment basin is not eroding, only the portion downstream of the sediment basin is eroding. The bank is vegetating with dense stands of saltgrass, creeping wild rye, and other vegetation.

Wetland and pond acreage was not mapped in 2013, because the winter of 2012–2013 was drier than usual with a total rainfall of 7.18 inches over the entire year with most of the rainfall occurring in November and December and although wetlands and ponds onsite contained standing water, they did not fill to their full capacity. Water ponded at all sites at least once in December 2012 and January 2013. Water depth ranged from 6 to 27 inches. All sites were completely dry by March 2013 except the southern wetland, which was ponded in March and completely dry by April. There was no clear pattern of ponding in the wetlands; some contained the most water in December and some in January.

Hydrologic connectivity monitoring occurred at all site visits in 2013; however, water has not been observed flowing over the constructed overflow and into the southern wetland complex at any time, including in March 2011 immediately following the major storm.

Noxious weed monitoring was completed on May 3 and July 8, 2013. Infestations of milk thistle, slenderflower thistle (*Carduus tenuiflorus*), stinkwort (*Dittrichia graveolens*), and one perennial pepperweed (*Lepidium latifolium*) was discovered onsite. Milk thistle was scattered throughout the site with a smaller cluster west of the pond. One individual of stinkwort was detected in the pond on May 3, 2013, which was pulled and bagged taken off site for disposal. Twenty more individuals of stinkwort were detected at the pond on July 8, 2013, which were hand pulled and bagged and taken offsite for disposal.

The Atriplex soil translocation sites were monitored on May 3, 2013. Four San Joaquin spearscale (*Atriplex joaquinana*) were observed, one large (approximately 12 inches in height) and three small plants (less than 6 inches in height). Italian ryegrass was overtopping all four individuals. In the east soil translocation site, eight San Joaquin spearscale (*Atriplex joaquinana*) were observed, all less than 6 inches in height. Other species observed in the translocation sites include Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), common tarweed (*Centromadia pungens* ssp. *pungens*), soft brome (*Bromus hordeaceus*), and saltgrass (*Distichlis spicata*).

Grazing once again provided more beneficial than harmful impacts in 2013. A portion of the site was grazed with approximately 59 cows and 2 bulls from November 28, 2012, to January 28, 2013, and 86 cows and 4 bulls from January 28 to April 26, 2013. Cattle caused some erosion and damaged vegetation on the banks of the creek where they accessed the creek particularly in the vicinity of the electric fence. But, overall, the benefits of grazing (reducing Italian ryegrass

thatch and biomass) outweighed the impacts of grazing (trampled vegetation of wetlands and some bank erosion).

Recommendations/Future Actions

There are criteria for which success has not been achieved or progress toward achieving success could be improved. 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.

Vegetation planting and monitoring should continue in 2014. Hydrologic monitoring results should be used to inform small scale planting locations. Transection locations should be relocated accordingly as well. In addition, the performance standards for vegetation cover monitoring in the quadrats should be revised to use relative cover rather than absolute cover.

Saltgrass should continue to be planted on the banks where the bank is laid back, and straw wattles should be placed along the tops of the banks if overland flows start to concentrate and erode the features. The large erosional feature should be stabilized as the straw bales are intended to be a temporary solution. This may require the use of heavy equipment or reducing the intensity of flows through the area.

Grazing should continue similarly in 2014. More of the creek should be fenced to exclude cattle. If the wetlands are planted again in the future or desirable plant species spread or colonize, they should also be fenced to exclude cattle.

Vasco Caves Souza I Pond Creation Project

Project Overview

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 (Table 8). 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. It is expected that 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.

Performance Criteria and Monitoring

The seasonal pond and native wetland plant species are being monitored using a number of performance criteria (Table 13f). The performance criteria for the created seasonal pond and wetland species are based on the number of days the pond is inundated and on survivorship of the hydrophytic species over the 5-year monitoring period. Progress of the restoration plantings will be considered satisfactory if the performance criteria are met or exceeded. After the performance criteria are met, the restoration project will be considered successful.

Monitoring and Adaptive Management to Date

The dry winter influenced the progress toward the achievement of the restoration project success criteria during Year 5 monitoring. Three general types of monitoring were conducted to determine if the restoration success criteria were met for Year 3: hydrologic, vegetation, and wildlife monitoring (Monk & Associates 2013b).

The hydrology success criterion for Year 5 states: "*A portion of the created pond will remain inundated for at least 30 days each year. The remainder of the created pond shall remain saturated or inundated for at least 60 days each year*." This success criterion was met in Year 5. The 1- and 2-foot sections of the pond were inundated for at least 90 days during the 2012–2013 rainy season and the 3-foot section was inundated for 180 days.

There are two vegetation success criteria for Year 5, (1) "*The pond edges and margin will be dominated by wetland vegetation (FAC, FACW and/or OBL species). An allowance will be made for vegetation suppression in inundated areas of the created pond since one of the desired design parameters was to establish a sufficiently long inundation period that will allow CTS larvae to successfully metamorphose"* and (2) *The created pond will not have any plant species on the California Exotic Pest Plant Council's (CEPPC)*. Success criterion 1 was met in monitoring Year 5. The vegetation transects conducted in the created pond on May 10, 2013, show that the pond edges and margin are dominated by wetland vegetation. Relative percent cover of wetland vegetation in the pond during monitoring Year 5 was 99% in the 1-foot section and 93.2% in the 2-foot section. Vegetation success criterion 2 was not met in Year 5. Italian rye grass, though ubiquitous throughout the East Bay grasslands, is on the CEPPC's list, as is another non-native grass observed in the created pond during Year 5: European manna grass (*Glyceria declinata*).

Ca tiger salamander larvae – note 4 legs are visible. Photo Credit: Sarah Lynch

Despite the lower than normal precipitation levels and shallow pond conditions, California tiger salamander eggs and larvae in the created pond were observed in Year 5. In addition to the California tiger salamander observations, a total of 12 vertebrate species were observed either at the created pond or nearby in the uplands, and 6 bird species were observed.

Recommendations/Future Actions

During Year 5 the created pond met the hydrology success criterion. It also met one of two vegetation success criteria. The only vegetation success criterion that was not met in Year 5 was criterion 2. Regarding the European manna grass observed in the pond in Year 5, the pond will be periodically monitored another year to see if this invasive grass reappears and requires removal. A final report on the outcome of this grass will be prepared at the end of 2014.

Table 13c. 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 13d. 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 13e. 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 (and subsequent years if necessary)	Absolute cover of native wetland vegetation	60% cover

Table 13f. 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 13g. 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 expected prepared within 1 year of land acquisition however they have taken longer. This is due to the decisions to cover many adjacent properties under one coordinated management plan, the 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 south-central 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 in 2012 and 2013, assembling and reviewing numerous iterations of draft materials. A public draft is anticipated in 2014. This is the first preserve management plan prepared by the Conservancy and can be expanded to include neighboring properties. It will become a template for future preserve management plans prepared for other parts 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 2013 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 To-Date

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 2013, natural resource maintenance and enhancement projects continued on all properties within the Vasco Hills/Bryon Vernal Pools Preserve Management area. Approximately 40 native bunchgrasses and shrubs were planted near the Vaquero Farms central office area. On the Martin property, approximately 0.25 acre was seeded with native grasses. In addition to these new activities, project initiated in previous years continued to monitored and managed.

- **San Joaquin spearscale and crownscale salvage and relocation**. In February 2011, topsoil was salvaged from an area that had recorded presence of San Joaquin spearscale (*Atriplex joaquiniana*). Under guidance from a biologist and Conservancy staff, maintenance crews removed topsoil from an area being impacted by a covered project and placed it on Souza II in two separate plots. The atriplex transplant project on Souza II continued to have some positive results in 2012, the second year since the transplant. In the west transplant site, one San Joaquin spearscale and one crownscale (*Atriplex coronata* var. *coronata*) were observed. In the east transplant site, no San Joaquin spearscale or crownscale were observed. Both sites were hand weeded and the 2012 populations persist (Nomad Ecology 2013).

- **Small-flowered morning glory salvage and relocation**. In 2010, seeds of the small-flowered morning glory (*Convolvulus simulans*) were collected from an impact site near Deer Valley Road, and three plots were seeded on the Vaquero Farms North property in December 2010. Seed was planted in 1-meter by 0.5-meter plots, 1 inch deep, and approximately 5 inches apart. Monitoring in 2013 indicated that the transplant was successful and the plants continue to persist.

- **Vernal pool fairy shrimp salvage and relocation**. Vernal pool fairy shrimp inoculum salvaged from the Deer Valley Road Widening Project in 2010 and 2012. In 2010, inoculum was placed in a wetland created in 2009 as part of the Souza II Wetland Restoration project site. Due to rainfall patterns the past year Conservancy biologists have not been able to confirm that the translocation was successful.

  In 2012, prior to the construction of the Deer Valley Widening project, approximately five yards of topsoil/inoculum was salvaged and stored in the barn at the Souza II project site. In late October 2012, a new wetland was created at the Souza II corral, the topsoil/inoculum was placed in the deepest area of the new feature. There was additional inoculum that was not placed in the new pool but in previously inoculated

wetland on the Souza II wetland restoration project. Conservancy biologists have not been able to confirm that the translocation was successful.

Invasive Plant Control

There were several invasive plant species sites identified or controlled in 2013 by EBRPD and the Conservancy. Mapping and monitoring of all sites continued in 2013 and will continue in 2014.

- *Dittrichia* sp. was hand removed from wetland and pond areas. On Souza II project site it was hand pulled, bagged, and removed. In 15 other patches, Dittrichia was mowed to be controlled on Souza I, Souza III, Martin, Vaquero Farms North, and Vaquero Farms Central.
- 5 cubic yards of yellow star thistle was hand pulled at Souza I property.
- 2 acres of milk thistle was mowed at Martin property.
- Herbicide application and grazing (sheep) on 2 acres of medusa head on VF North.
- Herbicide application (5 acres) on medusa head / barb goatgrass (Adrien Galvin).

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 2013. 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. No changes to animal unit months were proposed for 2014.

Land Management

This section summarizes all land management activities undertaken on the HCP/NCCP Preserves during the 2013 reporting period, and discusses management issues on the Preserves.

For the 2013 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 2013 are summarized below.

Management Activities and Maintenance

General inspections: General inspections and site maintenance by EBRPD was 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.

Fences: Fences and gates were removed, repaired, or replaced throughout the Preserve System. A gate numbering system was developed and implemented to identify gates on all properties.

- Grandma's Quarter: Wire gates were replaced at Grandma's Quarter
- Souza II: Approximately 150 feet of barbed wire fencing was reconfigured and re-fenced on Souza II.
- Vaquero Farms North: The medusa head treatment area was fenced so livestock didn't also graze the herbicide treated test plot.

Road and Trail maintenance: Road and trail maintenance occurred on some of the Preserve System properties.

- Vaquero Farms, Schwartz, Ang, Barron, Irish Canyon, and Thomas South: Approximately 15 miles of roads and trails were mowed, and graded when needed.
- Alaimo, Ang, Barron, Irish Canyon, and Thomas South: Branch pruning along roads was conducted.

Debris Removal: Clean-up efforts continued on all properties in 2013.

- Vasco Hills/Byron Vernal Pools Management Area: Trash and debris removal occurred on properties inside the Vasco Hills/Byron Vernal Pools Management Area.
- Souza II: A mobile home was removed from Souza II.
- Ang: The Orinda Hiking Club removed portions of an old chain-link fence. The group has volunteered once per month in 2013 and will continue efforts into 2014. Several loads of scrap metal were removed from the Ang property in October and December. In August, several loads of old redwood posts from previous fence removal efforts were removed from the Ang property.
- Affinito: Dilapidated billboards were removed from Affinito in April. In July, a call for bids was issued for demolition of an abandoned A-frame structure.
- Hess/Land Waste Management: An illegal dump site was cleaned up from Hess in November. Several loads of scrap metal were removed from the property in October and December.

Water development: Several water infrastructure improvements and maintenance activities were conducted in 2013.

- Souza III: A failing 1,350-gallon water tank was replaced
- Vaquero Farms North: A new 1,350-gallon tank and cattle trough were installed. The new system provides livestock water and will encourage livestock to graze the pasture more evenly providing benefits to wildlife.
- Vaquero Farms Central: A well head and water line maintenance and repair continued at Vaquero Farms Central.

Security: Ongoing/regular patrol and security checks continued at all properties.

- Vaquero Farms: At Vaquero Farms a Bay Alarm security system was installed.
- Ang and Hess: In March and August of 2013 cameras were installed to monitor trespass activity at Ang and Hess.
- Thomas North: Security shutter kits were installed for use at the ranch house on the Thomas-north property in July.
- Alaimo: In December, a call for bids and contract to have a chain-link enclosure constructed at Alaimo to protect the existing wells was issued.

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. No conceptual ecological models have been developed or modified during the 2013 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, and 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 2013. Protocols were developed for the Byron Hills Management area for monitoring the effectiveness of monitoring actions and the status and trends of focal species. Once these protocols are final, 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 will 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. They produce an annual report and Conservancy records and GIS is updated accordingly.

HCP plant species (covered and no-take species) inventories and focused botanical surveys were conducted in April, May, June, July, and September 2013 (Nomad Ecology 2013c). Initially, the 2013 surveys were focused on a few of the smaller acquisitions: Adrienne Galvin, Galvin, Schwartz, and Austin-Thomas North to primarily focus on early spring blooming covered plant species. Since there is still a need to locate one additional population of round-leaved filaree (*California macrophylla*) to meet HCP/NCCP conservation goals, early season surveys were conducted in suitable habitat on Vaquero Farms Central and Vaquero Farms South. However, only a short duration effort was made due to the low precipitation totals during the 2012/2013 rainy season which likely reduced abundance of this taxon as evidenced by a reference population evaluation. In June 2013, HCP/NCCP staff indicated that acquisition of the 1,875-acre Roddy Ranch was in the beginning stages. During this early stage of the acquisition process permission to access the property to conduct covered plant surveys was granted by the Roddy family. Since access was not organized until July 2013, covered plant surveys focused on late season *Atriplex* (including *Extriplex*) and big tarplant (*Blepharizonia plumosa*). Surveys were conducted in accordance with the survey requirements for covered and no-take plant species of the HCP/NCCP, as well as CEQA-related sensitive botanical resources. 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 and federally listed species or species included in the California Native Plant Society rare plant inventory were 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 characteristic were recorded (physical condition, age structure, reproductive success, availability of suitable habitat, and diversity of suitable habitat). GIS shapefiles of covered species were created using global positioning system (GPS) point data collected in the field.

The results of the inventory are incorporated in the annual report. New species occurrences are credited toward the current reporting year rather than the year of the acquisition. During the course of these surveys populations of four covered plant species were observed within acquisition properties: big tarplant (*Blepharizonia plumosa*), San Joaquin spearscale (*Extriplex*

joaquinana), Diablo helianthella (*Helianthella castanea*), and Mount Diablo fairy lantern (*Calochortus pulchellus*). In addition, non-covered but special status plant species including crownscale (*Atriplex coronata* var. *coronata*; CRPR 4.2), small-flowered morning glory (*Convolvulus simulans*; CRPR 4.2), and serpentine bedstraw (*Galium andrewsii* subsp. *gatense*; CRPR 4.2) were also observed within acquisition properties

A wetland assessment and mapping of Preserve System acquisitions was also conducted (Nomad Ecology 2013d). The assessment's primary objective was to groundtruth land cover mapping for wetland features and streams present in the Preserve System. In addition, alkali grassland, uncommon vegetation types, and uncommon landscape features were groundtruthed or mapped. The 2013 survey included five properties in their entirety. The five properties mapped as part of the 2013 wetland assessment include:

- Adrienne Galvin
- Alaimo
- Galvin
- Roddy Ranch (acquisition anticipated complete July 2014)
- Schwartz

Wetland assessment results for Alaimo, Adrienne Galvin, Galvin, and Schwartz were based strictly on field surveys and background aerial imagery analysis. The results for the assessment were used to verify acreages of wetlands and landscape feature preserved and identify restoration and enhancement opportunities. The land cover acreages presented in this annual report include groundtruthed acreages for alkali wetland (riverine and depressional), permanent wetland, pond, seasonal wetland (riverine and depressional), riparian, and alkali grassland. Wetland assessment and mapping on unsurveyed acquisition properties will continue in 2014 using the same methodology.

Long-Term Monitoring Phase

As of December 2013, long-term monitoring has not yet commenced. The long-term monitoring phase will commence once a comprehensive strategy has been developed (monitoring design 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

A contract with EBRPD was approved to research golden eagle behavior in the Altamont Pass Wind Resource Area (APWRA) and map collision hazards. The research proposal, *Using Satellite Telemetry to Improve and Expand Golden Eagle Hazard Collision Mapping to Lessen Impacts of Wind Turbine Repowering in the Altamont Pass Wind Resource Area, California* includes five main tasks (East Bay Regional Parks District 2010).

- Trap and attach transmitters on up to six golden eagles.
- Track eagles, including mapping using a 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 would include development of collision hazard maps for red-tailed hawk and American kestrel 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 would be developed using observational data collected by biologists performing post-construction monitoring at Buena Vista.


Photo Credit: Joe Didonato

In 2013, a total of nine golden eagles were trapped, banded, and outfitted with GPS/GSM satellite transmitters between December 18, 2012 and June 11, 2013. Seven golden eagles were initially trapped in or near the APWRA: one adult, resident pair on territory at the Los Vaqueros Reservoir, one juvenile, and 4 sub-adult golden eagles. GPS tracking for this project began as soon as the first eagles were trapped and transmitted on December 17, 2012, and has proceeded to-date. In general, the transmitted juvenile and sub-adult golden eagles appear to wander extensively throughout the undeveloped regions of the East Bay Area. The open space lands to the northwest (Mt. Diablo/Morgan Territory) and west (Dublin, San Ramon, Livermore, Pleasanton Ridge, Sunol, Mission Peak) of the APWRA appear to be particularly important for these eagles. An evaluation model for the Buena Vista Wind Farm and the APWRA is 100% complete, while expanding the model to include Los Vaqueros Reservoir Watershed at the northern end of the APWRA is 15% complete. New collision hazard (risk) maps for American kestrel, red-tailed hawk, and golden eagle based on pre-existing behavioral data are 95% complete. The golden eagle research project will continue in 2014.

Invasive Plant/Weed Control

EBRPD initiated a new research program in 2013, comparing the effectiveness of herbicide application versus grazing using sheep and cows on medusa head and barbed goat grass on Vaquero Farms. The research will continue in 2014 on other invasive plant populations.

BioBlitz

Save Mount Diablo's 2013 BioBlitz took place May 3–4, 2013, on the Barron and Thomas South properties—Black Diamond Mines Regional Preserve. The properties total 1,650 acres and bridge the gap of public open space between Mt. Diablo State Park and Black Diamond Mines Regional Preserve. The properties include ponds, canyons, rock outcrops, oak woodland, grassland, and chaparral. Barron drains to the east into Oil Canyon near the historic Stewartville Townsite, eventually joining Sand Creek in Antioch. Thomas South is crossed by three parallel ridges and striped with dense woodland, grassland, and exposed rock strata along 1,905-foot Krieger Peak and extends to the south rising onto Keller Ridge with chaparral overlooking Marsh Creek Road.

Fifty-two scientists and naturalists volunteered their time and identified 568 species including more than 20 locally rare species, as follows: 65 birds, 4 amphibians, 5 reptiles, 6 arachnids, 15 mammals, 340 insects, 131 plants, and 2 fungi. Notable species included large populations of California tiger salamander larvae.

Staff field testing CRAM wetland monitoring protocols

California Rapid Method Assessment

Conservancy staff coordinated with the San Francisco Estuary Institute and Moss Landing

Marine Laboratory to pilot new wetland monitoring protocols. The California Rapid Assessment Method (CRAM) depressional wetland module was tested on several wetlands in the eastern portion of the Plan Area. The team worked for 2 days visiting and assessing wetlands. The information will be used to fine tune the monitoring protocol.

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. Finally, 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 is an ongoing process utilized throughout Plan implementation.

In 2013, 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 the adaptive management actions described in Section IV, a repair of a small section of the Souza II restoration project has been designed and is expected to be constructed in 2014. A small drainage that carries stormwater run-off from Vasco road enters the project site. Because its source is road run-off, the drainage is flashy, carrying high velocity and high volumes of water for short periods of time during storms. The drainage has developed into a larger erosional feature that is threatening other aspects of the restoration. The construction of a small feature to capture and slow the water before directing it onto the floodplain of the project is expected to be constructed in 2014.

As part of adaptive management on Vaquero Farms North, a tank and trough system was installed. Land managers observed that cattle grazing on the property were concentrated around water sources and low lying areas, resulting in uneven grazing concentrations across the range. The tank and trough system was installed to spread cattle more evenly and achieve consistent residual dry matter (RDM) across the property. The system was placed in in at a higher elevation the northeastern part of the property. Monitoring results on the effectiveness of this action will be recorded in the annual grazing report between the grazing tenant and EBRPD.

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.

Under Stay-Ahead Measurement Method 2, 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 because 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 6,880.9 acres ahead across all land cover types and 177,870 linear feet ahead in stream land cover. The Conservancy is 5,308.9 acres ahead of the stay-ahead requirement for grassland and irrigated agriculture land cover types (the requirement is 453.7 acres. For plant occurrences, the Conservancy is meeting the stay ahead requirement (Table 15).

Table 14. Stay-Ahead Assessment: Land Cover

	Conservation				Impact				
Land Cover Type	Protection Required (acres)	Protection to date (acres)	% of Required	Estimated Impacts (acres)	Impacts to date (acres)	% of Impacts	Acres Required to be Ahead	Acres Ahead	% Ahead[1] (Conservation % - Impacts %)
Terrestrial									
All grassland & irrigated agriculture	18,150	5,612.5	30.9%	12,148	303.6	2.5%	453.7	5,308.9	28%
Chaparral and scrub	550	133.6	24%	2	0.0	0.0%	0.0	133.6	24%
Oak savanna	500	310.4	62%	165	0.0	0.0%	0.0	310.4	62%
Oak woodland	400	1,249.5	312%	73	0.0	0.0%	0.0	1,249.5	312%
Subtotal terrestrial	*19,600*	*7,306.0*	37%	*12,388*	*303.6*	2%	480.4	6,825.6	35%
Aquatic[2]									
Riparian woodland/scrub	70	21.0	30%	35	0.4	1%	0.7	20.7	29%
Perennial wetland[3]	75	5.4	7%	75	0.1	0%	0.1	5.3	7%
Seasonal wetland	768	16.2	2%	56	0.4	1%	5.1	15.9	1%
Alkali wetland	93	21.7	23%	31	0.1	0%	0.0	21.6	23%
Pond	16	7.3	46%	8	0.0	0%	0.0	7.3	46%
Reservoir (open water)[4]	12	0.0	0%	12	0.0	0%	0.0	-	0%
Slough/Channel	36	0.0	0%	72	0.1	0%	0.0	(0.1)	0%
Subtotal aquatic	*1,070*	*71.6*	*7%*	*289*	*1.0*	0%	3.7	67.9	6%
Stream (length in linear feet)									
Perennial stream	4,224	10,647.0	252%	2,112	56.3	3%	112.6	10,590.7	249%
Intermittent stream	2,112	72,237.3	3420%	2,112	360.0	17%	360.0	74,860.7	3403%
Ephemeral stream[5]	26,400	95,543.3	362%	26,400	105.0	0%	105.0	96,121.4	362%
Subtotal stream length	*32,736*	*178,427.6*	545%	*30,624*	*521.3*	2%	557.3	177,870.3	543%
Totals									
All land cover types (acres)	20,670	7,377.6	36%	12,677	304.7	2%	496.7	6,880.9	33%
Streams (linear feet)	32,736	178,427.6	545%	30,624	521.3	2%	557.3	177,870.3	543%

[1] *The Plan allows a 5% deviation from Stay Ahead requirements (e.g. 5% in this column). 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.*

[2] *Protection required for Aquatic land cover types are dependent upon amount of impact.The requirements based on the conservative estimate of impacts provided in the Plan, which may significantly over-estimate the amount of impact that ultimately occurs.*

[3] *Perennial wetlands* are equivalent *permanent wetlands.*

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

[5] *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*	*3*	*0*	*3*	*100%*
Mount Diablo fairy lantern	*Calochortus pulchellus*	*3*	*0*	*3*	*100%*
Recurved larkspur	*Delphinium recurvatum*	*0*	*0*	*0*	--
Round-leaved filaree	*Erodium macrophyllum*	*1*	*[see note [2]]*	*1*	--
Diablo helianthella	*Helianthella castanea*	*10*	*0*	*10*	*100%*
Brewer's dwarf flax	*Hesperolinon breweri*	*0*	*0*	*0*	--
Showy madia	*Madia radiata*	*0*	*0*	*0*	--
Adobe navarretia	*Navarretia nigelliformis* ssp. *nigelliformis*	*0*	*0*	*0*	--
Total		**26**	**0**	**26**	**--**

[1] Vasco Road Project avoided impacts and translocated soils where a small number of individuals had been located (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 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.

VIII. CHANGED CIRCUMSTANCES AND REMEDIAL MEASURES

The No Surprises Regulation established by the 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 the USFWS and the 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, the USFWS and the 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

A wildfire—which occurred in early July on the Land Waste Management/Hess (eastern part), Affinito, and Thomas properties—burned the area that is planned for restoration in 2014 (on Hess). No remedial measures were required. The wildfire burned grassland, chaparral, and some rare plant populations. Rare plant populations that were impacted by the wildfire will be monitored in 2014 to identify effects from the fire.

Post-fire: Section of Hess Creek planned for restoration in 2014

IX. FINANCES

Budget

The Conservancy analyzed cost projections from the HCP, the previous years' actual costs and the anticipated 2013 work plan to develop the 2013 budget (Table 16). Based on preliminary accounting for the reporting period, the Conservancy stayed within the budget amount for each cost category as well as the total 2013 Budget. Overall, expenditures were more than $13 million under the $15.953 million budget, namely due to a large land acquisition originally expected to close in 2013, but whose closing is now scheduled to occur summer 2014.

During the reporting period, the largest budgeted item was land acquisition followed by program administration, planning and design for restoration/management/recreation, monitoring/research/adaptive management, and habitat restoration/creation. 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, 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 government to assemble, manage, and monitor Preserve System lands.

Revenue sources also include lease income from Preserve System properties and *Contributions 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 $4,464,519 was received or provided as match in 2013 (Tables 17 and 18). This amount includes development fees from 11 covered activities ($1,953,085), contribution to

recovery payments from seven covered activities ($285,687), wetland and stream fees from two covered activities ($27,361), other fees and charges for staff time ($14,786), grants ($1,487,100), and estimated local match funding ($696,500).

All grants awarded to date are summarized in Table 19. Since it began implementing the HCP/NCCP through the end of 2013, the Conservancy has been awarded $52,147,482 in grants. Of this amount, $33,572,916 has been spent and $18,483,780 remains (though much of this is committed to land transactions scheduled to close in 2014). These amounts do not include match funding provided by partners. EBRPD has contributed an estimated $18 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[8] 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 if the Conservancy can 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 (= 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 2013 the Conservancy Board determined to have a long term funding plan in place by year ten. In addition, the Conservancy has begun to secure potential sources for long-term funding. The Adrienne Galvin property, acquired in 2013 will provide lease revenue from an existing house 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.

[8] 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. 2013 Conservancy Budget: Expenditures and Comparison to Budget Projections

	HCP/NCCP Projected Cost Estimate Information			2013					
				Expenditure Budget by Revenue Source					Expenditures
Cost Category	Years 6-10	Average Cost Per Year (Years 6-10)	% of Total	Development Fee Account	Wetland Mitigation Fee Account	Grant Funding	TOTAL	% of Total	Total expenditures for 2013[1]
Program Administration and Permitting Program	$ 3,460,986	$ 692,197	7.3%	$ 609,840	$ -	$ -	$ 609,840	4%	$ 566,413
Land Acquisition	$ 31,742,559	$ 6,348,512	66.8%	$ 230,000	$ -	$ 13,799,084	$ 14,029,084	88%	$ 1,451,502
Management, Restoration and Recreation Planning and Design	$ 1,137,698	$ 227,540	2.4%	$ 100,136	$ 30,000	$ 180,000	$ 310,136	2%	$ 272,926
Habitat Restoration/ Creation	$ 3,507,094	$ 701,419	7.4%	$ -	$ 206,609	$ 50,000	$ 256,609	2%	$ 4,698
Environmental Compliance	$ 459,000	$ 91,800	1.0%	$ 81,086	$ 40,000	$ 50,000	$ 171,086	1%	$ 46,365
HCP/NCCP Preserve Management and Maintenance	$ 3,589,085	$ 717,817	7.6%	$ 219,318	$ -	$ -	$ 219,318	1%	$ 20,324
Monitoring, Research, and Adaptive Management	$ 2,835,248	$ 567,050	6.0%	$ 119,756	$ 40,000	$ 100,000	$ 259,756	2%	$ 109,455
Remedial Measures	$ 30,000	$ 6,000	0.1%	$ 6,000	$ -	$ -	$ 6,000	0%	$ -
Contingency Fund (5% of non-land acquisition costs)	$ 723,186	$ 144,637	1.5%	$ 91,337	$ -	$ -	$ 91,337	1%	$ -
TOTAL	$ 47,484,856	$ 9,496,971	100.0%	$ 1,457,473	$ 316,609	$ 14,179,084	$ 15,953,167	100%	$ 2,471,684

[1] Expenditure totals are estimated based on preliminary accounting data.

Table 17. Summary of All Revenues Received/Approved

Type	Reporting Period Total	Cumulative Total
Mitigation for Terrestrial Impacts (development fees, rural infrastructure fees, and temporary impact fees)	$ 1,953,085	$ 5,140,000
Contributions to Recovery	$ 285,687	$ 1,180,000
Wetland Mitigation Fees (includes fees on streams, as well as fees for temporary impacts to wetlands)	$ 27,361	$ 460,000
Other Fees and Charges for Staff Time[1]	$ 14,786	$ 3,590,000
Grants	$ 1,487,100	$ 30,460,000
Local Matching Funds[2]	$ 696,500	$ 19,040,000
Total	*$ 4,464,519*	*$ 59,870,000*

[1] Includes pre-HCP payments, administrative fees and other changes. Staff time invoices for several PSE projects are outstanding for 2013.

[2] Local Matching Funds includes grants awarded to local partners. Grants awaredd 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[1]	Source	Date[2]	Amount
Mitigation for Terrestrial Impacts (development fees, rural infrastructure fees, and temporary impact fees)			
AutoZone Store 4136 Project		1/28/2013	$ 9,526
Chevron Pipeline KLM Site 1357 Repair Project		5/13/2013	$ 7,589
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project		7/25/2013	$ 641
Emerson Ranch Project		11/19/2013	$ 1,393,007
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project		8/28/2013	$ 216,432
Phillips 66 Pipeline Repair Project 196,920.27.22		1/23/2013	$ 2,752
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013		5/2/2013	$ 5,462
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment		5/2/2013	$ 17,479
Phillips 66 Pipeline Requirement Survey Project, Summer 2013		9/11/2013	$ 44
PSEP California Avenue Valve Automation Project		8/22/2103	$ 564
SR 160/SR 4 Bypass Phase 2 Connectors		6/26/2013	$ 299,589
Development fees subtotal			*$ 1,953,085*
Contributions to Recovery			
Chevron Pipeline KLM Site 1357 Repair Project		5/13/2013	$ 16,909
PG&E's Pittsburg-Tesla 230 kilovolt (kV) Reconductoring Project		8/28/2013	$ 235,846
Phillips 66 Pipeline Repair Project 196,920.27.22		1/23/2013	$ 2,752
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013		5/2/2013	$ 5,462
Phillips 66 Pipeline Repairs Project, Line 200, Spring 2013- First Amendment		5/2/2013	$ 8,739
Phillips 66 Pipeline Requirement Survey Project, Summer 2013		9/11/2013	$ 1,000
SR 160/SR 4 Bypass Phase 2 Connectors		6/26/2013	$ 14,979
Contribution to Recovery subtotal			*$ 285,687*
Wetland Mitigation Fees (includes fees on streams, as well as fees for temporary impacts to wetlands)			
Chevron Pipeline KLM Site 1357 Repair Project		5/13/2013	$ 26,228
Clayton Regency Mobile Home Park Marsh Creek Stormdrain Outfall Renovation Project		7/25/2013	$ 1,132
Stream fees subtotal			*$ 27,361*
Other Fees and Charges for Staff Time			
Phillips 66 Pipeline Repair Project 196,920.27.22		5/7/2013	$ 4,712
CCTA for State Route 4 Bypass		5/23/2013	$ 5,074
East Contra Costa eBART Phase II Extension Project First and Second Amendment		5/23/2013	$ 5,000
Other fees subtotal			*$ 14,786*
Grants			
CDFW LAG Grant (Monitoring Effectiveness Plan)	State	6/12/2013	$ 50,000
CDFW LAG Grant (Wetland and Rare Plant Baseline Inventory)	State	9/23/2013	$ 2,700
CDFW LAG Grant (Monitoring and Maintenance of Restoration Projects)	State	9/23/2013	$ 8,500
CDFW LAG Grant (Preserve Management Plan for Byron Hills)	State	10/12/2013	$ 75,000
CDFW LAG Grant (Monitoring and Maintenance of Restoration Projects)	State	11/5/2013	$ 50,000
Section 6 (Alaimo)	Federal	4/15/2013	$ 166,500
Section 6 (Adrienne Galvin)	Federal	4/30/2013	$ 1,134,400
Grants subtotal			*$ 1,487,100*
Local Matching Funds			
EBRPD (Alaimo purchase)		4/15/2013	$ 18,500
EBRPD Land Acquisition Due Diligence cost/funding (estimated)		2013	$ 150,000
EBRPD Land Management cost/funding (estimated)		2013	$ 528,000
Local funding subtotal			*$ 696,500*
Total			**$ 4,464,519**

[1] Local matching funds includes grants awarded to local partners. Grants are grants awarded to the Conservancy for Conservation Plan implementation. For some of the land acquistions (Table 7), the lands were acquired for less than the appraised value. This is considered a seller donation. Seller donations are not included in the total revenue received or approved.

[2] Revenues received in 2013 are included. Some of these revenues were reimbursement for work performed prior to 2013

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

Funding Source	*Agency*	*Purpose*	*Amount*	*Required Match*	*Amount Expended (12/31/13)[b]*	*Remain (12/31/13)*	*Needs to be used by…*	*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	✓	$65,886 unspent
Section 6 (2009)		Acquisition	$2,500,000	$3,055,556	$0	$2,500,000	Aug 2014		Full amount to be expended by Aug 2014
Section 6 (2010)		Acquisition	$6,000,000	$7,333,333	$1,080,000	$4,920,000	Aug 2014		Full amount to be expended by Aug 2014
Section 6 (2011)		Acquisition	$4,463,936	$5,455,922	$0	$4,463,936	Oct 2014		
Section 6 (2012)		Acquisition	$1,000,000	$1,222,222	$0	$1,000,000	Sept 2015		
CVPIA - HRP	USBR	Acquisition	$1,241,631	$500,000	$1,241,631	$0	Sept 2010	✓	
IRWMP - Prop 50	SWRCB	Acquisition or restoration	$750,000	$500,000	$750,000	$0	June 2012	✓	
IRWMP - Prop 50 (reprogrammed)	SWRCB	Acquisition or restoration	$1,400,000	$500,000	$1,400,000	$0	Mar 2012	✓	
IRWMP - Prop 84	DWR	Acquisition or restoration	$650,000	25% match required	$261,388	$388,612	Dec 2014		must be used within SF Regional Board area
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	$0	$27,000	$0	April 2013	✓	
NCCP Local Assistance (2010)	CDFW	Restoration project monitoring/maintenance	$85,000	$0	$85,000	$0	April 2013	✓	
NCCP Local Assistance (2010)	CDFW	Preserve monitoring plan development	$50,000	$0	$50,000	$0	April 2013	✓	
NCCP Local Assistance (2011)	CDFW	Wetland and rare plant inventory (phase 2)	$40,000	$0	$40,000	$0	April 2014	✓	
NCCP Local Assistance (2011)	CDFW	Restoration project monitoring/maintenance	$50,000	$0	$50,000	$0	April 2014	✓	
NCCP Local Assistance (2011)	CDFW	Preserve management plan development	$75,000	$0	$75,000	$0	April 2014	✓	
NCCP Local Assistance (2013)	CDFW	Ang Pond restoration	$95,000	$0	$0	$95,000	April 2015		
EQIP	NRCS	Ang riparian planting, fencing and livestock water system	$75,585	$0	$0	$75,585	Dec 2016		Awarded to grazing tenant for habitat improvement on Ang property
Gordon and Betty Moore Foundation		Acquisition Fox Ridge	$880,000	50% match desired	$880,000	$0	Dec 2009	✓	

Table 19. (Continued)

Funding Source	*Agency*	*Purpose*	*Amount*	*Required Match*	*Amount Expended (12/31/13)* [b]	*Remain (12/31/13)*	*Needs to be used by…*	*Complete?*	*Notes*
Gordon and Betty Moore Foundation		Acquisition and research Souza 3	$2,250,000	50% match desired	$2,051,228	$198,772			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		✓	
Prop 84 NCCP account	WCB	Acquisition of Barron	$973,930	$0	$973,930	$0	Feb 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Thomas	$1,842,966	$0	$1,842,966	$0	June 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Affinito	$1,005,750	$0	$1,005,750	$0	Dec 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Vaquero Farms Central	$230,000	$0	$230,000	$0	Dec 2012	✓	
Prop 84 NCCP account	WCB	Acquisition of Thomas North	$388,755	$0	$388,755	$0	Aug 2013	✓	
Prop 84 NCCP account	WCB	Acquisition of Roddy Ranch	$4,841,875	$0	$0	$4,841,875	Aug 2014		Approved, not yet spent
		TOTAL	**$52,147,482**	**$42,669,365**	**$33,572,916**	**$18,483,780**			

Notes: a) Funding from partners not included. EBRPD contributed more than $13 million of its own funds or its grants funds to joint land acquisitions.

b) 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
EQIP: Environmental Quality Incentive Program
IRWMP: Integrated Regional Water Management Plan
NCCP: Natural Community Conservation Plan
NRCS: Natural Resources Conservation Service
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:

- **Installation of Renewable Energy Facilities on Contaminated Land.** This policy sets forth guidelines on how to apply the mitigation fee provisions of the HCP/NCCP to projects involving the installation of certain types of renewable energy facilities on contaminated land. As established by the policy, alternative energy projects on contaminated properties may pay HCP/NCCP temporary impact fees on an annual installment basis, in lieu of an upfront payment, provided certain conditions are met.
- **Process for Making Future Determinations Related to Take Authorizations That are Assigned to the Conservancy by the HCP/NCCP.** The HCP/NCCP calls for the Conservancy to make certain determinations related to take authorizations but does not specify how the Conservancy should make its decisions. This policy details the procedures for handling each determination in order to simplify and expedite the process for the Conservancy's review of small projects and making various determinations required of the Conservancy.

Implementation Deliverables and Policies Under Development

- **Contribution to Recovery for Participating Special Entity Projects.** The Conservancy will continue to prepare an implementation policy related to standardizing the method for calculating contribution to recovery (CTR) charges on future Participating Special Entity (PSE) projects.

Coordinated Wetland Permitting

Background and 2013 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.

Discussion with U.S. Army Corps of Engineers (Corps), U.S. Environmental Protection Agency (EPA), State Water Resources Control Board (State Board), the Regional Water Quality Control Boards (RWQCBs), CDFW, and USFWS regarding this parallel approach to compliance with wetlands regulations date 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.

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, approximately 10 projects have been permitted under 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 Board and RWQCBs) 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 "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 In Lieu Fee 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 federal Mitigation Rule 33 CFR Part 332. Under this approach, until the ILF is approved, the Conservancy will represent for the Corps that applicants receiving authorization under the RGP would fulfill compensatory Section 404 mitigation requirements by designating a portion of one or more of the Conservancy's existing wetland restoration sites as the compensatory mitigation for an applicant's project. The Corps initially approved using this interim strategy for up to 1 year. In 2013 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 Pittsburg City Council 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 2012a) and HCP Fee Burden Analysis (Willdan 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. Revisions to fees by participating cities and the County is pending.

Other Activities

Hosting of 10 year celebration of NCCPs at Roddy Ranch

2013 marked the 10-year anniversary of the NCCP Act and marked 30 years since the adoption of the first HCP. The Conservancy, through its involvement with the California Habitat Conservation Planning Coalition, organized an event to acknowledge these achievements. The event, hosted at Roddy Ranch was called Celebrating Habitat Conservation Plans and Natural Community Conservation Plans: Conserving Natural Resources and Facilitating Economic Development. The event brought together stakeholders from around the state including elected officials, wildlife agency staff, plan participants, members of the conservation, agricultural and development community as well as implementation partners. In total approximately 200 people attended the event.

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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.