

East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan Annual Report 2011



May 2012



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Acronyms and Abbreviations

APWRA	Altamont Pass Wind Resource Area
BMP	best management practice
CDFG	California Department of Fish and Game
CNDDB	California Natural Diversity Database
Conservancy	East Contra Costa County Habitat Conservancy
Corps	U.S. Army Corps of Engineers
EBRPD	East Bay Regional Park District
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

kV	kilovolt
OBL	obligate wetland
NCCPA	Natural Community Conservation Planning Act
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
USFWS	U.S. Fish and Wildlife Service
WCB	Wildlife Conservtion Board

EXECUTIVE SUMMARY



Eastern Contra Costa County is a unique region where the San Francisco Bay Area, Sacramento–San Joaquin River Delta, and Central Valley meet. It features a rich landscape that is home to a number of rare plants and animals. Located east of San Francisco, the area’s convenient location, natural beauty, and mild climate have led to rapid population growth. Between 2007 and 2025, Contra Costa County’s population is predicted to grow by 127,000 people, and a significant portion of this growth will occur in eastern Contra Costa County which supports suitable habitat for many state and federally listed endangered species.

Between 2001 and 2006, the East Contra Costa County Habitat Conservation Plan Association developed the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP; or Plan) in cooperation with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). The Plan was developed to comply with the federal Endangered Species Act (ESA) and California’s Natural Community Conservation Planning Act (NCCPA). The Plan provides a regional conservation and development framework that protects natural resources while improving and streamlining the permit process for state and federally listed species and impacts on their habitats. The Plan was approved by participating local jurisdictions in 2006 and 2007. Permits were issued by the USFWS and the CDFG in July and August of 2007 (permit numbers 1-1-07-F-2007 and 2835-2007-001-01, respectively). The Plan allows the Permittees, Contra Costa County (County), the cities of Brentwood, Clayton, Oakley, and Pittsburg, the East Contra Costa County Habitat Conservancy (Conservancy), the Contra Costa County Flood Control and Water Conservation District (County Flood Control District) and the East Bay Regional Park District (EBRPD), to control endangered species permitting for activities and projects in the region¹ while providing comprehensive species, wetlands, and ecosystem conservation and contributing to the recovery of endangered species in northern California.

¹ The participating cities and the County control endangered species permitting for projects they perform as well as projects by other entities that they approve. The Conservancy, County Flood Control District and EBRPD control endangered species permitting for projects they perform. The Conservancy also controls endangered species permitting for projects not subject to the land use authority of the Cities or the County (e.g. utility projects).



Within the 174,018-acre inventory area, the permits issued provide take authorization under the federal ESA and state NCCPA for between 8,670 acres and 11,853 acres of urban development and up to 1,126 acres of rural infrastructure projects. The primary means to offset these impacts is to conserve lands in a Preserve System. The Preserve System will encompass 23,800 acres to 30,300 acres of land that will be 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. The Plan 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.

This is the third Annual Report prepared by the Conservancy. This Annual Report summarizes implementation activities undertaken between January 1, 2011 to December 31, 2011 per the conditions of the Plan and Implementing Agreement.

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, Radback Energy received a permit for construction of the Oakley Generating Station, which will form part of the redevelopment of the DuPont Oakley property. The natural gas-fired plant will use two state-of-the-art turbines that are specifically designed to maximize both efficiency and operational flexibility. The eBART project, a 10-mile extension of the BART system, underwent the permitting process in 2011 and received its permit in January 2012. This \$462 million project will generate over 600 construction jobs and 40 to 80 permanent jobs.

Altogether, thirteen projects received take coverage under the Plan in 2011, including two urban development projects and eleven rural infrastructure projects, totaling approximately 25 acres of permanent impacts and 52 acres of temporary impacts on terrestrial land cover types. In addition, there were 59 feet of permanent and 155 feet of 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 and stream land cover types were tracked by watershed. Impacts on aquatic land cover types during the reporting period were limited to the Clifton Court Forebay watershed and the Deer Creek watershed.

Land Acquisition and Stay-Ahead

The first 4 years of Plan implementation resulted in significant progress toward acquisition goals (see Figures ES-1 through ES-4). As of December 31, 2011, 17 properties were acquired for the Preserve System totaling over 8,425 acres. This includes 4 properties acquired in 2011. All acquisitions to date have been completed in partnership with EBRPD (i.e. EBRPD will own and manage Preserve System lands). Highlights of the acquisitions include the following achievements.

- Mount Diablo State Park connected to Black Diamond Mines Regional Preserve by protected lands for the first time.
- More than 5,000 acres of annual grassland preserved.
- Oak woodland preservation requirement exceeded by 168%.
- 56% of the oak savanna preservation requirements achieved.
- 38% of pond and 12% of alkali wetland preservation requirements achieved.
- 19 covered plant occurrence preserved.
- Intermittent and ephemeral stream preservation requirements achieved.



The Conservancy is in compliance with the Plan's Stay-Ahead Provision. As displayed in Figure ES-1, the Conservancy has made substantial progress in the first three 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 several land cover types, including 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-2a, ES-2b, ES-3a, and ES-3b 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). The Conservancy has been aggressively pursuing these restoration requirements. During the reporting period, the Conservancy completed one restoration project along Upper Hess Creek. This project resulted in the restoration or creation of four habitat types across five restoration sites. The restored upland and aquatic habitats will support California tiger salamander (*Ambystoma californiense*), California red-legged frog (*Rana draytonii*), native grasses, and alkali vegetation and improve the hydrologic connectivity. To date, five restoration projects have been constructed and each is now being monitored and adaptively managed. These five restoration projects were designed to restore or create:

- 0.02 acre of alkali grassland.
- 0.04 acre of native grassland.
- 2.5 acre of alkali wetlands.
- 7.7 acres of seasonal wetland.
- 0.2 acre of perennial wetlands.
- 0.9 acre of riparian woodland.
- 0.3 acre of ponds.
- 4,765 feet of intermittent stream.

These restoration projects provide a range of benefits to covered species. Components of the restoration projects have been specifically designed to benefit California tiger salamander, California red-legged frog, vernal pool fairy shrimp (*Brachinecta lynchi*) (and other covered branchiopods), and alkali plant species such as brittlescale (*Atriplex depressa*) and spearscale (*Atriplex joaquiniana*).

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 U.S. Army Corps of Engineers (Corps), U.S. Environmental Protection Agency, State Water Resources Control Board, the Regional Water Quality Control Boards, CDFG 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.

Significant progress was made in 2011.

- The Corps issued a Draft Regional General Permit (RGP) related to the HCP/NCCP, solicited public comments, and received eleven supportive comment letters by the

deadline. The RGP would allow for expedited Corps authorization of activities that are covered under the HCP/NCCP and meet the impact limitations specified in the RGP (e.g., less than 1.5 acres of impacts to waters). A key purpose of the RGP is to coordinate the Corps permitting requirements with those of the HCP/NCCP. The RGP would do this by relying on the HCP/NCCP conservation strategy, mitigation ratios, regional wetland avoidance strategy and other conservation measures for the bulk of the RGP conditions. Project proponents would still need to apply individually to Corps for authorization under the RGP, but the permit conditions are defined in the RGP and closely match the HCP/NCCP. (The RGP was issued by the Corps on May 4, 2012 as this Annual Report went to press.)

- The Sacramento District was officially designated the lead Corps District for the Conservancy's RGP. The Sacramento District will be responsible for approving and implementing the RGP throughout the entire HCP/NCCP Plan Area, including areas that are outside the Sacramento District boundaries.
- The Corps Sacramento District initiated programmatic consultation on the RGP under Section 7 of the ESA with the USFWS. (USFWS issued a Biological Opinion on the RGP on April 30, 2012.)
- The Corps Sacramento District also requested a General 401 Water Quality Certification under Section 401 of the Clean Water Act from the State Water Resources Control Board for activities that would be authorized under the Corps proposed implementation of the RGP.
- The Corps issued a Public Notice on an In-Lieu Fee Program Prospectus prepared by the Conservancy. The Corps received seven supportive public comment letters by the deadline. The Conservancy is seeking to establish an In-Lieu Fee (ILF) program to 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. 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.

Funding

The Conservancy has successfully pursued grants. Various federal, state and private funding sources generously awarded \$10,631,582 during the reporting period to Conservancy activities. Most grant funding awarded will be spent in future years. Fees received totaled \$848,747. EBRPD acquisitions funding and local contributions to recovery totaled \$2,266,900.

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 land cover acquired as a percent of the conservation required.

The red bars display the 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.

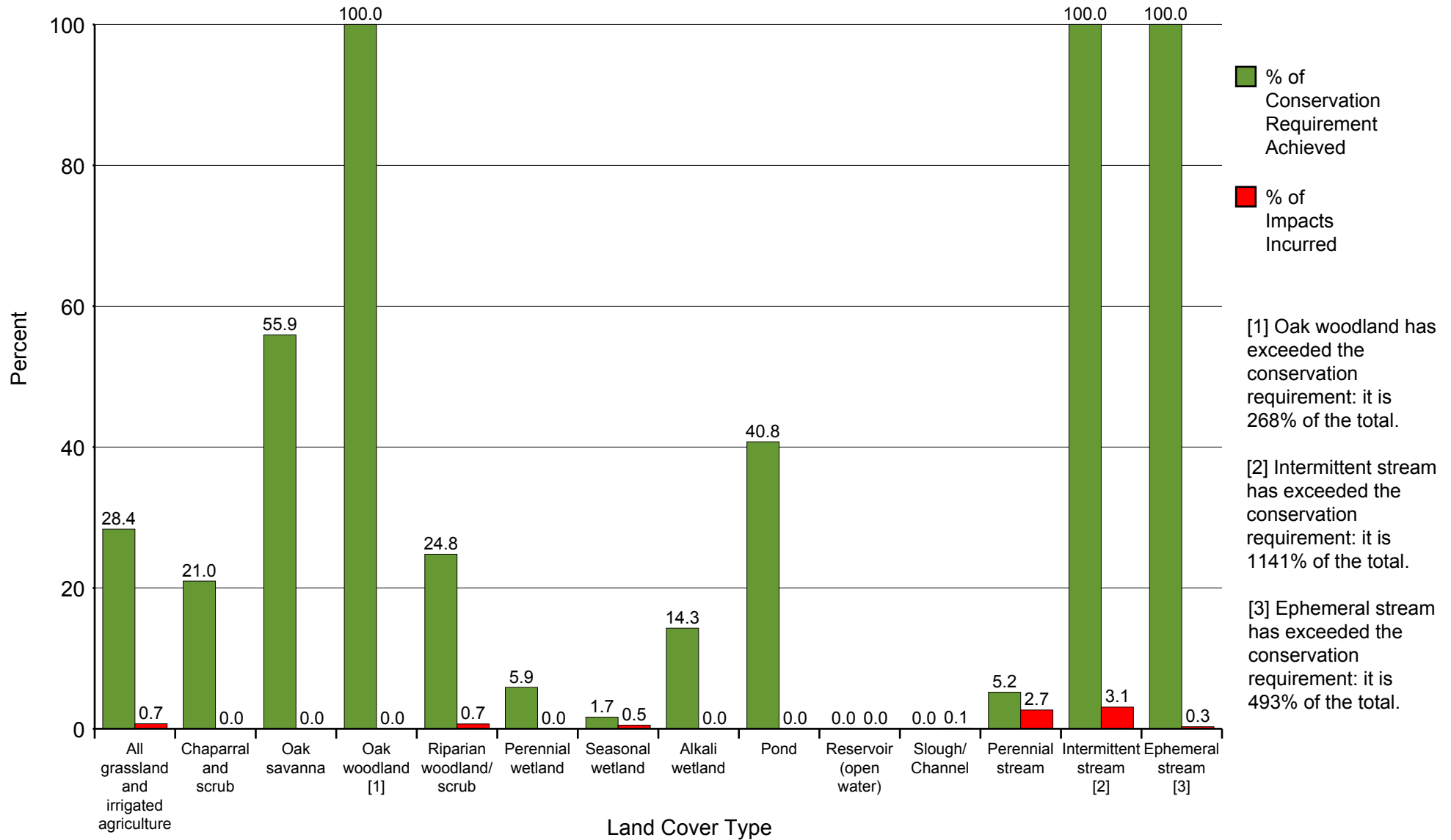


Figure ES-2a. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Terrestrial Land Cover Types

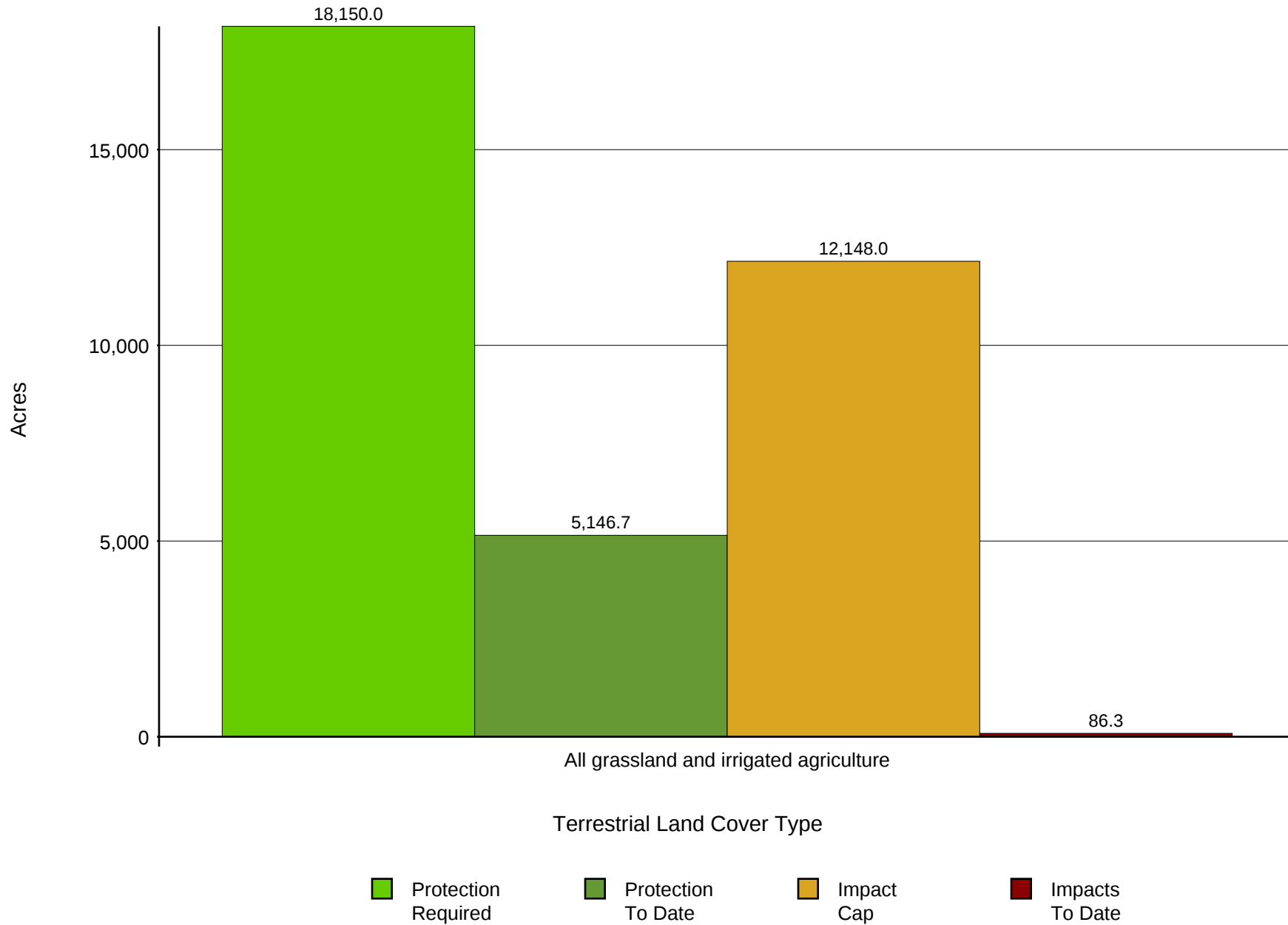


Figure ES-2b. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Terrestrial Land Cover Types

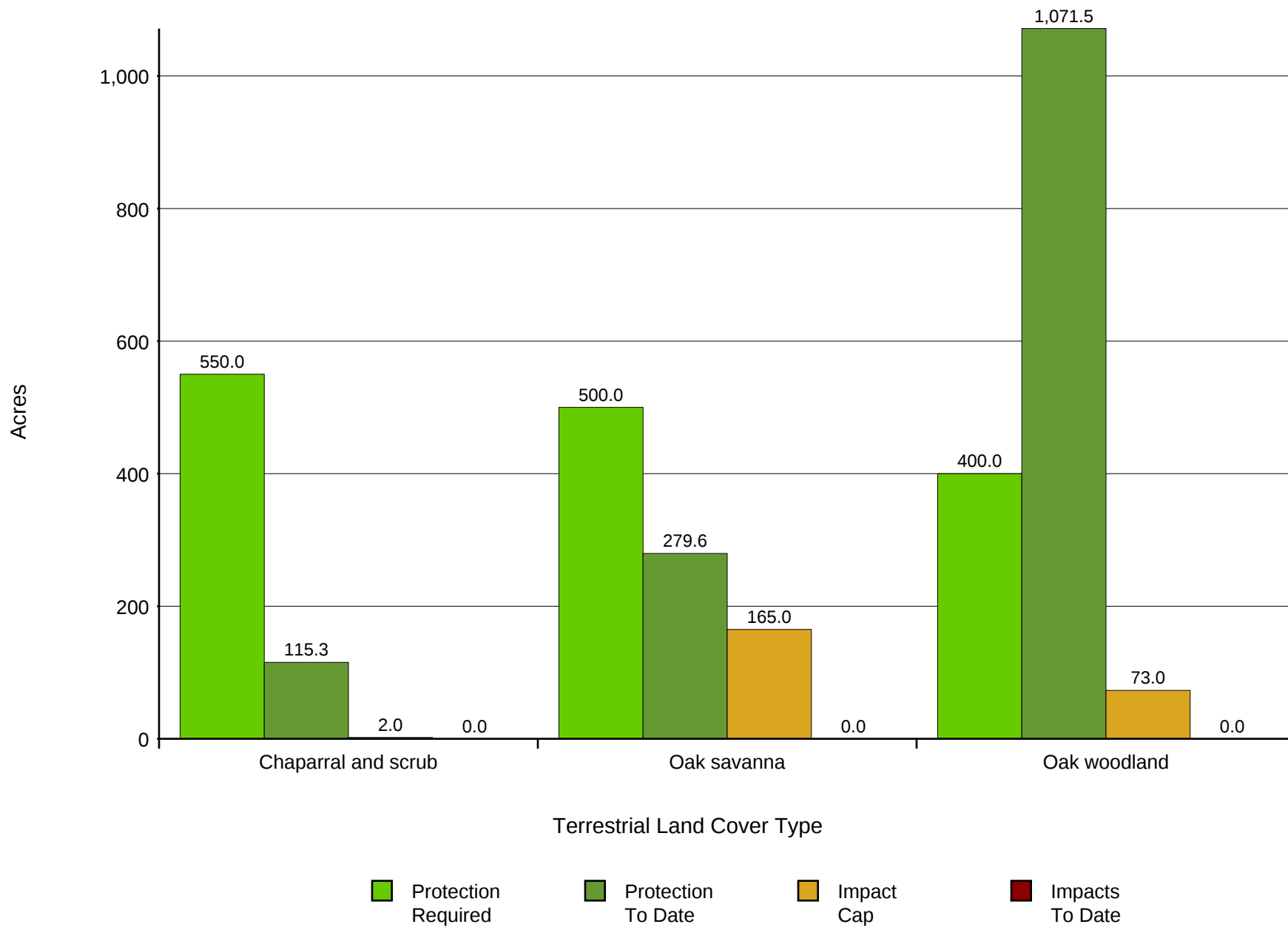


Figure ES-3a. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Aquatic Land Cover Types

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.

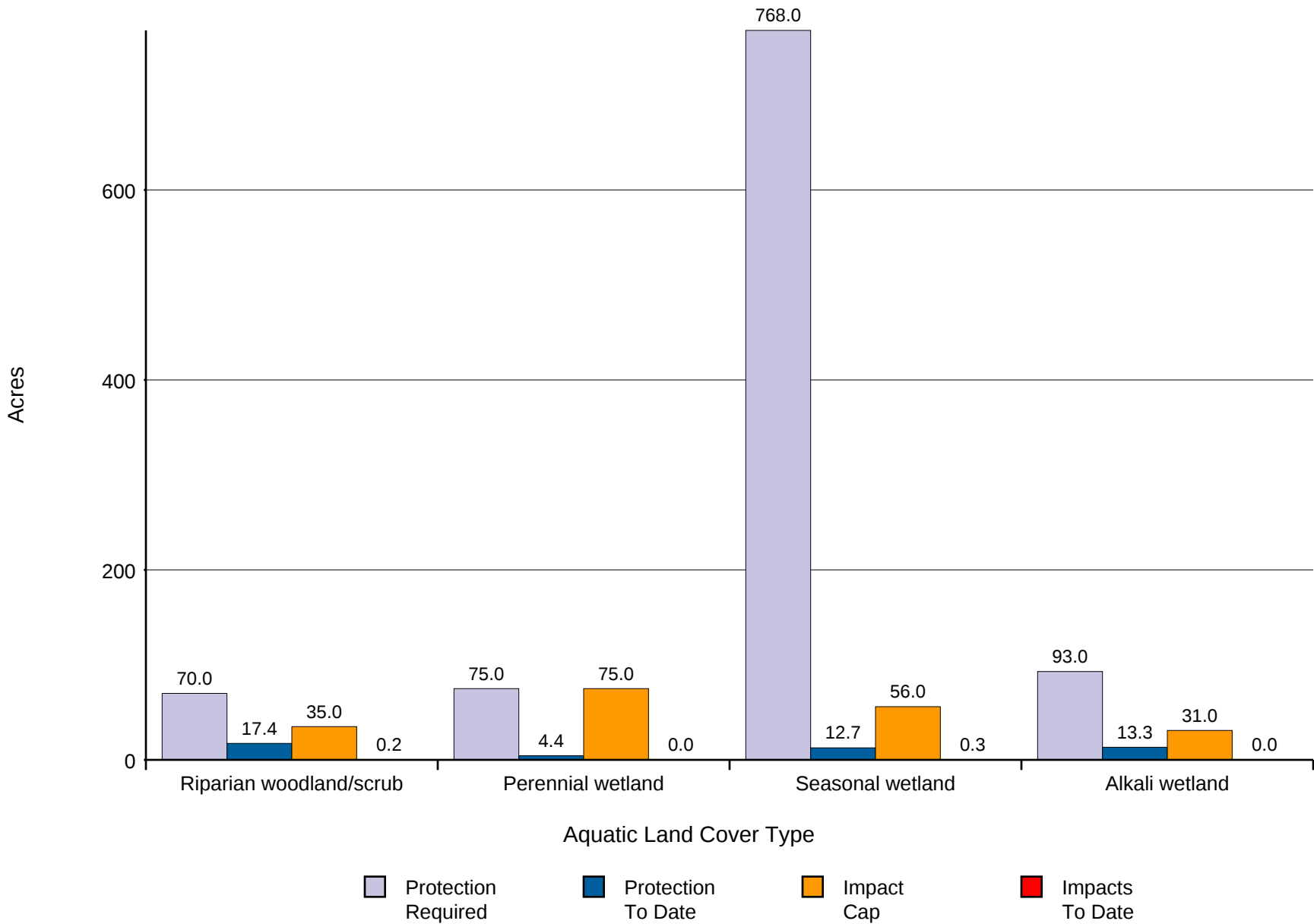


Figure ES-3b. Detailed Comparison of Conservation Required and Achieved to Impact Limit and Incurred for Aquatic Land Cover Types

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.

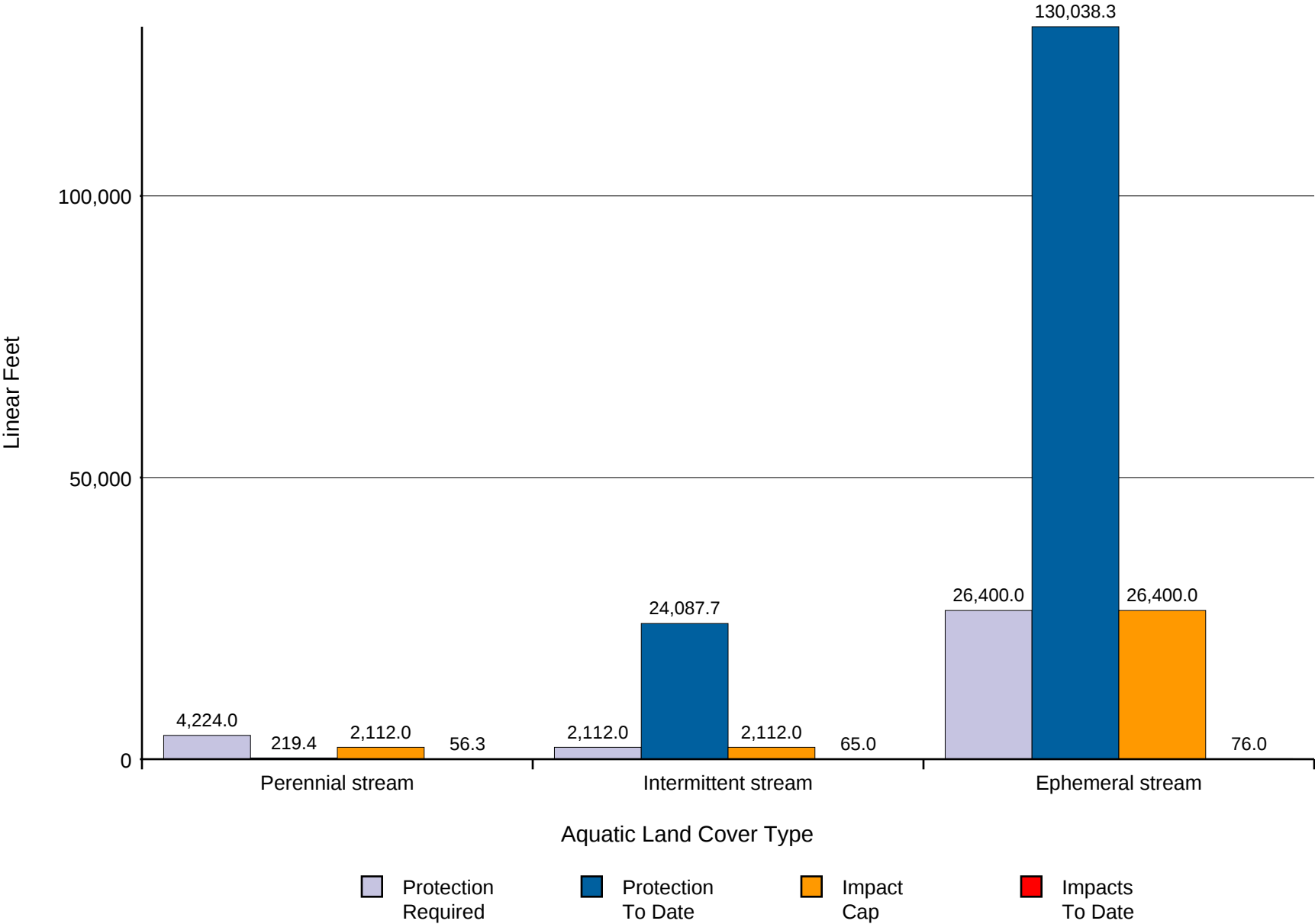
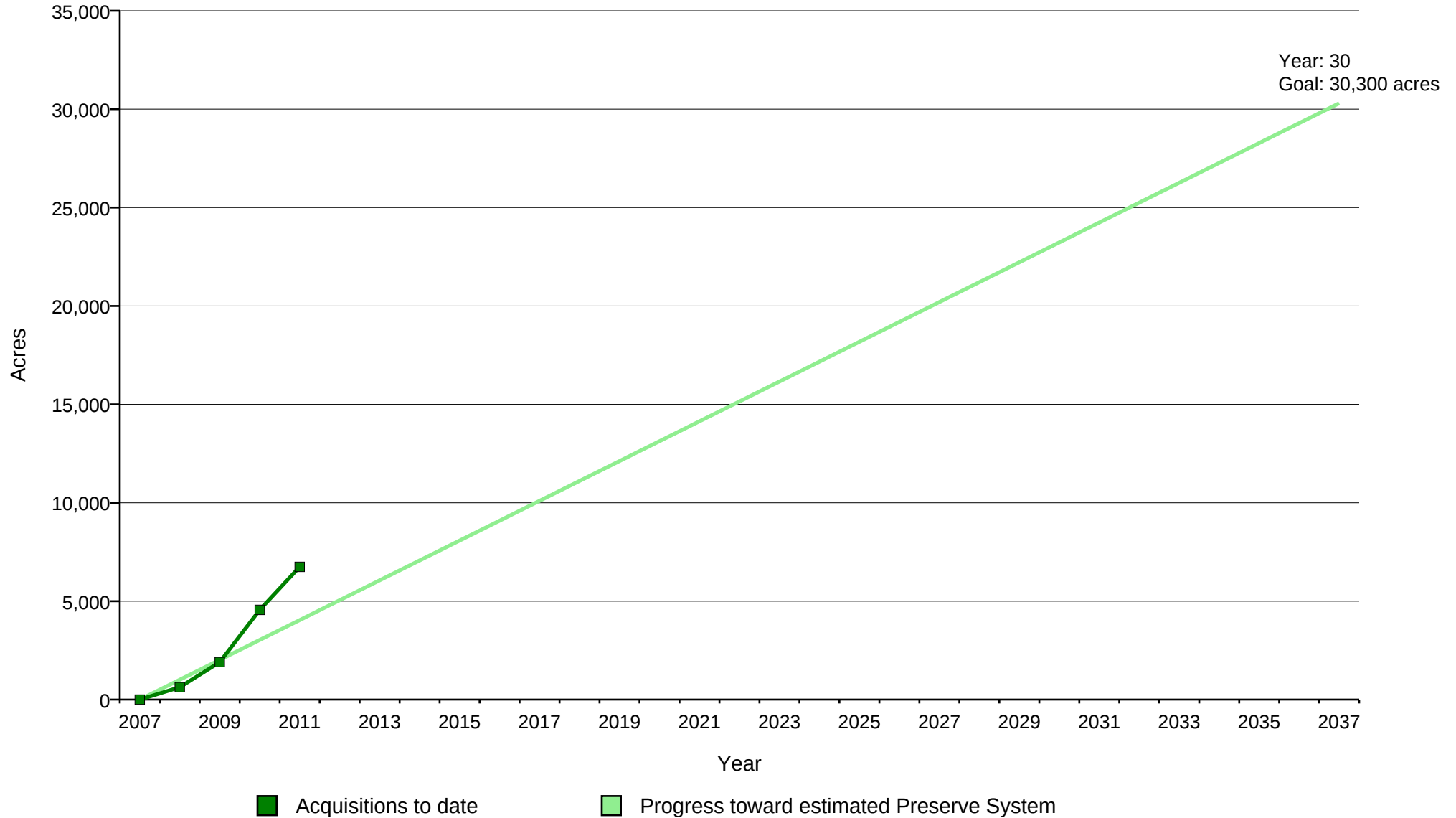


Figure ES-4. Progress Toward Assembling the Preserve System

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 the 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 permits were issued by the California Department of Fish and Game (CDFG) 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 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 manages day to day activities of the Conservancy under the direction of the Governing Board. The Executive Director, in partnership with two dedicated staff members, performs a wide range of tasks necessary to implement the Plan. Responsibilities include coordinating real estate activities, 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 CDFG 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 100,000 acres. All 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 CDFG, 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:

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

This is the third Annual Report prepared by the Conservancy to document the progress of the Plan. This Annual Report 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 effect²) to December 31, 2010. 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.

Except where noted, data is provided only for the current reporting period of January 1, 2011 through December 31, 2011.

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 permit term, including riparian and wetland restoration by watershed. Each restoration and creation conservation measure implemented is also identified.

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

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.

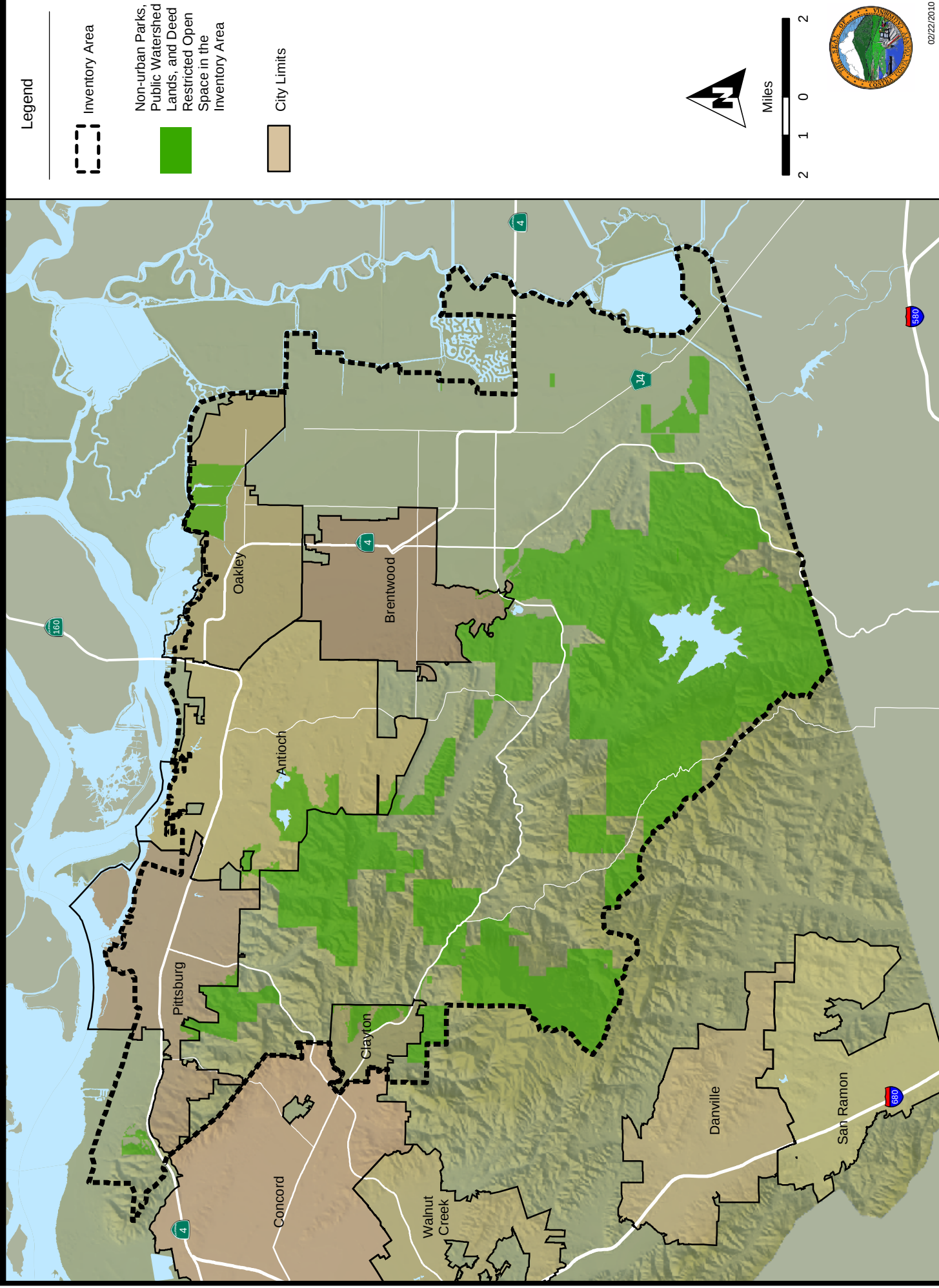
Finances

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.

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



II. COVERED ACTIVITIES AND IMPACTS

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

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

Covered Activities Receiving Take Coverage

A total of 13 projects received take coverage under the Plan during the reporting period (Table 1 and Figure 3). Covered activities include the following.

- Two Urban Development Area Projects
- Eleven Rural Infrastructure Projects

Of the 13 covered activities, 1 received coverage from the City of Brentwood, 1 received coverage from the City of Oakley, 3 received coverage from Contra Costa County, 3 received coverage from Contra Costa County—Public Works, and 5 received coverage from the Conservancy. All covered activities mitigated for impacts through the payment of HCP/NCCP fees. The covered projects paid a total of \$848,747 in HCP/NCCP fees and contributions to recovery. 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 13 covered activities implemented during the reporting period, landscape-level conditions on covered activities were applied 25 times (one to three conditions applied per covered activity). Natural community-level conditions on covered activities were applied three times (zero conditions to one condition applied per covered activity). Species-level conditions on covered activities were applied 160 times (two conditions to twenty-four 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 25.1 acres of permanent impact and 52.0 acres of temporary impact (Table 4). There was 0.1 acre of impacts on uncommon vegetation³, uncommon features, or habitat elements.⁴ No covered plant occurrences were removed by covered activities (Table 5).

Impacts on aquatic land cover types during the reporting period were limited to two watersheds (Table 6). In the Clifton Court Forebay watershed there were 47.0 feet of permanent impacts and 112.0 feet of temporary impacts on intermittent streams. In the Deer Creek watershed, there were 12.0 feet of permanent impacts and 43.0 feet of temporary impacts on intermittent streams.

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).

Table 1. Reporting Summary of Covered Activities

Activity Type	Covered By	Project Name	Location	Description
Activities within Urban Development Area				
Other	City of Brentwood	New Meetinghouse for Brentwood 2nd and Marsh Creek Wards	On Highland Road and Shadowcliff Way	Construction of a new church meetinghouse and the associated maintenance, storage, parking lot, and landscape facilities and improvements.
Residential	City of Oakley	Stonewood III- Unit 1 of Subdivision #9183	Southeast of Simoni Ranch Road at Little Ranch Circle	Development of Unit 1 of Subdivision #9183. Project coverage is only for 2.21 acres of the site to be developed at this time.
Rural Infrastructure Projects				
Utility	ECCC Habitat Conservancy	ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project	March Creek Road, Clayton	ConocoPhillips Pipeline Company will install a deep well anode bed and rectifier and complete operational and safety pipeline repair at two locations along its Line 200 Mainline trunk pipeline.
Utility	ECCC Habitat Conservancy	ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment	In the vicinity of Vasco Caves Regional Park	An emergency repair to the Line 200 Mainline trunk pipeline. A new site was added to the project for take coverage, prompting a Second Amendment to the PSE Agreement.
Utility	ECCC Habitat Conservancy	Oakley Generating Station Project	6000 Bridgehead Road, Oakley Ca	As part of the OGS project, Contra Costa Generating Station LLC received incidental take coverage for impacts to threatened and endangered species resulting from ground disturbing activities associated with the development, construction, and operation of the Oakley Generating Station and associated transmission facilities.
Utility	ECCC Habitat Conservancy	Oakley Generating Station Project - First Amendment	6000 Bridgehead Road, Oakley Ca	As part of the OGS project, the applicant requested a modification in the project including additional construction laydown/parking areas and trimming and removal of trees on site. The modification in the project required a First Amendment to the PSE Agreement.
Utility	ECCC Habitat Conservancy	Coalinga-Avon Pipeline Repair Extension - First Amendment	In the vicinity of Los Vaqueros Reservoir	Repairs to one additional site, known as Dig Site 1a, along the Coalinga-Avon Pipeline owned and operated by Shell Oil Products US. This is an amendment to the original PSE Agreement to include the additional repair site.
Utility	Contra Costa County	Morgan Territory Road Telecommunications Facility	12103 Marsh Creek Road, outside of Clayton Ca	Installation of a new telecommunications facility within a cupola on top of an existing workshop and a new generator.
Utility	Contra Costa County	Camino Diablo Vasco Telecommunications Facility Project	19430 Vasco Road, Byron Ca	Installation of a new telecommunication facility and associated equipment including a faux water tank tower, underground conduits, and a new road to access the site.
Utility	Contra Costa County	J4 Byron Hot Springs Communications Facility	5525 Hope Way (Byron Hot Springs Road)	Installation of a new wireless communications facility enclosed within a 50x50 foot lease area.
Transportation	Contra Costa County - Public Works	Balfour Road Culvert Repair Project	Along Balfour Road, 0.4 miles east of the intersection with Deer Valley Road	Repair and strengthen the bottom of a deteriorating 60-inch culvert that carries Deer Creek under Balfour Road. The project will create a new rock slope dissipater at the outfall to stabilize the end of the culvert and dissipate the force of flow and reduce erosion from roadside drainage.
Transportation	Contra Costa County - Public Works	Byron Highway Shoulder Widening Project (Phase I)	Byron Hot Springs Road to 800 feet south of Rankin Road/Western Farms Ranch Road	Widen Byron Highway to add 6 foot wide paved shoulders and 2 foot wide shoulder backing in order to bring shoulders on Byron Highway to current design standards. Work includes extension of a box culvert.

Table 1. Continued

Activity Type	Covered By	Project Name	Location	Description
Transportation	Contra Costa County - Public Works	Vasco Camino Diablo Intersection Project	Vasco Road at Camino Diablo (Intersection)	Improvements to the Camino Diablo and Vasco Road intersection to allow for improved efficiency and reduced of intersection traffic. Specifically two right turn pockets will be installed and modifications to traffic signals and signage will occur. There will be relocation of culverts, v-ditches, and utilities as a result of the project.

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

Project Name	Natural Community		Landscape							
	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
New Meetinghouse for Brentwood 2nd and Marsh Creek Wards						✓	✓			
Stonewood III- Unit 1 of Subdivision #9183						✓	✓			
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project						✓	✓			
ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment			✓			✓	✓			
Oakley Generating Station Project	✓		✓			✓	✓			
Oakley Generating Station Project - First Amendment						✓	✓			
Coalinga-Avon Pipeline Repair Extension - First Amendment							✓			
Morgan Territory Road Telecommunications Facility							✓			
Camino Diablo Vasco Telecommunications Facility Project							✓			
J4 Byron Hot Springs Communications Facility							✓			
Balfour Road Culvert Repair Project	✓						✓			
Byron Highway Shoulder Widening Project (Phase I)	✓					✓	✓			✓
Vasco Camino Diablo Intersection Project						✓	✓			✓

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

Project Name	Species-Level Measures[1]															
	Townsend's Big-Eared Bat			San Joaquin Kit Fox			Golden Eagle			Western Burrowing Owl			Swainson's Hawk			
	Planning Surveys	Preconstruction Surveys	AMM	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Construction Monitoring
New Meetinghouse for Brentwood 2nd and Marsh Creek Wards													✓	✓	✓	✓
Stonewood III- Unit 1 of Subdivision #9183													✓	✓		
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project						✓	✓			✓	✓	✓				
ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment						✓	✓					✓	✓			
Oakley Generating Station Project						✓	✓			✓	✓		✓	✓		
Oakley Generating Station Project - First Amendment																
Coalinga-Avon Pipeline Repair Extension - First Amendment						✓	✓						✓	✓		
Morgan Territory Road Telecommunications Facility										✓	✓		✓	✓		
Camino Diablo Vasco Telecommunications Facility Project						✓	✓						✓	✓		
J4 Byron Hot Springs Communications Facility						✓	✓						✓	✓		
Balfour Road Culvert Repair Project						✓	✓			✓	✓		✓	✓		
Byron Highway Shoulder Widening Project (Phase I)						✓	✓			✓	✓		✓	✓		
Vasco Camino Diablo Intersection Project		✓	✓			✓	✓			✓	✓		✓	✓		
[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

Project Name	Species-Level Measures[1]															
	Giant Garter Snake				CA Tiger Salamander		CA Red-Legged Frog		Covered Shrimp				Alkali milkvetch			
	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Minimization	Planning Surveys	Minimization	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
New Meetinghouse for Brentwood 2nd and Marsh Creek Wards																
Stonewood III- Unit 1 of Subdivision #9183																
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project							✓	✓								
ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment							✓	✓								
Oakley Generating Station Project			✓	✓			✓				✓				✓	✓
Oakley Generating Station Project - First Amendment															✓	✓
Coalinga-Avon Pipeline Repair Extension - First Amendment																
Morgan Territory Road Telecommunications Facility																
Camino Diablo Vasco Telecommunications Facility Project																
J4 Byron Hot Springs Communications Facility																✓
Balfour Road Culvert Repair Project							✓	✓			✓	✓			✓	✓
Byron Highway Shoulder Widening Project (Phase I)			✓								✓	✓			✓	✓
Vasco Camino Diablo Intersection Project							✓				✓				✓	✓

Table 3. Continued

Project Name	Species-Level Measures[1]															
	Brewers dwarf flax				Contra Costa goldfields				Diamond-petaled poppy				Large-flowered fiddleneck			
	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
New Meetinghouse for Brentwood 2nd and Marsh Creek Wards																
Stonewood III- Unit 1 of Subdivision #9183																
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project			✓		✓		✓		✓		✓		✓		✓	
ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment			✓		✓		✓		✓		✓		✓		✓	
Oakley Generating Station Project	✓															
Oakley Generating Station Project - First Amendment																
Coalinga-Avon Pipeline Repair Extension - First Amendment			✓				✓				✓				✓	
Morgan Territory Road Telecommunications Facility																
Camino Diablo Vasco Telecommunications Facility Project																
J4 Byron Hot Springs Communications Facility																
Balfour Road Culvert Repair Project			✓				✓				✓				✓	
Byron Highway Shoulder Widening Project (Phase I)			✓				✓				✓				✓	
Vasco Camino Diablo Intersection Project	✓	✓	✓	✓			✓	✓			✓	✓			✓	✓

Table 3. Continued

Project Name	Species-Level Measures[1]											
	Mount Diablo fairy-lantern				Round-leaved filaree				Showy madia			
	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
New Meetinghouse for Brentwood 2nd and Marsh Creek Wards												
Stonewood III- Unit 1 of Subdivision #9183												
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project	✓		✓		✓		✓		✓		✓	
ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment	✓		✓		✓		✓		✓		✓	
Oakley Generating Station Project												
Oakley Generating Station Project - First Amendment												
Coalinga-Avon Pipeline Repair Extension - First Amendment			✓				✓				✓	
Morgan Territory Road Telecommunications Facility												
Camino Diablo Vasco Telecommunications Facility Project												
J4 Byron Hot Springs Communications Facility												
Balfour Road Culvert Repair Project			✓				✓				✓	
Byron Highway Shoulder Widening Project (Phase I)			✓				✓				✓	
Vasco Camino Diablo Intersection Project			✓	✓			✓	✓			✓	✓

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)

Page 1 of 2

Land Cover Type	Reporting Period		Cumulative	
	Impacts		Impacts	
	(acres, unless otherwise noted)	(acres, unless otherwise noted)	(acres, unless otherwise noted)	(acres, unless otherwise noted)
	Permanent	Temporary	Permanent	Temporary
Terrestrial				
Annual grassland	1.3	6.3	27.3	29.4
Alkali grassland	0.0	0.0	0.6	1.2
Ruderal	9.7	39.0	31.5	96.0
Chaparral and scrub	0.0	0.0	0.0	0.0
Oak savanna	0.0	0.0	0.0	0.6
Oak woodland	0.0	0.0	0.0	0.0
<i>Subtotal terrestrial</i>	<i>11.0</i>	<i>45.3</i>	<i>59.4</i>	<i>127.3</i>
Aquatic				
Riparian woodland/scrub	0.0	0.0	0.24	0.29
Perennial wetland ¹	0.0	0.0	0.01	0.12
Seasonal wetland	0.0	0.0	0.29	0.01
Alkali wetland	0.0	0.0	0.00	0.00
Pond	0.0	0.0	0.00	0.00
Reservoir (open water) ²	0.0	0.0	0.00	0.00
Slough/Channel (includes stream)	0.0	0.0	0.07	0.14
<i>Subtotal aquatic</i>	<i>0.0</i>	<i>0.0</i>	<i>0.61</i>	<i>0.56</i>
Stream (length in linear feet)				
Total stream length	59.0	155.0	197.3	542.2
<i>Stream length by width category</i>				
≤ 25 feet wide	0.0	127.0	110.0	357.5
> 25 feet wide	59.0	28.0	87.3	184.7
<i>Stream length by type and order</i>				
Perennial	0.0	0.0	56.3	321.2
Intermittent	59.0	155.0	65.0	155.0
Ephemeral, 3 rd or higher order	0.0	0.0	0.0	0.0
Ephemeral, 1 st or 2 nd order	0.0	0.0	76.0	66.0
<i>Subtotal stream length</i>	<i>59.0</i>	<i>155.0</i>	<i>197.3</i>	<i>542.2</i>
Irrigated agriculture				
Cropland	0.0	0.0	11.3	6.6
Pasture	0.0	0.0	0.0	0.0
Orchard	0.0	0.0	1.7	0.0
Vineyard	13.9	5.2	13.9	5.6
<i>Subtotal irrigated agricultural</i>	<i>13.9</i>	<i>5.2</i>	<i>26.9</i>	<i>12.2</i>
Other				
Nonnative woodland	0.1	1.4	0.1	1.4
Wind turbines	0.0	0.0	0.0	0.6
<i>Subtotal other</i>	<i>0.1</i>	<i>1.4</i>	<i>0.1</i>	<i>1.9</i>

Land Cover Type	Reporting Period		Cumulative	
	Impacts		Impacts	
	(acres, unless otherwise noted)	(acres, unless otherwise noted)	(acres, unless otherwise noted)	(acres, unless otherwise noted)
	Permanent	Temporary	Permanent	Temporary
Uncommon Vegetation Types (subtypes of above land cover types)				
Purple needlegrass grassland	0.00	0.00	0.00	0.02
Wildrye grassland	0.00	0.00	0.03	0.01
Wildflower fields	0.00	0.00	0.00	0.00
Squirreltail grassland	0.00	0.00	0.00	0.00
One-sided bluegrass grassland	0.00	0.00	0.00	0.00
Serpentine grassland	0.00	0.00	0.00	0.00
Saltgrass grassland (alkali grassland)	0.00	0.00	0.00	0.00
Alkali sacaton bunchgrass grassland	0.00	0.00	0.00	0.00
Other uncommon vegetation types	0.00	0.00	0.00	0.00
<i>Subtotal uncommon vegetation types</i>	<i>0.00</i>	<i>0.00</i>	<i>0.03</i>	<i>0.03</i>
Uncommon Landscape Features or Habitat Elements				
Rock outcrop	0.1	0.1	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
Buildings (number)	0	0	0	0
Potential nest sites (number)	0	0	0	0
<i>Subtotal uncommon landscape features (acres)</i>	<i>0.1</i>	<i>0.1</i>	<i>0.2</i>	<i>0.1</i>
<i>Subtotal uncommon landscape features (number)</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Totals (excludes subtypes)				
Acres	25.1	52.0	87.2	142.1
Linear feet	59.0	155.0	197.3	542.2

¹Perennial wetlands are equivalent permanent wetlands

² Reservoir (open water) is equivalent to aquatic

Table 5. Reporting Period and Cumulative Impacts to Covered Plants

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

¹ 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 conditions, seeds collected on site were propagated, and monitoring reports document that round-leaved filaree persists on site and is as abundant as before the project.

**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	--	--	--	--
	Perennial wetland ¹	--	--	0.01	0.12
	Seasonal wetland	--	--	--	--
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water) ²	--	--	--	--
	Slough/Channel ³ (includes stream)	--	--	--	--
	<i>Subtotal aquatic</i>	<i>0.00</i>	<i>0.00</i>	<i>0.01</i>	<i>0.12</i>
	Stream (linear feet)				
	Total stream length	--	--	132.00	--
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	--	110.00	230.50
	> 25 feet wide	--	--	22.00	118.00
	<i>Stream length by type and order</i>				
	Perennial	--	--	56.00	282.50
	Intermittent	--	--	--	--
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	76.00	66.00
	<i>Subtotal stream length</i>	<i>0.00</i>	<i>0.00</i>	<i>132.00</i>	<i>348.50</i>
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)	--	--	--	--
	<i>Subtotal aquatic</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
	Stream (linear feet)				
	Total stream length	47.00	112.00	47.00	112.00
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	--	--	--
	> 25 feet wide	47.00	--	47.00	0.00
	<i>Stream length by type and order</i>				
	Perennial	--	--	--	--
	Intermittent	47.00	112.00	47.00	112.00
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	--	--
	<i>Subtotal stream length</i>	<i>47.00</i>	<i>112.00</i>	<i>47.00</i>	<i>112.00</i>

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)	--	--	--	--
	<i>Subtotal aquatic</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
	Stream (linear feet)				
	Total stream length	12.00	43.00	12.00	43.00
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	15.00	--	15.00
	> 25 feet wide	12.00	28.00	12.00	28.00
	<i>Stream length by type and order</i>				
	Perennial	--	--	--	--
	Intermittent	12.00	43.00	12.00	43.00
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	--	--
	<i>Subtotal stream length</i>	<i>12.00</i>	<i>43.00</i>	<i>12.00</i>	<i>43.00</i>
Kellogg	Aquatic (acres)	--	--	--	--
	Riparian woodland/scrub	--	--	0.05	0.25
	Perennial wetland ¹	--	--	--	--
	Seasonal wetland	--	--	0.29	0.01
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water) ²	--	--	--	--
	Slough/Channel ³ (includes stream)	--	--	0.07	0.14
	<i>Subtotal aquatic</i>	<i>0.00</i>	<i>0.00</i>	<i>0.41</i>	<i>0.40</i>
	Stream (linear feet)				
	Total stream length	--	--	6.00	--
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	--	--	--
	> 25 feet wide	--	--	6.00	--
	<i>Stream length by type and order</i>				
	Perennial	--	--	--	--
	Intermittent	--	--	6.00	--
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	--	--
	<i>Subtotal stream length</i>	<i>0.00</i>	<i>0.00</i>	<i>6.00</i>	<i>0.00</i>

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Lower Marsh	Aquatic (acres)				
	Riparian woodland/scrub	--	--	--	0.04
	Perennial wetland ¹	--	--	--	--
	Seasonal wetland	--	--	--	--
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water) ²	--	--	--	--
	Slough/Channel ³ (includes stream)	--	--	--	--
	<i>Subtotal aquatic</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.04</i>
	Stream (linear feet)				
	Total stream length	--	--	0.31	38.70
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	--	--	--
	> 25 feet wide	--	--	0.31	38.70
	<i>Stream length by type and order</i>				
	Perennial	--	--	0.31	38.70
	Intermittent	--	--	--	--
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	--	--
	<i>Subtotal stream length</i>	<i>0.00</i>	<i>0.00</i>	<i>0.31</i>	<i>38.70</i>
Sand	Aquatic (acres)				
	Riparian woodland/scrub	--	--	0.19	--
	Perennial wetland ¹	--	--	--	--
	Seasonal wetland	--	--	--	--
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water) ²	--	--	--	--
	Slough/Channel ³ (includes stream)	--	--	--	--
	<i>Subtotal aquatic</i>	<i>0.00</i>	<i>0.00</i>	<i>0.19</i>	<i>0.00</i>
	Stream (linear feet)				
	Total stream length	--	--	--	--
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	--	--	--
	> 25 feet wide	--	--	--	--
	<i>Stream length by type and order</i>				
	Perennial	--	--	--	--
	Intermittent	--	--	--	--
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	--	--
	<i>Subtotal stream length</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Total	Aquatic (acres)				
	Riparian woodland/scrub	--	--	0.24	0.29
	Perennial wetland ¹	--	--	0.01	0.12
	Seasonal wetland	--	--	0.29	0.01
	Alkali wetland	--	--	--	--
	Pond	--	--	--	--
	Reservoir (open water) ²	--	--	--	--
	Slough/Channel ³ (includes stream)	--	--	0.07	0.14
	Total aquatic	0.00	0.00	0.61	0.56
	Stream (linear feet)				
	Total stream length	59.00	155.00	197.31	193.70
	<i>Stream length by width category</i>				
	≤ 25 feet wide	--	15.00	110.00	245.50
	> 25 feet wide	59.00	28.00	87.31	184.70
	<i>Stream length by type and order</i>				
	Perennial	--	--	56.31	321.20
	Intermittent	59.00	155.00	65.00	155.00
	Ephemeral, 3 rd or higher order	--	--	--	--
	Ephemeral, 1 st or 2 nd order	--	--	76.00	66.00
	Total stream length	59.00	155.00	197.31	542.20

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

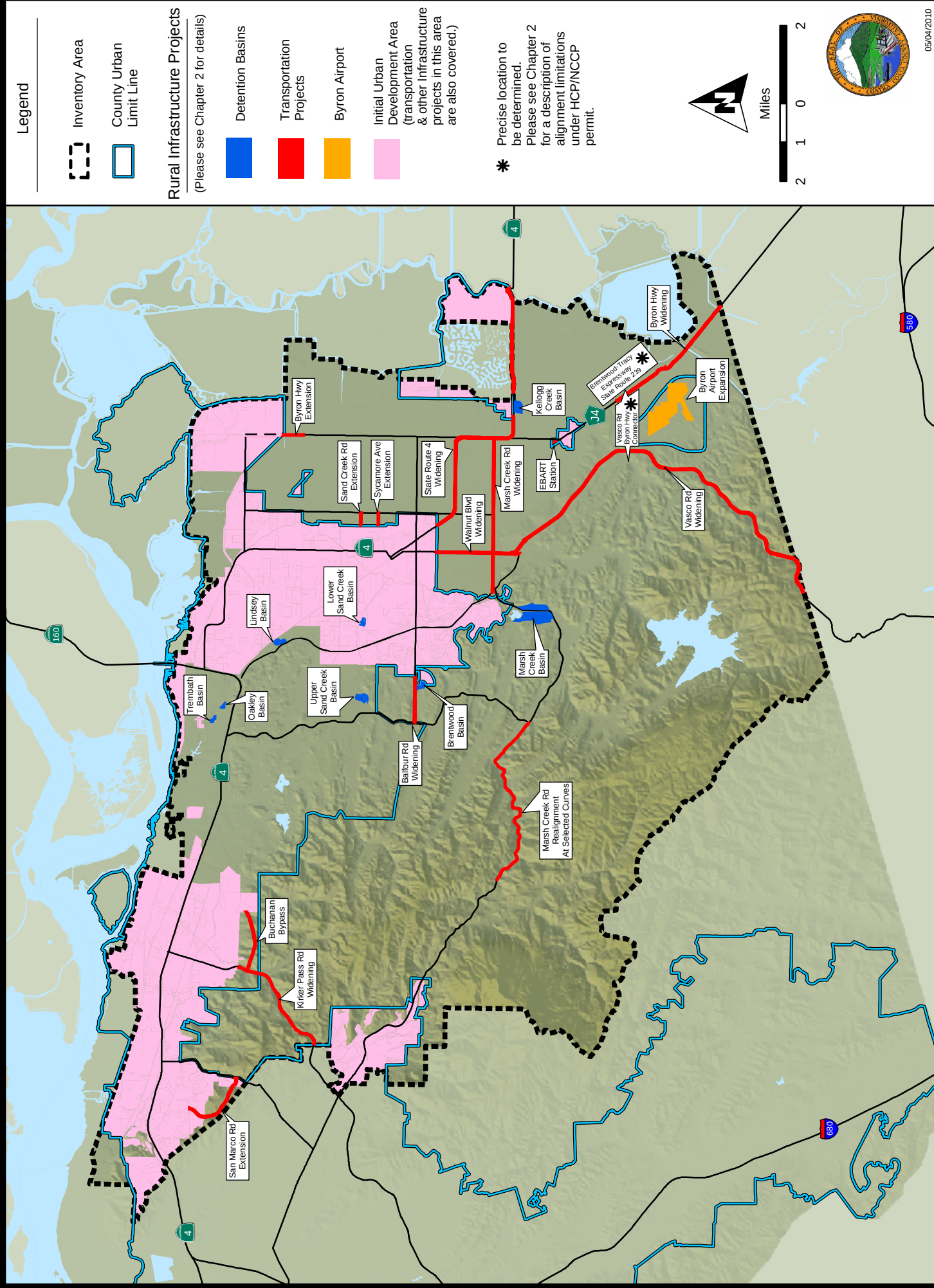
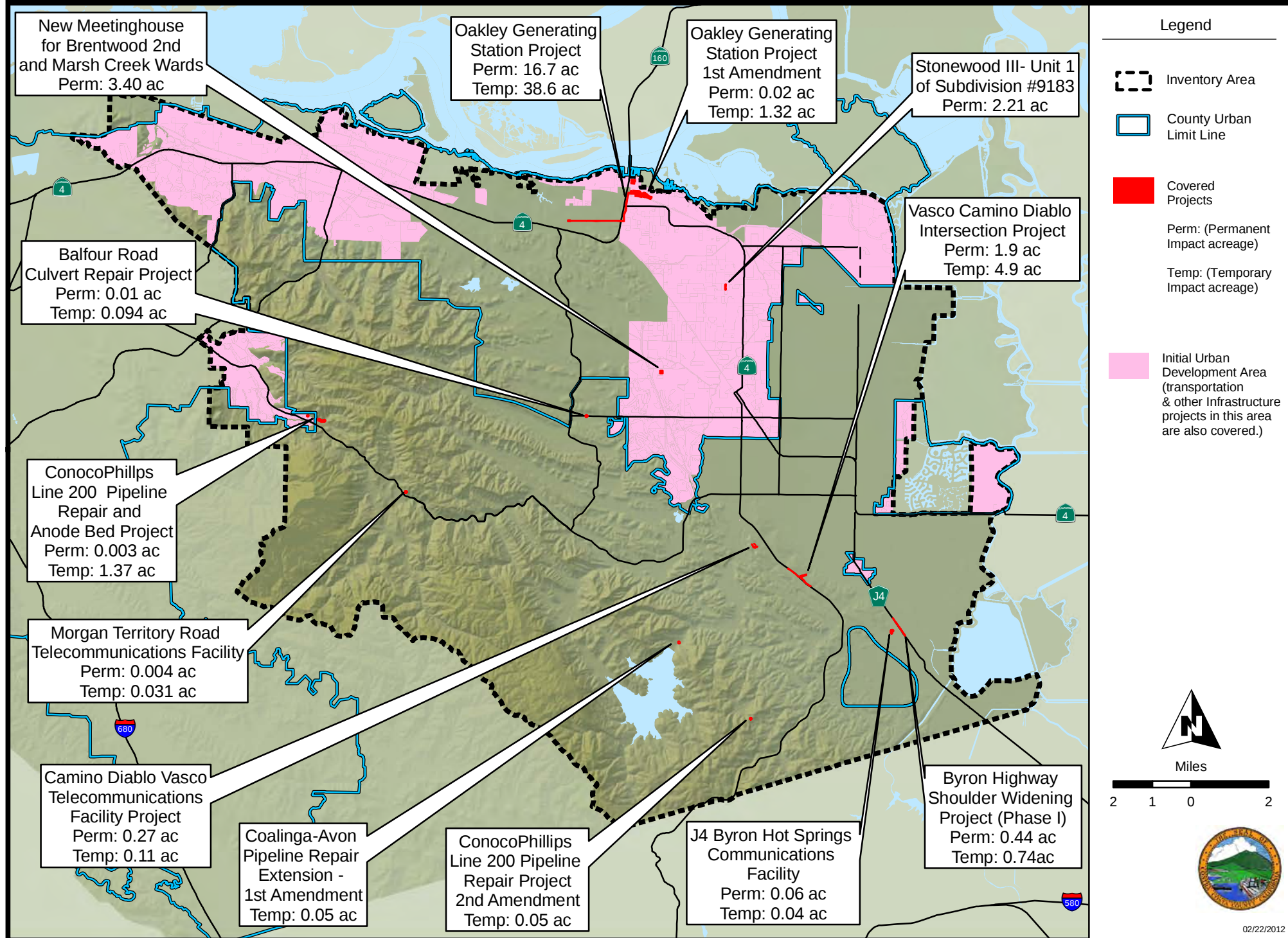


Figure 3. Location of Covered Projects



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.

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.

Land Acquisition

This section summarizes the progress toward land acquisition requirements during this reporting period (Table 8a). Working with EBRPD, the Conservancy acquired 4 properties for the Preserve System totaling 2,185 acres: Thomas/Austin 1 (814 acres), Thomas/Austin 2 (160 acres), Barron (763 acres), and Land Waste Management (448 acres) (Table 7 and Table 8b). 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.

Tables 8a, 8b, and 9 show the land cover types protected by the four acquisitions. Key highlights from the tables are listed below.

- More than 1,300 acres of annual grassland acquired during reporting period with more than 6,440 acres acquired to date (30% of the annual grassland preservation requirement achieved).
- More than 78 acres of chaparral and scrub acquired during the reporting period with more than 115 acres acquired to date (21% of the chaparral and scrub preservation requirement achieved).
- More than 110 acres of oak savanna acquired during the reporting period with more than 300 acres acquired to date (56% of the oak savanna preservation requirement achieved).
- More than 652 acres of oak woodland acquired during the reporting period with more than 1,100 acres acquired to date (268% of the oak woodland preservation requirement achieved).

Table 10 summarizes progress toward preservation requirements of covered plant populations. During the reporting period, two occurrences of big tarplant (*Blepharizonia plumosa*) and one occurrence of Diablo helianthella were acquired. To date, 10 known occurrences of covered plant populations have been preserved of the total 16 required by the Plan. This includes one occurrence each of Mount Diablo manzanita (*Arctostaphylos auriculata*), Mount Diablo fairy lantern (*Calochortus pulchellus*) and round-leaved filaree (*Erodium macrophyllum*), two occurrences each of brittle scale (*Atriplex depressa*) and Diablo helianthella, and three occurrences of big tarplant.

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

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 (deed): 617
 Key land cover: annual grassland, alkali grassland, seasonal wetland, alkali wetland, pond
 Land Cost¹: \$2,961,600
 Eligible for the following Section 6 grants: FY06 and FY07

<u>Funding Source</u>	<u>Funding amount</u>	<u>Current Fair Market Value⁴</u>	<u>Source of non-federal match?</u>
Moore Foundation grant	\$1,500,000	\$1,408,023	yes
EBRPD REP Program ³	<u>\$1,461,600</u>	<u>\$1,371,977</u>	no
TOTAL	\$2,961,600	\$2,780,000	

Estimate of Non-Federal Match for Section 6 Grants that may be accrued from this property: \$1,408,023

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 (deed): 320
 Land Cost¹: \$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)

<u>Funding Source</u>	<u>Funding amount</u>	<u>Current Fair Market Value⁴</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$270,402	\$377,436	yes
Prop 40 Per capita	\$273,000	\$381,063	yes
EBRPD REP Program ³	<u>\$416,598</u>	<u>\$581,501</u>	no
TOTAL	\$960,000	\$1,340,000	

Estimate of Non-Federal Match for Section 6 Grants that may be accrued from this property: \$758,499

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 (deed): 333
 Land Cost¹: \$1,400,000
 Eligible for the following Section 6 grants: FY07 (one of the parcels), FY08 and FY09

<u>Funding Source</u>	<u>Funding amount</u>	<u>Current Fair Market Value⁴</u>	<u>Source of non-federal match?</u>
California Coastal Conservancy ²	<u>\$1,400,000</u>	<u>\$1,400,000</u>	yes
TOTAL	\$1,400,000	\$1,400,000	

Estimate of Non-Federal Match for Section 6 Grants that may be accrued from this property: \$1,400,000

Schwartz

Acquired by: EBRPD in partnership with Conservancy
 Date Acquired: 6/1/2009
 Acres (deed): 153
 Key land cover: oak woodland, chaparral, annual grassland, streams and oak savanna.
 Appraised Value: \$803,800
 Purchase Price: \$803,800
 Difference: \$0

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>
EBRPD (tax revenues)	\$127,249	16%
US Bur Rec CVPCP Grant	<u>\$676,631</u>	<u>84%</u>
TOTAL	\$803,880	100%

Souza 2

Acquired by: EBRPD in partnership with Conservancy
 Date Acquired: 7/30/2009
 Acres (deed): 191
 Key land cover: annual grassland, alkali grassland, seasonal wetland
 Land Cost: \$1,692,000
 Eligible for the following Section 6 grants: FY06 and FY07

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
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	<u>\$600,000</u>	<u>35%</u>	yes
TOTAL	\$1,692,000	100%	

Estimate of Non-Federal Match for Section 6 Grants that may be accrued from this property: **\$800,000**

Vaquero Farms South

To be Acquired by: EBRPD in partnership with Conservancy
 Date Acquired: 12/31/2009
 Acres (deed): 1,644
 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

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$500,000	17%	yes
ECCC Habitat Conservancy(fees)	\$250,000	9%	no
Section 6 Grant	<u>\$2,174,000</u>	<u>74%</u>	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)

<u>Source</u>	<u>Amount</u>	
EBRPD (tax revenues)	\$500,000	
Bargain sale (seller donation)	\$236,000	
Match from prior acquisitions*	<u>\$1,921,111</u>	(*Souza 1 and Lenztner)
TOTAL	\$2,657,111	

In-kind match remaining after VF South: **\$2,445,410**

Fox Ridge

To be Acquired by: EBRPD in partnership with Conservancy
 Date Acquired: 12/30/2009
 Acres (deed): 221
 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

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$250,000	14%	yes
ECCC Habitat Conservancy(fees)	\$75,000	4%	no
Moore Foundation	\$880,000	50%	yes
Section 6 Grant	<u>\$555,000</u>	<u>32%</u>	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:

<u>Source</u>	<u>Amount</u>
Moore Foundation	\$880,000
Bargain sale (seller donation)	\$200,000
EBRPD (tax revenues)	<u>\$250,000</u>
TOTAL	\$1,330,000

Excess match: \$651,667

In-kind match remaining after Fox Ridge: **\$3,097,077**

Vaquero Farms North

Acquired by: EBRPD in partne EBRPD in partnership with Conservancy
 Date acquired: 7/1/2010
 Acres (deed): 577
 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

<u>Proposed Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
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:

<u>Source</u>	<u>Amount</u>
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

In-kind match remaining after Vaquero Farms North: **\$ 27,521**

Grandma's Quarter

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 6/30/2010
 Acres: 157
 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

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$564,725	54%	yes
Section 6 Grant (FY06)	<u>\$471,475</u>	<u>46%</u>	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:

<u>Source</u>	<u>Amount</u>
Match from prior acquisitions*	\$11,522
EBRPD (tax revenues)	<u>\$564,725</u>
TOTAL	\$576,247

Excess match: \$0

In-kind match remaining after Grandma's Quarter: **\$ 15,999**

Martin

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 7/15/2010
 Acres: 232.41
 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

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$1,629,816	59%	yes
Section 6 Grant (FY06)	<u>\$1,115,579</u>	<u>41%</u>	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:

<u>Source</u>	<u>Amount</u>
EBRPD (tax revenues)	<u>\$1,629,816</u>
TOTAL	\$1,629,816

Excess match: \$266,331

In-kind match remaining after Martin: **\$ 282,330**

Souza 3

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 10/22/2010
 Acres: 1,021.34
 Acres not in CE: 910.84
 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

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$915,220	18%	yes
Moore Foundation	\$2,000,000	38%	yes
Section 6 Grant (FY07)	<u>\$2,385,180</u>	<u>46%</u>	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:

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

Ang

Acquired by: EBRPD in partnership with Conservancy
 Date Acquired: 9/1/2010
 Acres (deed): 460
 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

<u>Proposed Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$1,520,115	55%	yes
Section 6 Grant	<u>\$1,243,725</u>	<u>45%</u>	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:

<u>Source</u>	<u>Amount</u>
Bargain sale (seller donation)	\$92,160
EBRPD (tax revenues)	<u>\$1,520,115</u>
TOTAL	\$1,612,275
Excess match:	\$92,167

In-kind match remaining after Ang: \$ 298,521

Irish Canyon - Chopra

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 11/24/2010
 Acres: 320
 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

<u>Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$50,000	3%	yes
Section 6 Grant ⁶	<u>\$792,000</u>	<u>45%</u>	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:

<u>Source</u>	<u>Amount</u>
Bargain sale (seller donation) ⁸	\$918,000.00
EBRPD (tax revenues)	<u>\$50,000.00</u>
TOTAL	\$968,000.00
Excess match:	\$0.00

In-kind match remaining after Irish Canyon - Chopra: **\$298,521**

Land Waste Management

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 2/28/2011
 Acres (deed): 469
 Key land cover: annual grassland, alkali grassland, oak savanna, oak woodland, alkali wetlands, permanent and seasonal wetlands, ponds, riparian areas, and streams
 Appraised Value: \$3,050,000
 Purchase Price: \$3,050,000
 Difference: \$0
 Eligible for the following Section 6 grants: FY07, FY08

<u>Proposed Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$1,177,500	39%	yes
IRWMP Grant from SWRCB	\$500,000	16%	yes
Section 6 Grant (FY08)	<u>\$1,372,500</u>	<u>45%</u>	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:

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

In-kind match remaining after Land Waste Management: **\$298,521**

Barron

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: Spring 2011
 Acres (deed): 798
 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

<u>Proposed Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$650,000	22%	yes
WCB Proposition 84	\$973,930	33%	yes
Section 6 Grant (FY08)	<u>\$1,328,670</u>	<u>45%</u>	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:

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

In-kind match remaining after Barron: **\$298,521**

Thomas/Austin 1

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 7/15/2011
 Acres (deed): 852
 Key land cover: annual grasslands, oak woodlands, chaparral, oak savanna, ponds, and streams
 Appraised Value: \$3,770,000
 Purchase Price: \$3,770,000
 Difference: \$0
 Eligible for the following Section 6 grants: FY07, FY08

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

Non-Federal Match Needed: **\$2,073,500** (amount necessary to achieve 55:45 ratio of match to Section 6)

Match available:

<u>Source</u>	<u>Amount</u>
WCB Proposition 848	\$1,562,166
EBRPD (tax revenues)	\$377,000
In-kind match (prior acquisitions)	<u>\$134,334</u>
TOTAL	\$2,073,500
Excess match:	\$0.00

Thomas/Austin 2

Acquired by: EBRPD in partnership with Conservancy
 Date acquired: 7/15/2011
 Acres (deed): 160
 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

<u>Proposed Funding Source</u>	<u>Funding amount</u>	<u>Percent</u>	<u>Source of non-federal match?</u>
EBRPD (tax revenues)	\$62,400	10%	yes
WCB Proposition 84	\$280,800	45%	yes
Section 6 Grant ⁶	<u>\$280,000</u>	<u>45%</u>	no
TOTAL	\$623,200	100%	

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

Match available:

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

In-kind match remaining after Thomas/Austin 2: **\$530,001**

Notes:

- 1) For all transactions, only the purchase price is included. Transactions costs and site improvements are not included. However it may also be possible to count some of these costs as match. This can be pursued later if needed.
- 3) The EBRPD Resource Enhancement Program (or REP Program) is a program that involves partnering with projects requiring mitigation. REP Program contributions are not considered eligible as matching funds in this analysis.
- 4) Current market value is based on new appraisals. Funding source amounts have increased or decreased in proportion to the change in total value (e.g. if a source funded 50% of an acquisition, its current value is 50% of new overall value).
- 5) The SWRCB grant is the Integrated Regional Water Management Plan (IRWMP) Grant made to the East Contra Costa County IRWMP pursuant to Proposition 50. Project funding under this grant is on a reimbursement basis and is pending.

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

Land Cover Type	Land Cover Requirements ³ (acres)			Reporting Period (acres)				Cumulative (acres)				Percent Complete (%)		
	Protection	Creation	Restoration	Protection	Existing Easement (no credit)	Creation	Restoration	Protection	Existing Easement (no credit)	Creation	Restoration	Protection	Creation	Restoration
Terrestrial														
Annual grassland	16,500	--	--	1,329.2	-	-	-	5,011.0	1,442.3	-	0.04	30%	--	--
Alkali grassland	1,250	--	--	8.2	-	-	0.0	98.2	19.1	-	0.02	8%	--	--
Ruderal	-	--	--	-	-	-	-	49.1	22.5	-	-	-	--	--
Chaparral and scrub	550	--	--	78.2	-	-	-	115.3	-	-	-	21%	--	--
Oak savanna	500	--	165	110.8	-	-	-	279.6	23.9	-	-	56%	--	0%
Oak woodland	400	--	--	652.3	-	-	-	1,071.5	130.8	-	-	268%	--	--
<i>Subtotal terrestrial</i>	<i>19,200</i>	<i>--</i>	<i>165</i>	<i>2,178.7</i>	<i>-</i>	<i>-</i>	<i>0.0</i>	<i>6,624.7</i>	<i>1,638.6</i>	<i>-</i>	<i>0.06</i>	<i>35%</i>	<i>--</i>	<i>0%</i>
Aquatic														
Riparian woodland/scrub	70	--	55	2.2	-	-	-	16.4	0.2	-	0.9	23%	--	2%
Perennial wetland ¹	75	--	85	0.1	-	-	-	4.3	4.9	-	0.2	6%	--	0%
Seasonal wetland	168	--	163	2.2	-	-	-	5.0	0.8	-	7.7	3%	--	5%
Alkali wetland	93	--	67	0.8	-	-	2.4	10.8	3.7	-	2.5	12%	--	4%
Pond	16	--	--	1.4	-	0.1	-	6.1	2.6	0.4	-	38%	--	-
Reservoir (open water) ²	12	--	--	-	-	-	-	-	-	-	-	0%	--	-
Slough/Channel	36	--	72	-	-	-	-	-	-	-	-	0%	--	0%
<i>Subtotal aquatic</i>	<i>470</i>	<i>--</i>	<i>442</i>	<i>6.7</i>	<i>-</i>	<i>0.1</i>	<i>2.4</i>	<i>42.6</i>	<i>12.2</i>	<i>0.4</i>	<i>11.3</i>	<i>9%</i>	<i>--</i>	<i>3%</i>
Stream (length in linear feet)														
Perennial	4,224	--	2,112	-	-	-	-	886.4	-	-	-	21%	--	0%
Intermittent	2,112	--	2,112	-	-	-	348.3	24,087.7	5,555.0	-	4,765.1	1141%	--	226%
Ephemeral	26,400	--	26,400	38,443.2	2.2	-	-	130,038.3	30,764.3	-	-	493%	--	0%
<i>Subtotal stream length</i>	<i>32,736</i>	<i>--</i>	<i>30,624</i>	<i>38,443.2</i>	<i>2.2</i>	<i>-</i>	<i>348.3</i>	<i>155,012.4</i>	<i>36,319.3</i>	<i>-</i>	<i>4,765.1</i>	<i>474%</i>	<i>--</i>	<i>16%</i>
Other														
Nonnative woodland	--	--	--	-	-	-	-	0.7	-	-	-	--	--	--
Wind turbines	--	--	--	-	-	-	-	64.0	25.1	-	-	--	--	--
<i>Subtotal other</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>64.7</i>	<i>25.1</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>
Developed														
Urban	--	--	--	-	-	-	-	3	1	-	-	--	--	--
<i>Subtotal developed</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>--</i>	<i>--</i>	<i>--</i>
Uncommon Landscape Features or Habitat Elements														
Rock outcrop	--	--	--	-	-	-	-	10	5	-	-	--	--	--
<i>Subtotal uncommon landscape</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>10</i>	<i>5</i>	<i>-</i>	<i>-</i>	<i>--</i>	<i>--</i>	<i>--</i>
Totals (excludes subtypes)														
Acres	--	--	--	2,185.4	-	0.1	2.4	6,744.2	1,681.2	0.4	11.3	--	--	--
Linear feet	--	--	--	38,443.2	2.2	-	348.3	155,012.4	36,319.3	-	4,765.1	--	--	--

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.

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

Land Cover Type	Reporting Period Land Acquisitions (acres)						
	Thomas/ Austin 1	Thomas/ Austin 2	Barron	Existing Easement (No credit)	Land Waste Management		
	Protection	Protection	Protection		Protection	Creation	Restoration
Terrestrial							
Annual grassland	391.0	159.6	365.8	0.01	412.7	-	-
Alkali grassland	-	-	-	-	8.3	-	0.02
Ruderal	-	-	-	-	-	-	-
Chaparral and scrub	77.4	-	0.8	-	-	-	-
Oak savanna	52.1	-	39.2	-	19.5	-	-
Oak woodland	292.7	-	354.7	0.02	5.0	-	-
<i>Subtotal terrestrial</i>	<i>813.2</i>	<i>159.6</i>	<i>760.5</i>	<i>0.03</i>	<i>445.4</i>	<i>0.0</i>	<i>0.02</i>
Aquatic							
Riparian woodland/scrub	-	-	0.3	-	1.9	-	-
Perennial wetland ¹	-	-	0.1	-	0.1	-	-
Seasonal wetland	-	-	2.2	-	-	-	-
Alkali wetland	-	-	-	-	0.8	-	2.4
Pond	0.7	0.2	0.4	-	0.2	0.1	-
Reservoir (open water) ²	-	-	-	-	-	-	-
Slough/Channel	-	-	-	-	-	-	-
<i>Subtotal aquatic</i>	<i>0.7</i>	<i>0.2</i>	<i>3.0</i>	<i>0.0</i>	<i>2.9</i>	<i>0.1</i>	<i>2.4</i>
Stream (length in linear feet)							
Perennial	-	-	-	-	-	-	-
Intermittent	-	-	-	-	-	-	-
Ephemeral	10,948.4	2,812.8	11,983.2	-	12,698.7	-	348.3
<i>Subtotal stream length</i>	<i>10,948.4</i>	<i>2,812.8</i>	<i>11,983.2</i>	<i>0.0</i>	<i>12,698.7</i>	<i>0.0</i>	<i>348.3</i>
Developed							
Urban	-	-	-	-	0.02	-	-
Aqueduct	-	-	-	-	-	-	-
Turf	-	-	-	-	-	-	-
Landfill	-	-	-	-	-	-	-
<i>Subtotal developed</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.02</i>	<i>0.0</i>	<i>0.0</i>
Totals (excludes subtypes)							
Acres	813.9	159.8	763.5	0.0	448.3	0.1	2.4
Linear feet	10,948.4	2,812.8	11,983.2	0.0	12,698.7	0.0	348.3

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

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

Jurisdictional Wetlands and Waters Requirement	Total Requirement	Reporting Period Area Acquired	Cumulative Area Acquired	Percentage of Requirement Met by Acquisition (%)
Preserve-wide Riparian woodland/scrub (acres)	70.0	2.2	16.4	23%
Preserve-wide Perennial wetland (acres)	75.0	0.1	4.3	6%
Preserve-wide Seasonal wetland (acres)	168.0	2.2	5.0	3%
Preserve-wide Alkali wetland (acres)	93.0	0.8	10.8	12%
Preserve-wide Pond (acres)	16.0	1.4	6.1	38%
Preserve-wide Reservoir (open water) (acres)	12.0	0.0	0.0	0%
Preserve-wide Slough/Channel (acres)	36.0	0.0	0.0	0%
Preserve-wide stream length (feet)	32,736.0	0.0	0.0	0%
<i>Stream length by type and order</i>				
Perennial (feet)	4,224.0	0.0	886.4	21%
Intermittent (feet)	2,112.0	0.0	24,087.7	1141%
Ephemeral (feet)	26,400.0	38,443.2	130,038.3	493%

Table 10. Reporting Period and Cumulative Conservation of Covered Plants

Common Name	Scientific Name	Number of Occurrences Protected by HCP/NCCP			
		Required	Reporting Period	Cumulative	% Complete
Mount Diablo manzanita	<i>Arctostaphylos auriculata</i>	2	0	1	50%
Brittlescale	<i>Atriplex depressa</i>	2 (4) ¹	1	2	100% (50%)
San Joaquin spearscale	<i>Atriplex joanquiniana</i>	0	6	9	--
Big tarplant	<i>Blepharizonia plumosa</i>	3	2	3	100%
Mount Diablo fairy lantern	<i>Calochortus pulchellus</i>	1	0	1	100%
Recurved larkspur	<i>Delphinium recurvatum</i>	2	0	0	0%
Round-leaved filaree	<i>Erodium macrophyllum</i>	2	1	1	50%
Diablo helianthella	<i>Helianthella castanea</i>	2	1	2	100%
Brewer's dwarf flax	<i>Hesperolinon breweri</i>	1	0	0	0%
Showy madia	<i>Madia radiata</i>	0	0	0	--
Adobe navarretia	<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	1	0	0	0%
Total		16 (18)	11	19	

¹With 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.

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

Zone/ Subzone	Requirements ¹	acres	Min. Acres (MUDA)	Aquired Reporting Period	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	49.5	49.5	29%
1c	Annual grassland (1,450 acres combined w/ 1c)	TBD		364.9	364.9	
1d	25% of total area	478	478	157.8	157.8	33%
1e	No specific requirements	0	0	0.0	0.0	--
All	Estimated minimum requirement	2,100	2,250	608.4	608.4	27%
All	Estimated maximum requirement	2,850	3,150	608.4	608.4	19%
Zone 2						
2a	At least 60% of subzone	1,104	1,104	646.6	1,402.5	127%
2a	Annual grassland (850 acres)	--	850	409.4	937.5	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	336.7	392.9	87%
2b	Connection b/w Black Diamond R.P. and Clayton Ranch (w/ 2c)		see below	336.7	392.9	--
2b	90% of chaparral in 2a, 2b, and 2c (122 acres total)		see below	0.8	5.0	--
2c	Annual grassland (400 acres)	400	400	0.0	7.6	2%
2c	0.5-mile wide connect b/w Black Diamond and			0.0	183.8	--
2c	90% of chaparral in 2a, 2b, and 2c (122 acres total)		see below	0.0	5.0	--
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	126.7	16%
2d	Known occurrence of round-leaved filaree (number)	1	1	0.0	1.0	100%
2e	Annual grassland (800 acres)	800	800	0.0	79.5	10%
2e	See 2e/2f/2h below		see below	0.0	0.0	--
2f	Annual grassland (1000 acres)	1,000	1,000	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 for big tarplant	--	--	0.0	0.0	--
2f	Land for SJKF Movement must include 1 occurrence for of round-leaved filaree	--	--	0.0	0.0	--
2f	Where possible, land for SJKF and plants, should include alkali soils	--	--	0.0	0.0	--
2f	See 2e/2f/2h below	--	see below	0.0	0.0	--
2g	No specific requirements	--	--	0.0	0.0	--
2h	Annual grassland (600 acres)	600	600	0.0	0.0	0%
2h	Two occ. of big tarplant (number)	2	2	0.0	0.0	0%

Table 11. Continued

Zone/ Subzone	Requirements ¹	acres	Min. Acres (MUDA)	Aquired Reporting Period	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	0.8	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	1,442.8	2,607.2	35%
All	Estimated maximum requirement	9,550	9,550	1,442.8	2,607.2	27%
All	Alternative Stay Ahead Measurement for Zone 2		4,900	0.0	0.0	0%
Zone 3						
3a	90% of modeled AWS suitable core habitat	159	159	77.4	94.9	60%
3a	Land to increase linkage from chaparral in zone to Mt. Diablo chaparral			77.4	94.9	
3b	No specific requirements	0	0	0.0	0.0	--
3c	No specific requirements	0	0	0.0	0.0	--
All	Estimated minimum requirement	400	400	99.4	292.7	73%
All	Estimated maximum requirement	750	750	99.4	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			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	152.2	152.2	19%
4h	Linkage between Morgan Territory Ranch, Morgan	--	--	152.2	152.2	
4h	See 4a/4h below	--	see below	0.0	0.0	
4a/4h	90% of modeled AWS suitable core habitat	200	200	0.0	15.5	8%
4c/4e/4f/4g	18%/IDA or 39%MDA of natural land cover types in 4c, 4e, 4f, 4g	1,400	3,000	0.0	0.0	0%

Zone/ Subzone	Requirements ¹	acres	Min. Acres (MUDA)	Aquired Reporting		Percent Achieved
				Period	To date	
All	Chaparral/Scrub	270	270	0.0	15.0	6%
All	Estimated minimum requirement	4,900	6,050	152.2	152.2	3%
All	Estimated maximum requirement	6,150	8,350	152.2	152.2	2%
Zone 5						
5a	See 5a/5d and 5a/5b/5d below	--	see below	--	--	--
5b	See 5a/5b/5d below	--	see below	--	--	--
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	2,795.4	39%
All	Grassland	5,300	8,100	0.0	2,796.4	35%
All	Alkali grassland	750	900	0.0	89.7	10%
All	Alkali wetland	40	40	0.0	9.3	23%
All	Vernal pool invertebrate suitable habitat, wherever possible			Yes (not quantified)	8.8	
All	Estimated minimum requirement	6,100	9,050	0.0	3,039.9	34%
All	Estimated maximum requirement	7,200	11,450	0.0	3,039.9	27%
Zone 6						
6a	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6b	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6c	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6d	See 6d/6e below	--	see below	0.0	0.0	--
6e	See 6d/6e below	--	see below	0.0	0.0	--
6f	See 6a/6b/6c/6f below	--	see below	0.0	0.0	--
6d/6e	Alkali grassland	100	300	0.0	0.0	0%
6d/6e	Alkali wetland	20	40	0.0	0.0	0%
6a/6b/6c/6f	Cropland or Pasture	250	400	0.0	0.0	0%
All	Estimated minimum requirement	450	800	0.0	0.0	0%
All	Estimated maximum requirement	550	1,100	0.0	0.0	0%
All Zones						
All	Estimated minimum requirement	21,450	26,050	2,185.9	6,745.2	26%
All	Estimated maximum requirement	27,050	34,350	2,185.9	6,745.2	20%

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

Figure 4. Acquisition Analysis Zones and Sub-Zones

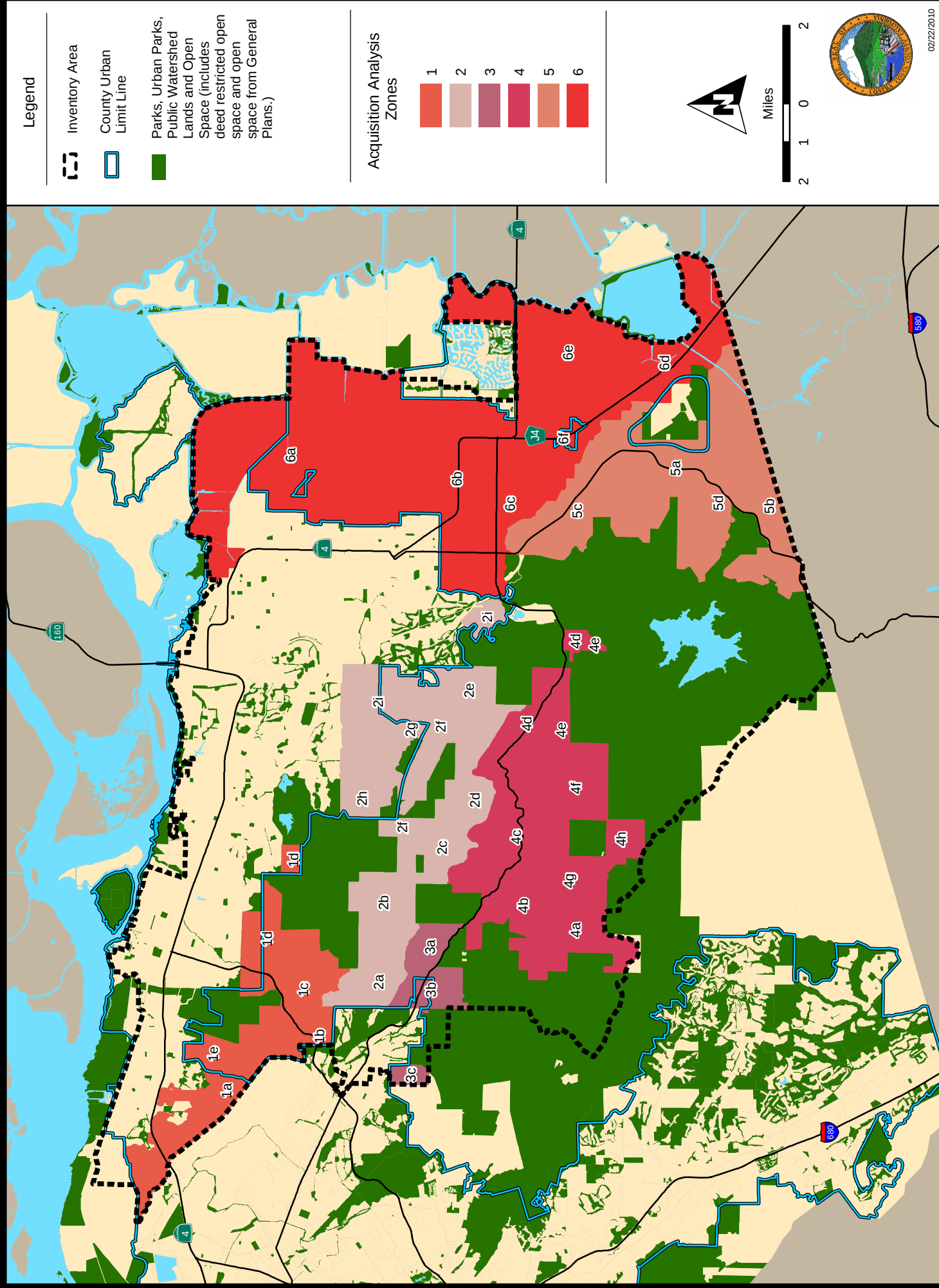


Figure 5. Acquisition Priorities with Initial Urban Development Area

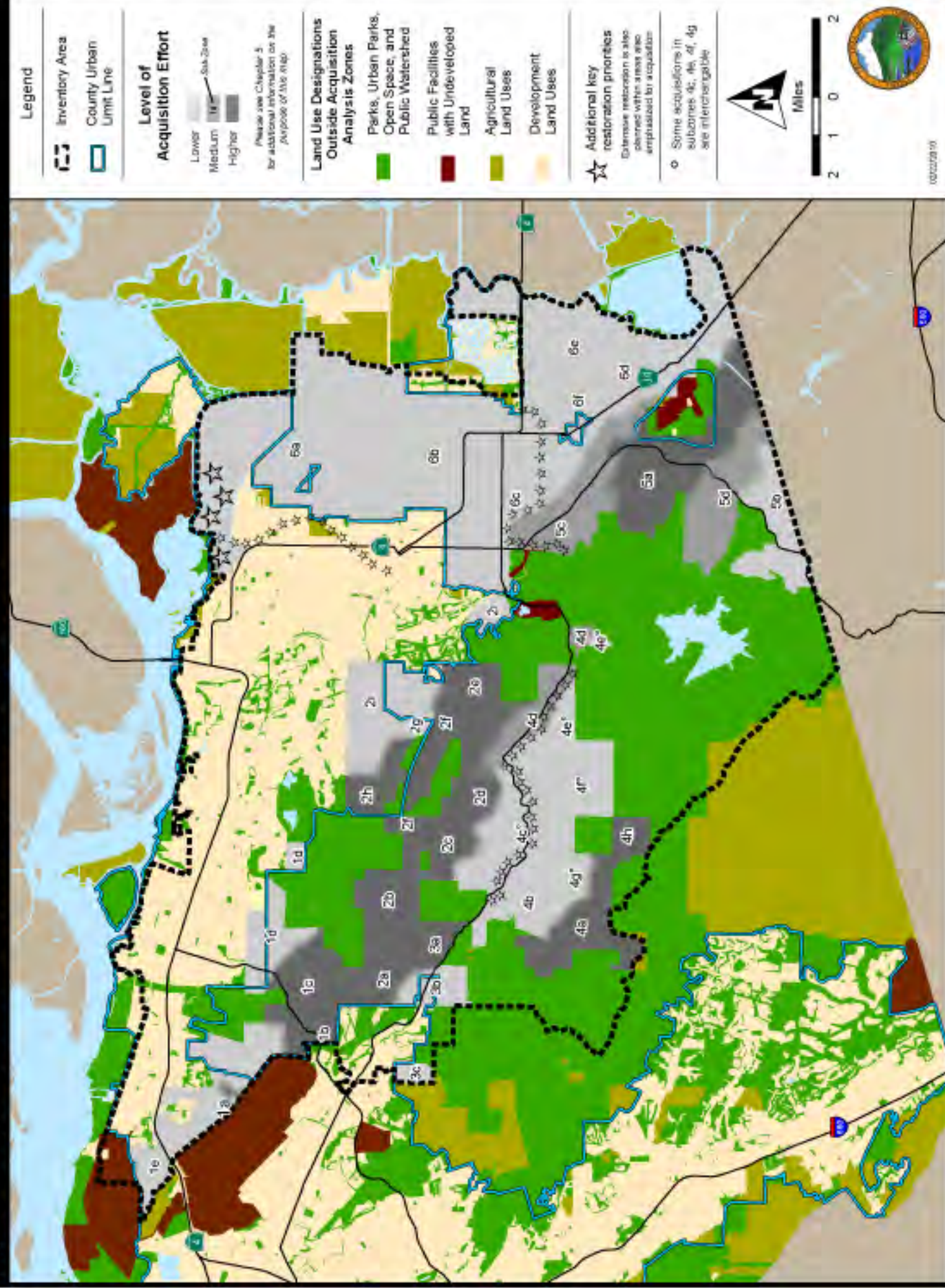
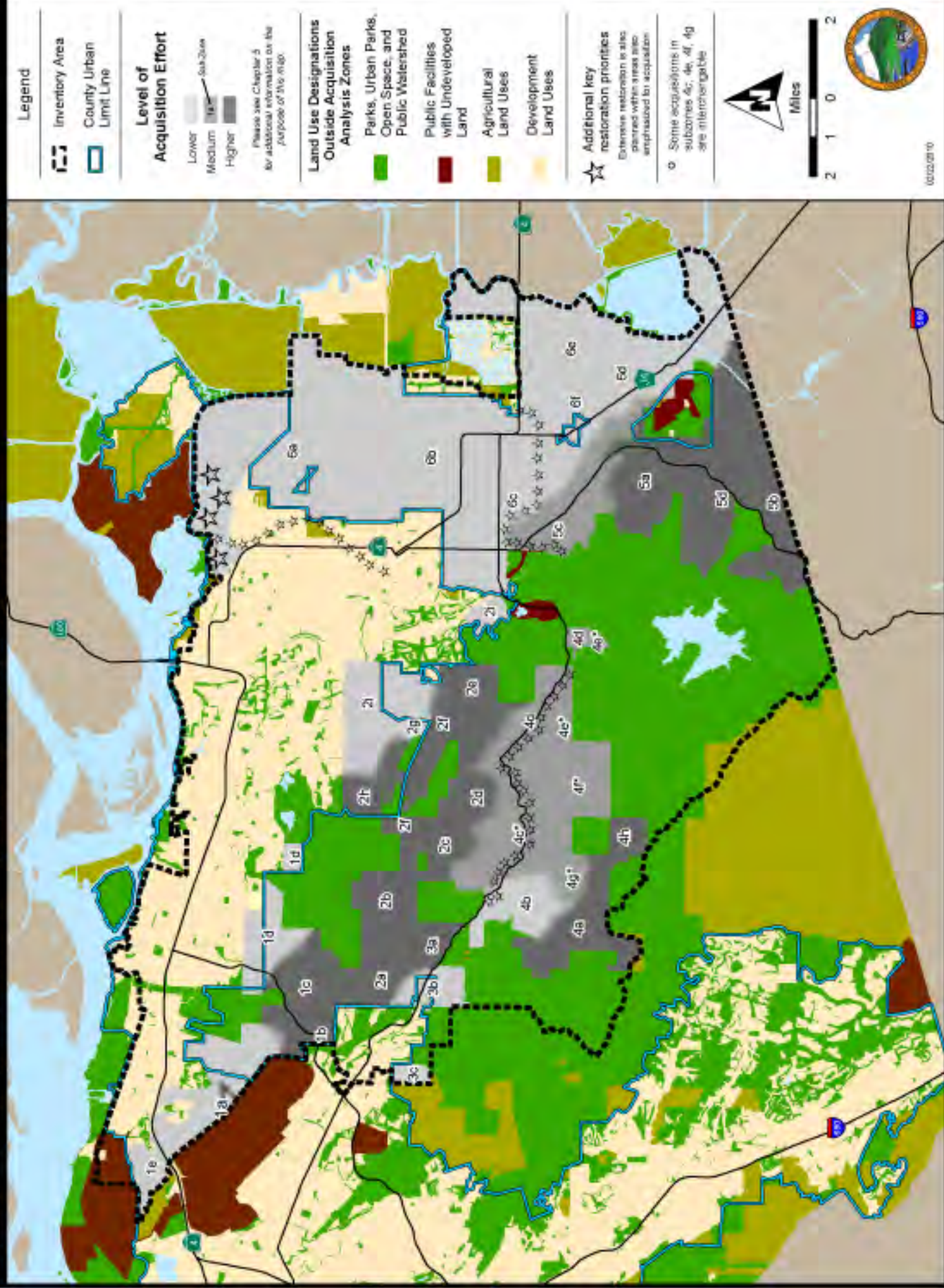


Figure 6. Acquisition Priorities with Maximum Urban Development Area



- 29% of Subzone 1b/c annual grassland requirements and 33% of 1d total area requirements were met.
- Subzone 2a requirements to protect at least 60% of the subzone and 850 acres of grassland were met.
- 87% of Subzone 2b annual grassland requirements were met.
- 60% of Subzone 3a Alameda whipsnake habitat requirements were met.
- 26% of the estimated minimum overall land acquisition requirement and 20% of the estimated maximum requirement were met.

New Preserve System Acquisitions

The 2011 Preserve System acquisitions are all in high priority acquisition areas and span three of six Acquisition Zones. The acquisitions focused on increasing Preserve System connectivity in the northeastern portion of the Inventory Area. Land Waste Management and Thomas/Austin 2 acquisitions protected key natural communities in the Los Medanos Hills between the Concord Naval Weapons Station (outside the Inventory Area) and Black Diamond Mines Regional Preserve (Zone 1). Thomas/Austin 1 and Barron acquisitions protected the Oil Canyon Creek/Sand Creek and Irish Canyon Creek watersheds between Clayton Ranch and Black Diamond Mines (Zones 2 and 3). The Zones 2 and 3 acquisitions nearly complete the protection of the Irish Canyon Creek watershed. These acquisitions deliver on the HCP/NCCP's aquatic resource conservation strategy to achieve conservation on the scale of watersheds, thereby ensuring the integrity of hydrologic functions. In addition, the Thomas/Austin 1 acquisition protects the most substantial acreage of chaparral habitat of any acquisition to date. This acquisition provides valuable habitat for the Alameda whipsnake and increases the linkage from chaparral in Mount Diablo State Park in Subzone 3a to the Preserve System.

The 2011 acquisitions are known to support or have the 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*)
- Diablo helianthella
- Mount Diablo fairy lantern
- Big tar plant

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.

Pre-Existing Conservation Easements

The Plan provides the Conservancy the choice of counting or not counting toward conservation requirements the areas within conservation easements. 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.

Thomas/Austin 1

Thomas/Austin 1 is an 814-acre property located adjacent to Black Diamond Mines Regional Preserve in the hills between Clayton Ranch and Mount Diablo State Park (Figure 8 and Figure 9). It is bounded by several Conservancy-owned properties, including Ang, Irish Canyon, and Barron. The property was acquired for \$3,240,000 (Table 7). The Conservancy purchased the property in partnership with EBRPD using EBRPD tax revenues, WCB Proposition 84 funding, and Federal Section 6 Grants. Pacific Gas and Electric Company (PG&E) lease revenues from an existing communication tower were purchased for an additional \$530,000 using EBRPD tax revenues and a Federal Section 6 Grant.

The acquisition is characterized by generally moderate to steeply sloping, major hill formations, valleys, and canyons, two creeks and numerous tributaries. It includes Kreigor Peak (1,894 feet) with elevations ranging from about 440 feet to 1,894 feet. The site has been used primarily for cattle grazing. Existing infrastructure includes livestock facilities (small shed, paddock), two existing communication towers (one on a 1-acre inholding), and a paved road to the communication towers. There is also a PG&E easement for access to power lines.

This acquisition protects key natural communities and suitable covered species habitat. It contributes to the protection of key habitat linkages in Acquisition Zone 2, Subzone 2a and Subzone 2b; and Acquisition Zone 3, Subzone 3a (Tables 8 and 11) and contains a mosaic of natural communities. Annual grasslands and oak woodlands are the dominant natural community types, with chaparral, oak savanna, ponds, and streams also present. This acquisition nearly completes the protection of Irish Canyon Creek watershed and contains the

Figure 8. Thomas/Austin 1 Property - Landcover Map

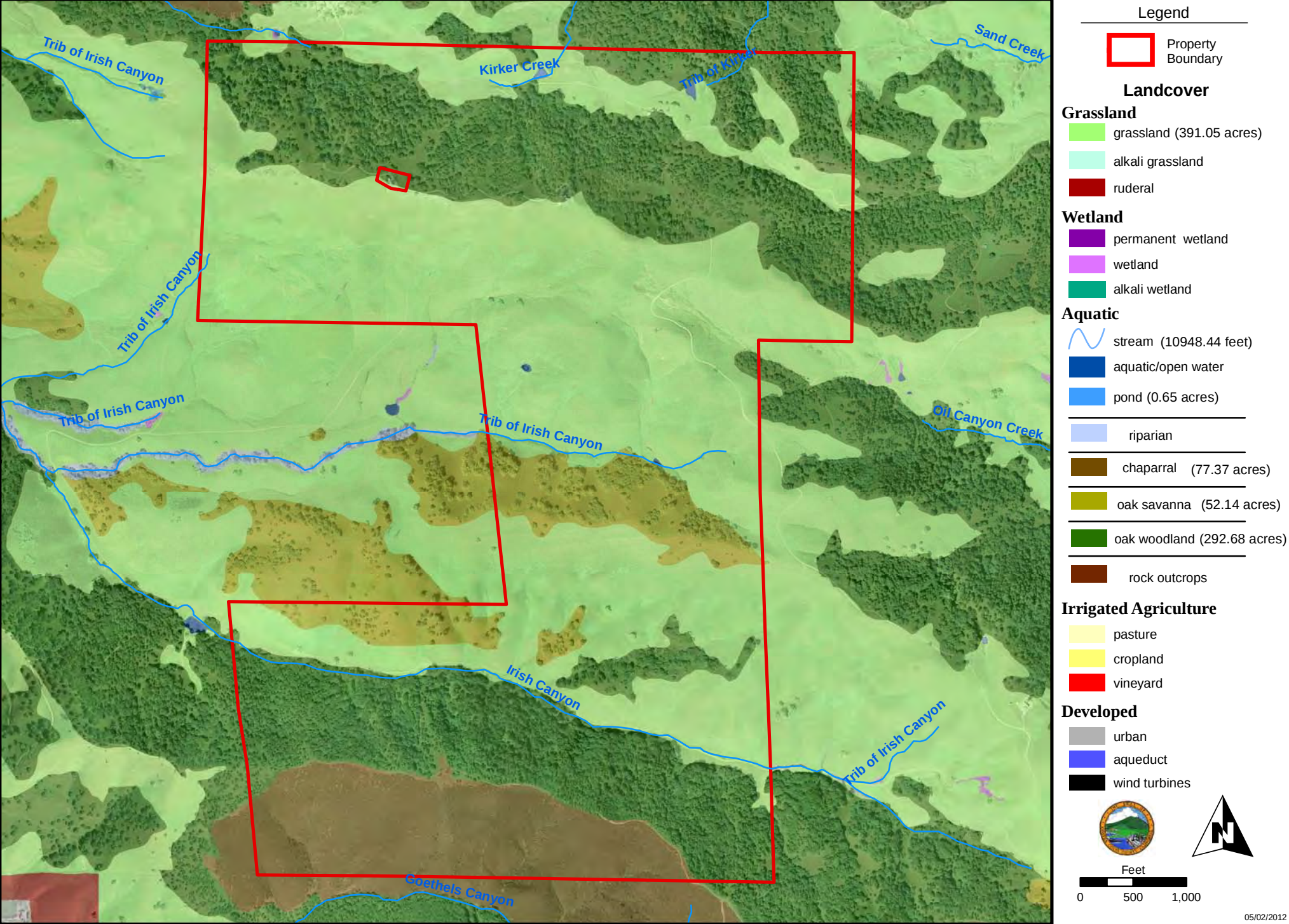
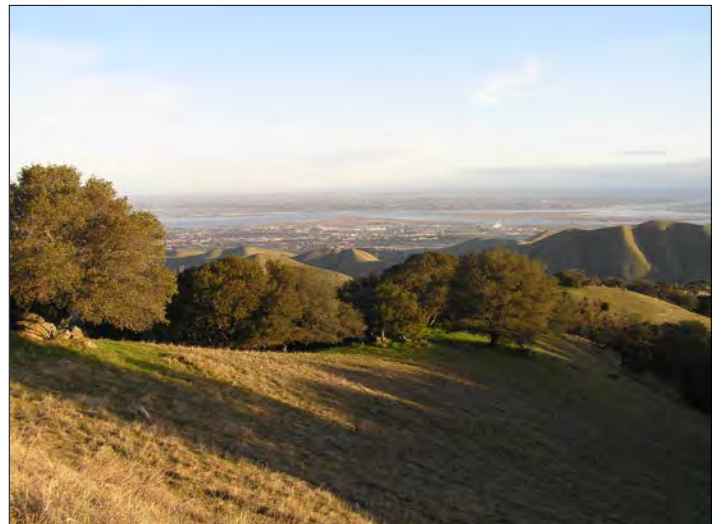
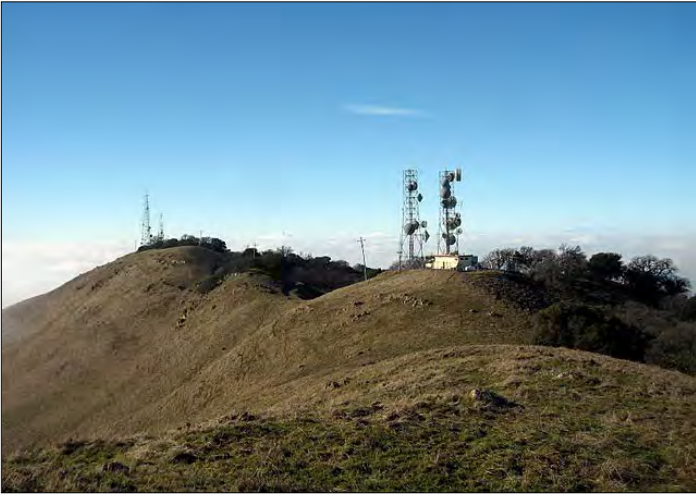


Figure 9. Thomas/Austin 1: Representative Photographs



headwaters for Irish Canyon Creek and Oil Canyon Creek. Irish Canyon Creek rises from the western slopes of the central ridge on Thomas/Austin 1 and flows to the west where it ultimately joins Mount Diablo Creek. Substantial chaparral habitat for Alameda whipsnake and for a variety of covered plant species associated with chaparral, including Diablo helianthella and Mount Diablo fairy lantern, is present on the property. Suitable habitat for a variety of other covered species including California red-legged frog, California tiger salamander, western pond turtle, western burrowing owl, golden eagle, and numerous plant species associated with grassland and other habitats is also present.

Thomas/Austin 2

Thomas/Austin 2 is a 160-acre property immediately adjacent to Black Diamond Mines Regional Preserve near Kirker Pass Road (Figure 10 and Figure 11). The property was acquired for \$624,000 (Table 7). The Conservancy purchased the property in partnership with EBRPD using EBRPD tax revenues, Wildlife Conservation Board (WCB) Proposition 84 funding, and a Federal Section 6 Grant.

The topography of the site is similar to Thomas/Austin 1. It includes a portion of the eastern ridge of Nortonville Canyon. While this site has also been used for cattle grazing, there are no site improvements or development on site.

This acquisition protects key natural communities and suitable covered species habitat. It contributes to fulfilling grassland and subzone acquisition requirements in Acquisition Zone 1, Subzone 1c and Subzone 1d (Tables 8 and 11). Annual grassland is the dominant natural community, with ponds, wetlands, and streams also present. Suitable habitat for a variety of covered species including California red-legged frog, California tiger salamander, western pond turtle, western burrowing owl, golden eagle, and numerous plant species associated with grassland and other habitats is present.

Barron

Barron is a 763-acre property adjacent to Clayton Ranch in the hills south of Black Diamond Mines Regional Preserve (Figure 12 and Figure 13). It is bounded by three Conservancy acquisitions, including Lentzner, Chaparral Springs, and Thomas/Austin 1. The Conservancy purchased the property for \$2,952,600 in partnership with EBRPD using EBRPD tax revenues, WCB Proposition 84 funding, and a Federal Section 6 Grant (Table 7).

The acquisition is bisected by a high ridgeline that divides major drainage basins. It is characterized by generally moderate to steeply sloping, major hill formations, valleys, canyons, two creeks, and numerous tributaries. Elevations range from less than 800 feet to 1,668 feet. It does not abut any urban uses. Current land use is grazing. Existing infrastructure to support livestock management includes perimeter and cross agricultural fencing, five small stock ponds, and a small livestock shed (located adjacent to the southern property line where a ranch road crosses into the neighboring Clayton Ranch property to the south). There is also an old, but functional well and a non-functioning windmill adjacent to the acquisition, and communication facility located on a separate property within the acquisition. A power line runs through the acquisition to the communication facility.

Figure 10. Thomas/Austin 2 Property - Landcover Map

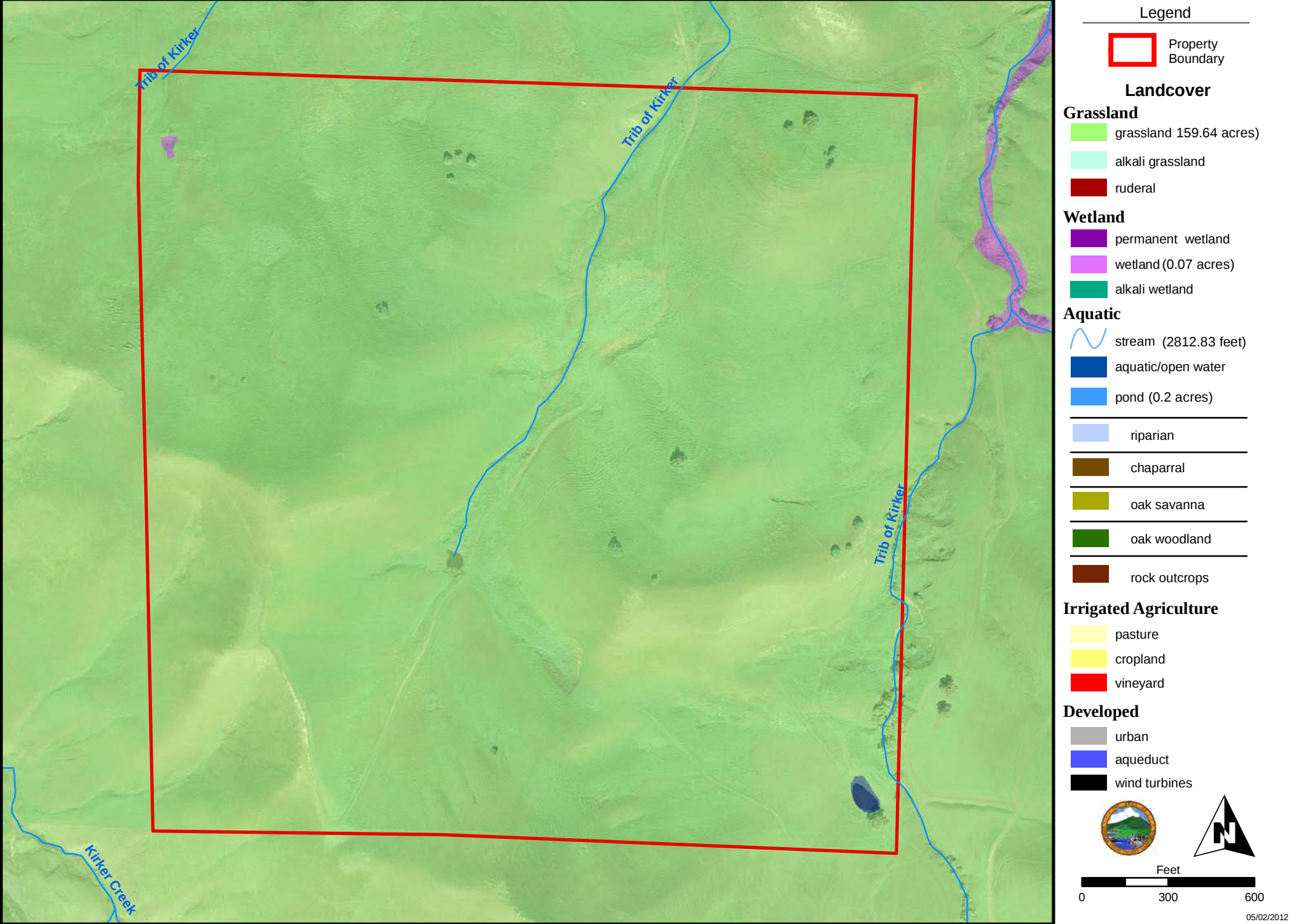


Figure 11. Thomas/Austin 2: Representative Photographs



Figure 12. Barron Property - Land Cover Map

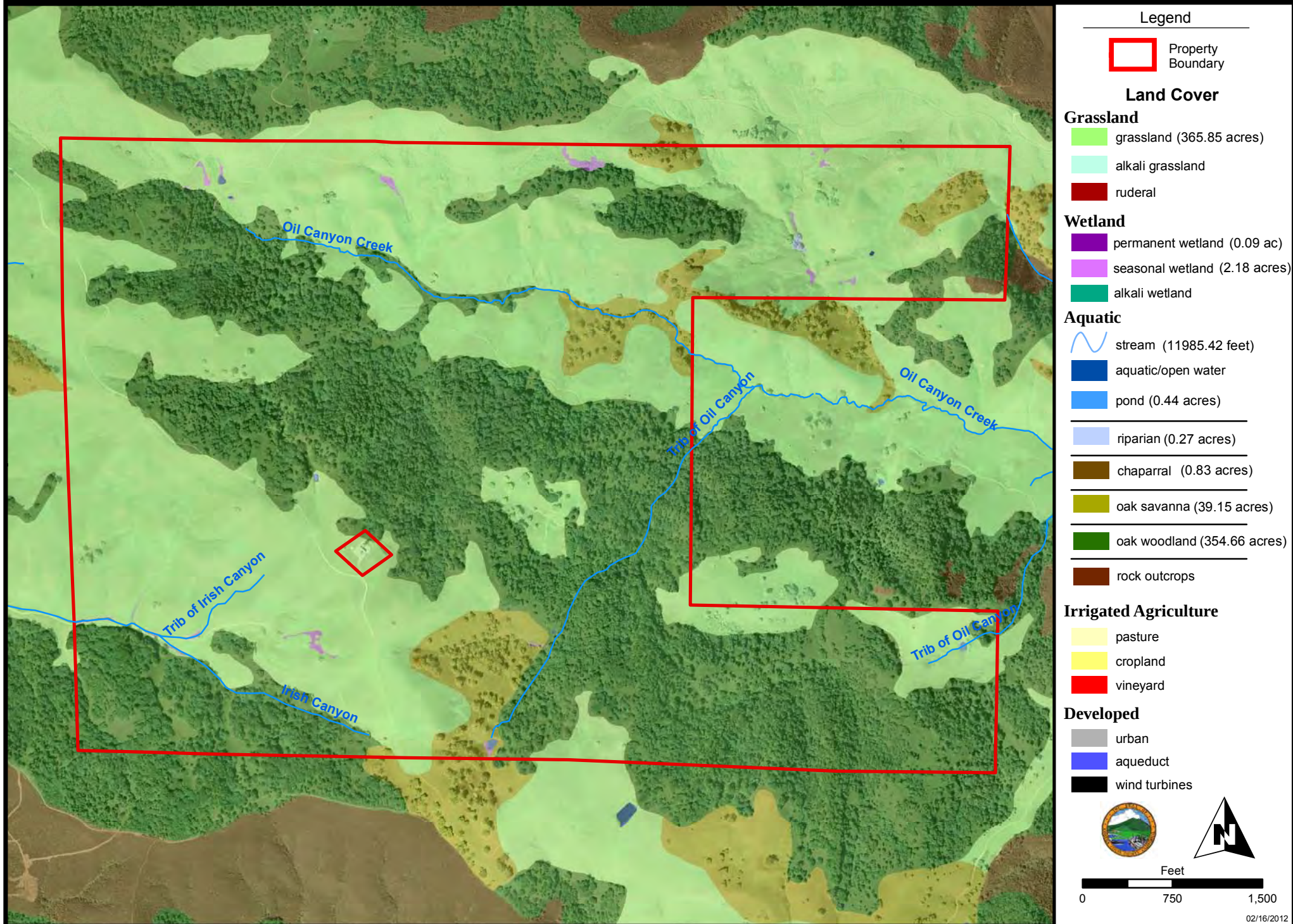
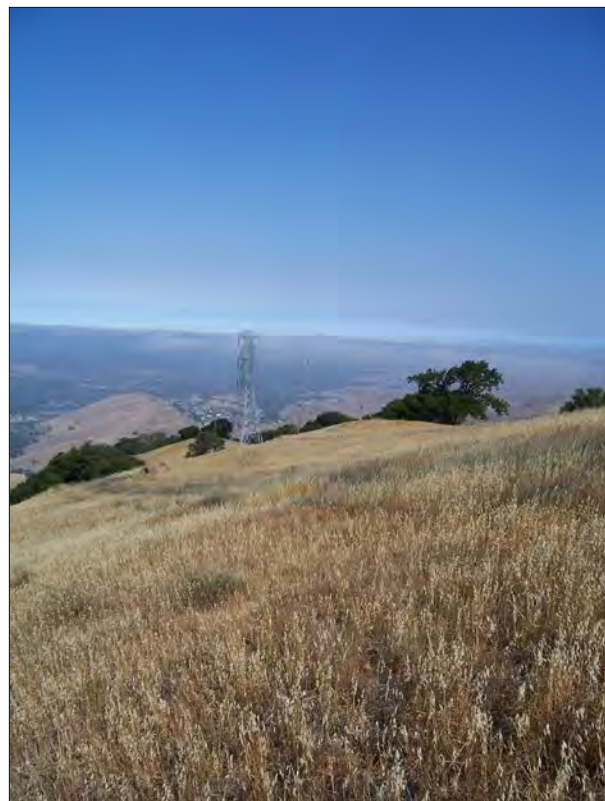


Figure 13. Barron: Representative Photographs



This acquisition protects key natural communities and suitable covered species habitat. It contributes to the protection of key habitat linkages in Acquisition Zone 2, Subzone 2a and Subzone 2b (Tables 8 and 11) and contains a mosaic of natural communities. The natural community composition is similar to Thompson, with annual grassland and oak woodlands as the dominant natural community types. Oak savanna, chaparral/scrub, ponds, seasonal wetlands and streams are also present. The acquisition contains the headwaters of Oil Canyon Creek which flows to the east before joining Sand and Marsh Creeks, as well as reaches of two tributaries to Oil Canyon Creek. It also supports the headwaters of Irish Canyon Creek which flows to the west where it joins Mount Diablo Creek, as well as a short tributary to Irish Canyon Creek. In addition, six springs are reported on the acquisition. Suitable habitat for a variety of covered species including California red-legged frog, California tiger salamander, western pond turtle, western burrowing owl, golden eagle, Alameda whipsnake (mainly movement habitat) and various plant species is present on the acquisition.

Land Waste Management

Land Waste Management is a 448-acre property located in the Los Medanos Hills adjacent to the Keller Canyon Landfill, abutting the portion of the property set aside for permanent protection of open space (Figure 14 and Figure 15). The property was acquired for \$3,050,000 (Table 7). The Conservancy purchased the property in partnership with EBRPD using EBRPD tax revenues, Integrated Regional Water Management Plan Proposition 84 funding, and a Federal Section 6 Grant.

The topography ranges from level or nearly level ground to very steep hillsides. This includes valleys with creeks and wetlands and hills supporting grasslands. Adjacent land uses include a firewood company and a few single-family residences. Infrastructure is limited to Kirker Pass road (bisects property) and easements. Easement include PG&E power lines and towers, two gas lines, and an explosive safety easement located on the western portion of the property (which is related to Detachment Concord and may soon be obsolete). The current land use of the acquisition is cattle grazing.

This acquisition protects key natural communities and suitable covered species habitat. It contributes to the protection of key natural communities in Acquisition Zone 1, Subzone 1b and Subzone 1c. Annual grassland is the dominant natural community, alkali grassland, oak savanna, oak woodland, alkali wetlands, permanent and seasonal wetlands, ponds, riparian areas, and streams are also present. A tributary of Kirker Creek (Hess Creek) runs through the acquisition. California red-legged frog and California tiger salamander are known to occur onsite.

Figure 14. Land Waste Management Property - Land Cover Map

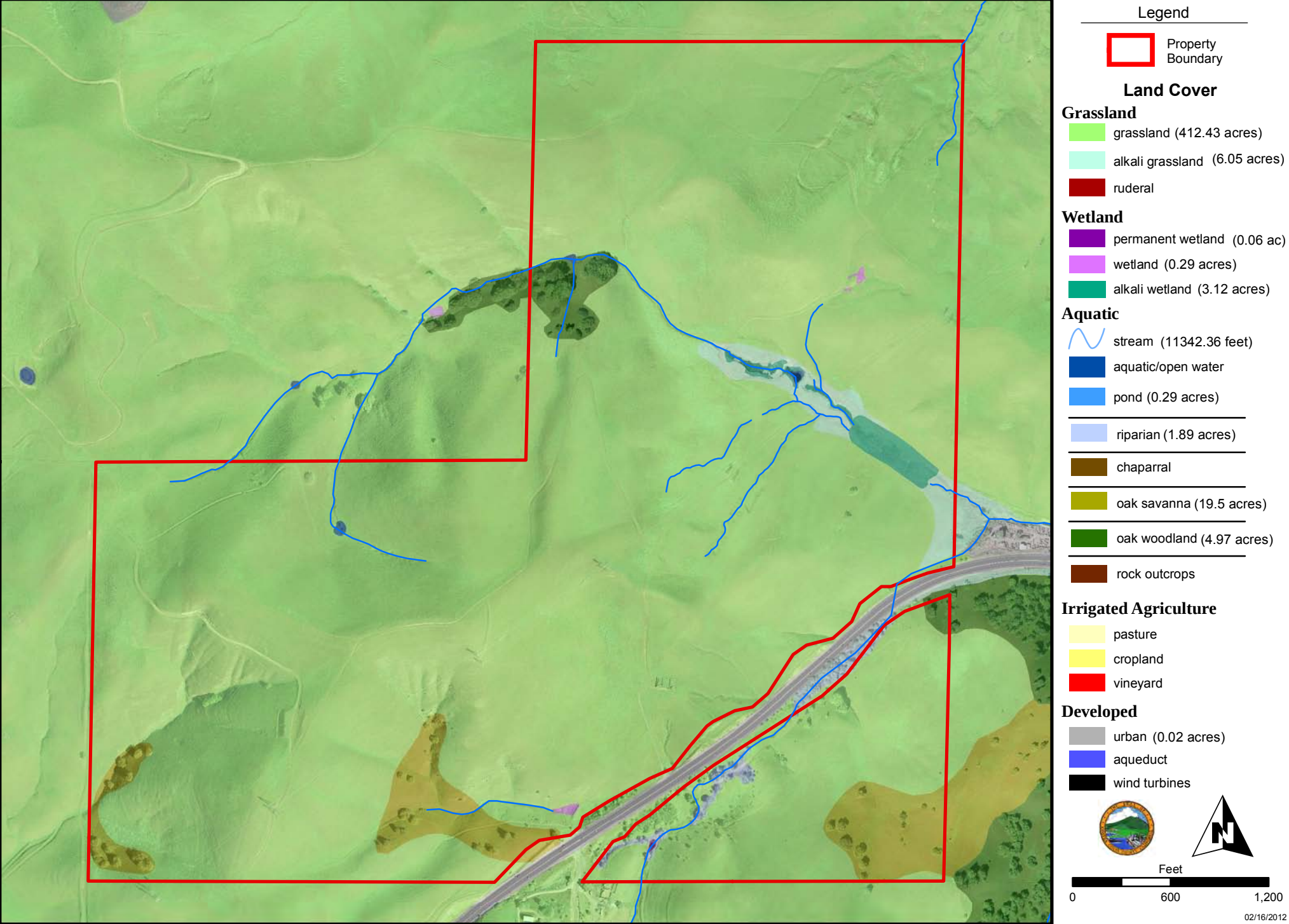


Figure 15. Land Waste Management: Representative Photographs



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 constructed one restoration project and continues to monitor four restoration projects. The projects are as follows.

- 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 watershed⁵. During the reporting period, the one restoration project initiated (Upper Hess Creek Watershed Habitat Restoration Project) resulted in the following.

- Restored 2.29 acres of alkali wetlands.
- Restored 0.007 acres of other waters.
- Created 0.06 acres of breeding pond.
- Restored 226 linear feet of channel.

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

Upper Hess Creek Watershed Habitat Restoration Project

Project Overview

The Upper Hess Restoration Project is located on the 448-acre Land Waste Management property in the Hess Creek subbasin of the Kirker Creek watershed (Figures 16, 17, and 18). 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 California tiger salamander breeding pond 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

⁵ 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.

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

Basin/Watershed	Aquatic Land Cover (acres)								Stream Land Cover (linear			
	Riparian woodland/ scrub	Perennial wetlands ¹	Seasonal wetlands	Alkali wetlands	Ponds	Reservoir (open water) ²	Slough/ channel	Aquatic Land Cover Total	Perennial	Intermittent	Ephemeral	Stream Land Cover Total
Brushy Creek												
Restoration	--	0.2	7.7	--	--	--	--	7.9	--	2,409.4	--	2,409.4
Creation	--	--	--	--	0.3	--	--	0.3	--	--	--	0.0
subtotal	0.0	0.2	7.7	0.0	0.3	0.0	0.0	8.2	0.0	2,409.4	0.0	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	348.3	0.0	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
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	908.8
Total for Inventory Area	0.9	0.2	7.7	2.5	0.4	0.0	0.0	11.7	0.0	3,666.6	0.0	3,666.6

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

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

Figure 16. Location of Habitat Restoration and Creation Projects Constructed through 2011

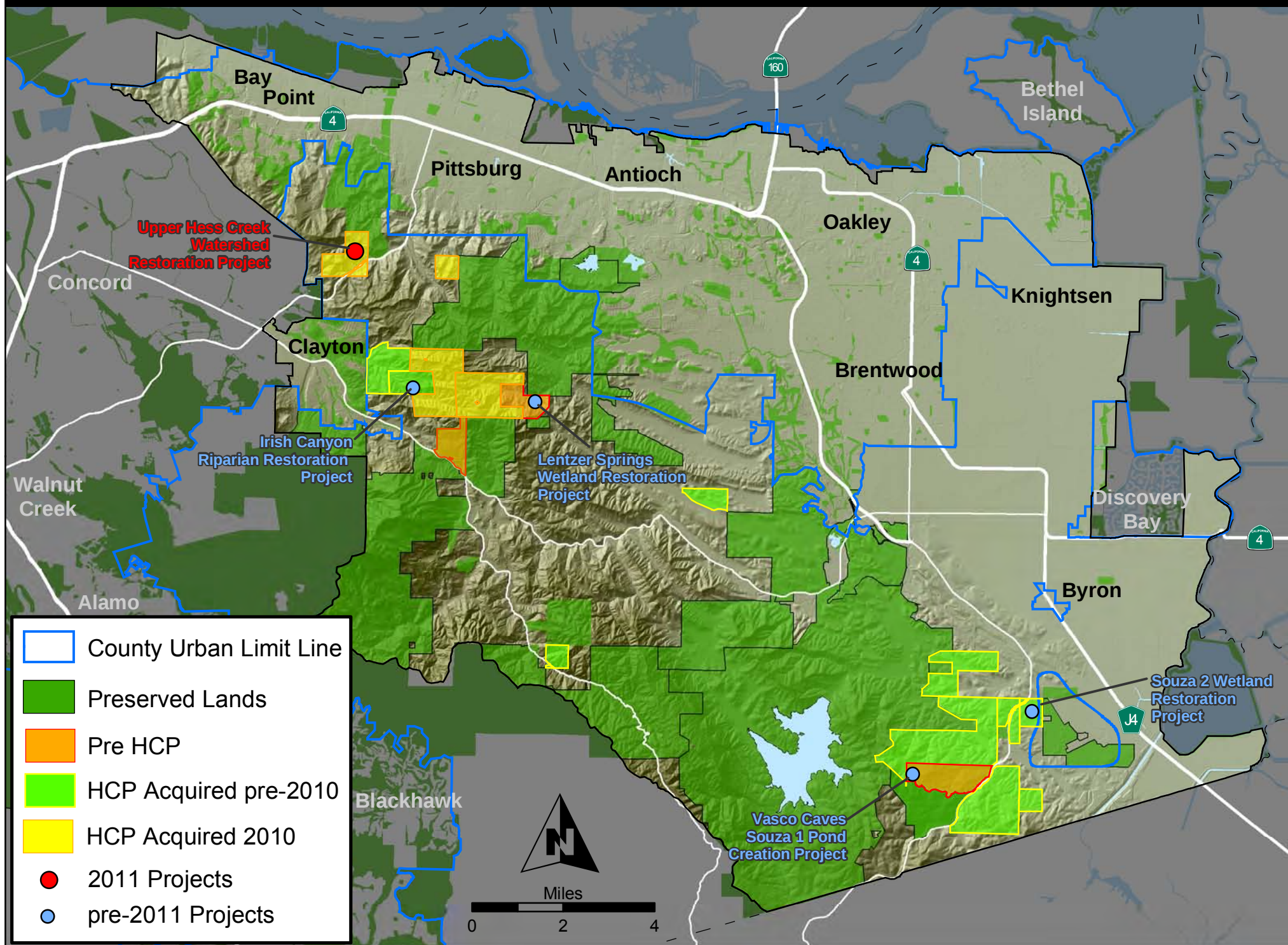


Figure 17. Upper Hess Creek Watershed Habitat Restoration Schematic

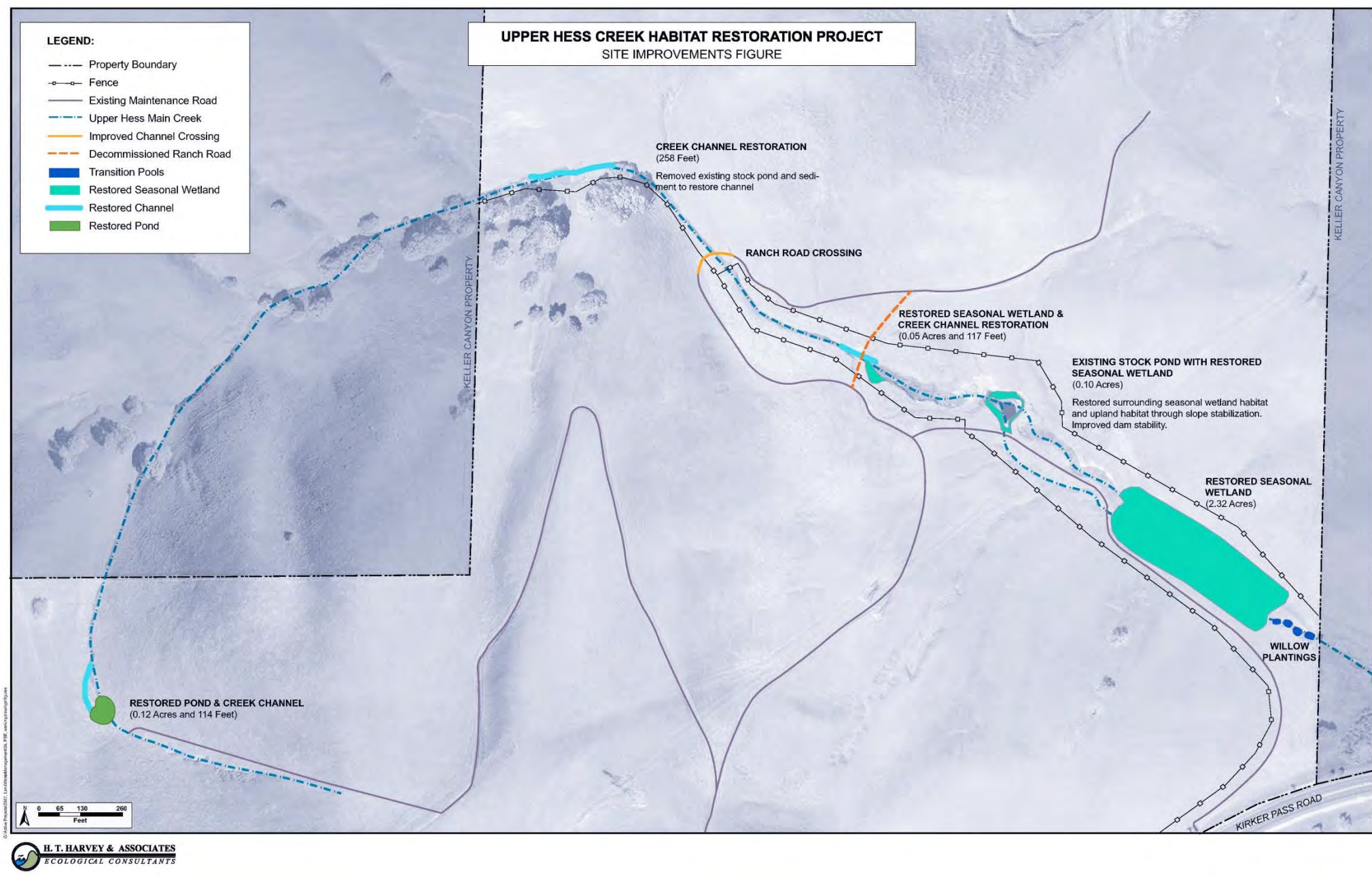


Figure 18. Upper Hess Creek Watershed Habitat Restoration Project: Representative Photographs



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. 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 California red-legged frog habitat, and enhancement/stabilization of an existing outlet spillway/swale 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 acres 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 13a and 13b). Progress toward meeting the restoration objectives and achieving the performance criteria will be monitored annually using four monitoring elements. All monitoring components include photo-documentation. Photo-documentation (includes photographs and written descriptions) will be taken from a number of fixed locations (photo-documentation points) established to measure specific success criteria. Photographs and written descriptions will be completed annually at the same time of year and measured against baseline assessments completed prior to project construction.

Vegetation survey and general site assessment (annually). Vegetation monitoring will occur at each restoration site to determine whether objectives SO-1, 3, 5, 6, and 8 have been achieved. Average relative percent cover of dominant wetland indicator species will be measured using quadrant sampling (1 meter-square), with sites selected using random, stratified methodology. Photo-documentation will record development and vegetative growth from photo-documentation points. Photographs will also be taken to record events that may have a significant effect on restoration success, such as erosion, flood, fire, or vandalism. Erosion will be monitored using photo-documentation to measure progress toward objective SO-2.

Invasive plant assessment (three times annually). The project site will be surveyed by a qualified plant ecologist or rangeland manager to identify areas of invasive plant infestations. Results will be reported and treatments recommended.

Wetland delineation (in Year 5). Wetland delineations will be used at each of the restoration sites to determine if the areal extent of each of the restored habitat types is achieved.

Hydrologic assessment (annually and monthly during wet season). Hydrologic connectivity between Upper Hess Creek and adjacent wetlands will be monitored annually to determine achievement of objective SO-4. Progress will be measured using photo-documentation. Depth and duration of inundation in the California tiger salamander pond will be monitored to determine achievement of objective SO-7. Depth and duration of inundation data will be collected using a staff gauge, placed at the lowest point of the pond. The lateral extent of inundation will also be estimated based on visual observation, and recorded on standardized site base maps. Hydrology data will be collected monthly when the pond is holding water which will vary between years, but is expected to occur from approximately December through

August in most monitoring years. Hydrographs will be constructed for the pond on an annual basis and for the entire 5-year monitoring period. Monitoring results will be reviewed by a restoration ecologist/hydrologist and will be used to inform adaptive management. Additional assessments may be required if the 5 years are characterized by abnormally dry conditions. Observations of California tiger salamander will also be recorded.

Irish Canyon Riparian Restoration Project

Project Overview

The Irish Canyon Riparian Restoration Project is located on the 320-acre Irish Canyon property in the Mt. Diablo Creek watershed (Figure 16). The goal of the restoration project is to fill in gaps in 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.

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 three years, and all failed plantings will be replaced during this period. After three 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 2. The sites planted in Year 1 have a 52% survival rate through the end of the second growing season. This means that 52% of the acorns and buck-eye nuts planted in Year 1 (both initial planting and replanting) have germinated and are now saplings. This includes a 77% survival rate for the initial planting, and a 75% survival rate for the replanting at the end of Year 1 (Save Mount Diablo 2011).

The restoration site was managed to improve tree growth and survival. Tree mortality resulted from over-saturation (wet winter), feral pig damage, and gopher predation. Tree tubes were installed around each oak planting to reduce mortality from small mammals, reduce competition from annual nonnative weeds, reduce water loss, and increase vertical growth. Weed control methods included a combination of manual hand pulling and weed whacking. Mowing was used to treat and contain an invasion of medusahead grass (*Taeniatherum caput-medusae*) within Channel Enhancement Area #1. During the dry season, the young trees were watered every 3 weeks. Acorns and buckeye nuts were collected 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 2012.

Lentzner Springs Wetland Restoration Project

Project Overview

The Lentzner Springs Wetland Restoration Project, constructed in 2008, 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 16).⁶ 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 13c). These criteria are based on survivorship and health of individual plants during the three 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 two additional years. After two 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 two consecutive years.

Monitoring and Adaptive Management to Date

Year 3 monitoring for the Lentzner Springs restoration project was conducted on May 5, 2011 (Nomad Ecology 2011a). The monitoring protocol was modified in 2011 as was recommended in the 2010 report (Nomad Ecology 2010). Modifications included increased quadrat size and recording of percent cover of every species in the quadrats.

⁶ Project is located within the Oil Canyon Creek subbasin of the Sand Creek subbasin within the Marsh Creek watershed.

Monitoring results found that the restoration site is meeting its performance criteria of at least 75% survival of the planted species. Of the planted species there was an overall increase in saltgrass (*Distichlis spicata*) and Great Valley gumweed (*Grindelia camporum*) and an absence of alkali heath and bulrush on site. The health of the saltgrass and Great Valley gumweed was good with most plants showing vigorous growth. The relatively high abundance of meadow barley and dwarf peppergrass recorded within two transects indicates that these areas have alkali wetland characteristics. Great Valley gumweed represents the most common species in the sample quadrats.

Weed control was the main maintenance activity. The area was predominantly hand weeded and neighboring weed sources were mowed before they go to seed. Some herbicides were used to control yellow star thistle (*Centaurea solstitialis*), but application was minimal.

Recommendations/Future Actions

Continued monitoring and weed control are recommended. Nonnative weedy species are present in abundance outside of the project area. In addition to weed species within the restoration enclosure, thistles such as milk thistle (*Silybum marianum*) and Italian thistle (*Carduus pycnocephalus*) are abundant in the area to the west of the enclosure. These weeds should be controlled so they do not become established within the restoration area. The site should continue to be maintained during spring and summer months for the third year on a bi-monthly basis. Maintenance should include removal of nonnative invasive species, including annual grasses, in the restoration area.

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 16). The project area totaled 2.6 acres and included creation of a 0.2-acre seasonal pond habitat and 0.99 acres 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 storm water sheet flow from an approximately 15-acre sub-watershed of the Brushy Creek Watershed and a swale into the pond. 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 13d). 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 restoration project success criteria was achieved or nearly achieved during Year 3 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 2011a). The created pond met the hydrology performance criterion by remaining inundated or saturated for a period longer than 60 days. One of two vegetation performance criteria was met for the pond. The relative percent cover of hydrophytic species with a wetland status of facultative (FAC), facultative wetland (FACW) or obligate wetland (OBL) was 74.2% for the 1-foot section and 100.0% for the 2-foot section. The 3-foot section remained inundated throughout the monitoring season which suppressed vegetative growth; therefore, relative percent cover in the 3-foot section was 0%. The other vegetation performance criterion was not met due to the presence of two plants in the pond on the California Exotic Pest Plant Council's list: European manna grass (*Glyceria declinata*, a new invasive weed) and Italian ryegrass (*Lolium multiflorum*). The pond has been successful in providing habitat for common wildlife, endangered wildlife (i.e., California tiger salamander and California red-legged frog), and migratory birds (e.g., long-billed curlew [*Numenius americanus*]). A total of 18 vertebrate species (11 birds, 3 mammals, and 4 amphibians) were observed either at the mitigation pond or nearby in the uplands, at the control pond, or at the drainage that leads into the control pond. The pond creates habitat diversity in the landscape and will become increasingly attractive to a greater range of wildlife species over the years.

The Conservancy treated and controlled the European manna grass and Italian ryegrass in and around the pond using hand removal, mowing, and spot applications of herbicide as the chosen removal techniques. Hand pulling was effective in removing the European manna grass from the pond. As it was the first year it has appeared, the hope is that no rhizomes had formed. Spot spraying was effective in removing the Italian ryegrass from the aquatic portions of the pond. The pond was also re-seeded as the overall cover of wetland vegetation has not been satisfactory.

Grazing is currently not permitted within the created pond area. However, in the summer of 2011, the sheep rancher let his sheep graze within the created pond and surrounding area. The pond was denuded by the grazing animals. The sheep had removed (eaten) all native grasses (specifically, California semaphore grass [*Pleuropogon californicus*]) and wildflowers that had been seeded in the pond. The sheep also left behind an enormous amount of pellets (excrement) that had to be removed from the pond prior to the next season's rains to prevent eutrophication of the water and excess algae growth which could deplete oxygen from the

water and be harmful to the local California tiger salamander population. The Conservancy completed the removal of the sheep pellets by the end of summer and reseeded the pond.

Recommendations/Future Actions

Italian ryegrass can only be temporarily controlled in the upland portions of the restoration site. It is a dominant species on the berm and this grass is ubiquitous in East Bay grasslands. Its complete removal from the created pond's upland areas seems unlikely. For the overall success of the created pond, it is assumed that if Italian ryegrass is effectively controlled/removed from within the aquatic portion of the pond, the success criterion will have been met.

In 2012 the site will be spot treated with herbicide to control Italian ryegrass, and the site will continue to be weeded and monitored.

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 16). The entire project area was about 60 acres and included restoration of 3,508 feet of an intermittent stream tributary, creation of 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 13e). Vegetation monitoring is occurring during the first three 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 nonnative invasive plant species will be considered satisfactory if less than 5% of the project site is covered with nonnative 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

Monitoring was conducted to determine if the restoration success criteria were met for Year 2 (Nomad Ecology 2011b). These included vegetative, erosion, wetland and pond acreage, hydrologic connectivity, depth and duration, milk thistle, atriplex, in-stream pool, and grazing monitoring. Each of these monitoring activities was used to determine if project objectives and performance criteria were met and if adaptive management should be implemented.

Vegetative monitoring was used to evaluate the plant survival and health. The most successful species included spikerush, gumplant, and baltic rush. Gumplant had over 100% indicating that it is successfully reproducing and likely becoming established on its own from surrounding seed sources. Spikerush had 12% survival and baltic rush had 20% survival. Spikerush and baltic rush were observed to be increasing in size and naturally recruiting and these would be good choices for replanting. Alkali heath plants that survived were large and spreading. Overall, the plantings on site did not perform well (13% survival) and performance standards were not met (75% survival performance standard).

Erosion reduction measures continued to be implemented along the Brushy Creek Tributary. Alkali tolerant species, including saltgrass were transplanted from Souza I and Vaquero Farms South at the erosion area and drainage best management practices (BMPs) were reinforced. In addition, a mobile electric fence was installed to exclude cattle from the creek. Cattle were allowed to graze the grasslands to reduce thatch inside the restoration area. This strategy will be employed again in 2012 to allow controlled grazing of the project area while excluding cattle from the creek area. In preparation for 2012 grazing, the fence was installed in late December 2011. It is expected that as the saltgrass continues to fill in that the erosion will slow.

Several wetland and pond features in the northern wetland complex and tributary channel flooded and filled after a major storm in March 2011. Water overtopped the northern wetland at the northeast corner and flowed off the property. Water also flowed over the constructed overflow and into the northern wetland complex. Debris on the margins of the tributary channel and wetland berms indicate the water overtopped the channel berms in several places. Water ponded behind the in-channel rock weirs. Portions of restored wetlands south of the creek were not inundated and so far have not exhibited wetland hydrology.

Invasive plant species presence was minor during the monitoring period. A few scattered milk thistle plants were present on site. Perennial pepperweed (*Lepidium latifolium*) was detected in two locations: near the kidney-shaped wetland and at the north end of the property. Stinkwort (*Dittrichia graveolens*) was detected in the pond. Adaptive management was implemented in response to the presence of these invasive species. Crews hand pulled and removed *dittrichia*

graveolens. The other invasive weeds (milk thistle, star thistle, and pepperweed) were sprayed inside the restoration site.

Grazing on the restoration project site contributed to the reduced presence of invasive plant species. Cattle were removed when the wetlands were inundated. This allowed for submerged wetland plants to be protected from cattle trampling or grazing. Site grazing resulted in a reduction in Italian ryegrass biomass and thatch. The cattle caused some erosion and vegetation damage on creek banks, wetland margins and pond margins; however, saltgrass on the margins was able to withstand some cattle trampling. Overall, the benefits of grazing (reducing Italian ryegrass thatch and biomass) outweighed the impacts of grazing (trampled vegetation at the margin of wetlands and some bank erosion).

Recommendations/Future Actions

There are several 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.

Vegetation planting and monitoring should continue in 2012. 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. This may require the use of heavy equipment or reducing the intensity of flows through the area.

Grazing should continue similar to 2011. 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.

Table 13a. 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 13b.
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).	

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

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

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

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

Year	Criterion	Satisfactory Progress Threshold
1		75% survival in Good or Fair condition
2	% of plants surviving	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 are prepared within one year of land acquisition. However, 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 Byron Hills Management Plan is currently under development. The Byron Hills Management Area is the southeastern portion of the inventory area, covering Acquisition Analysis Zone 5 and part of Zone 6. This management plan covers six properties that have been acquired for the Preserve System: Vaquero Farms North, Vaquero Farms South, Souza I, Souza II, Souza III, Grandma's Quarter, and Martin. This Byron Hills Management Plan is the first preserve management plan prepared by the Conservancy and can be expanded to include neighboring properties. As such, it will likely become a template for future preserve management plans prepared for other parts of the Preserve System.

As of December 2011, the Byron Hills Management Plan was not finalized, although implementation of limited management activities had commenced, as described below.

Natural Community Enhancement

This section describes the HCP/NCCP natural community enhancement conservation measures implemented during the 2011 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*, Conservation Measure 3.9 *Conduct Experimental Management to Enhance Covered Plant Populations*, and Conservation Measure 2.9 *Manage Streams and Riparian Woodland/Scrub*.

Efforts To-Date

Natural Community enhancement has been ongoing since permit issuance. The following 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*.

Livestock grazing: 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*. The grazing leases are now based on the EBRPD template. Their template maximizes natural resource management. Under this lease rent is now based on stocking rate rather than per acre. The goal is to encourage the use of more sustainable stocking rates rather than maximizing the number of livestock per acre. A mobile electric fence was purchased and installed to regulate grazing on the 40-acre milk thistle eradication site and restoration site on Souza II. Cattle were initially excluded from the recently reseeded 40-acre milk thistle eradication site and then allowed to graze. Post-restoration at the Upper Hess Habitat Restoration Project site, a water trough system was installed to provide water to cattle on site. Historically cattle used the main pond on site as a source of water. To better manage the resource, cattle are now excluded from the pond and wetland areas except for occasional managed grazing. This required provision of an alternative water source.

Restoration project site preparation: Prior to restoration ground disturbance at the Upper Hess Creek Watershed Habitat Restoration Project site, invasive plants growing within the restoration site were treated. Restoration Resources applied herbicide to pepperweed that was growing within the project area. The goal was to reduce the risk of the plant moving into the restored area.

Invasive species management: The 40+-acre milk thistle infestation area on the Souza II property was aerially sprayed with herbicide in both 2009 and 2010. Infestations on the Martin property were also sprayed at that time. In October 2010, the 40+-acre area on the Souza II property was mowed and reseeded with a native seed mix. Prior to cattle starting to graze in this area, a three-string electric fence with a solar generator was installed (late November 2010).

In February 2011, new grasses were determined to be well-established and ready to be grazed. Cattle were moved inside the electric fence enclosure to flash graze the area. The cattle grazed the area for two 10-day periods: one in mid-February and one in mid-March. This was done to reduce thatch, stimulate more growth of the native grasses, and expose any remaining thistle plants. In early April after cattle had been moved out of the area, the emerging thistle was spot treated with herbicide. There was no more grazing of the area until November. No fencing was installed for the winter 2011/12 grazing season and the area was reintegrated into the main grazing unit. The eradication site is now nearly devoid of milk thistle (Figure 19).

Morning glory planting on Vaquero Farms North: Seed 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, an inch deep and approximately 5 inches apart.

Atriplex transplanted from Vasco Road to Souza II. 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 a

covered project area and placed it on Souza II. Another area from the Vasco Road widening project was going to impact an Atriplex population, so topsoil was again harvested and placed in a separate plot on Souza II.

The atriplex transplant project on Souza II is experiencing positive results. In the west transplant site, seven San Joaquin spearscale and two crownscale (*Atriplex coronata* var. *coronata*) were observed. In the east transplant site, 17 San Joaquin spearscale and 1 crownscale were observed. Many of the individuals were flowering and presumably producing seed. This new population of San Joaquin spearscale will continue to be monitored as part of activities on the Souza II parcel.

Oil spill site clean-up and restoration on Souza III. On August 27, 2011, ConocoPhillips' 24-inch crude oil Pipeline Line 200 was punctured by an unauthorized backhoe excavation by an unknown party. The incident resulted in release of pressurized crude oil on Souza III and a neighboring property (the actual site of the rupture) near Vasco Road. The pipeline was remotely shutdown within 10 minutes of detection; however between 7 and 9 acres were affected and required cleanup (Monk & Associates 2011b) (Figure 20). Site clean-up and restoration was funded by ConocoPhillips and conducted by ConocoPhillips, authorized consultants, or third parties. ConocoPhillips retro-actively applied for take coverage for the pipeline repair, site clean-up, and restoration. Take coverage is anticipated to be extended in 2012.

Site clean-up and restoration included excavation, recontouring, and revegetation. Contaminated soils and vegetation were removed and the topography of the site was restored as close as possible to the original topography. In locations where contaminated soil removal was greater than a few inches, fill was imported, deposited, and recontoured. Soil was imported from immediately south of the site from an area with similar soil and seed bank. For those areas where soil removal was not required, contaminated vegetation was removed using hand tools (i.e., raking). Vegetation removal included grasses and three bluegum eucalyptus trees (*Eucalyptus globulus*). All earthwork was completed before the onset of the fall/winter rainfall. The site was revegetated to provide erosion control and restore the site to be consistent with the surrounding grassland community. The site was hydroseeded and mulched using a California native grassland seed mix.

A minimum of 3 years of biological monitoring will occur to determine if site restoration success criteria are met. Any areas where soil was removed shall exhibit a minimum of 80% total vegetation cover after 2 years and 100% vegetation cover after 3 years. Species composition shall be comparable to surrounding sites or exhibit a higher percent cover of California native species. Milk thistle, Italian thistle, and any species listed on the *California Exotic Pest Plant Council's Exotic Pest Plants of Greatest Ecological Concern in California* shall not be tolerated in the revegetated areas during the establishment period. If there are solid patches of thistle that persist after the 3-year monitoring period, control will continue until total cover of these species is less than 5% or until cover is consistent with cover by these species in areas adjacent to the release site that were not affected by the release or remediation efforts. ConocoPhillips

will be financially responsible for any remedial measures that would be implemented in the event success criteria are not met after 3 years of monitoring.

Land Management

This section summarizes all land management activities undertaken on the HCP/NCCP Preserves during the 2011 reporting period, and discusses management issues facing the Conservancy.

For the 2011 reporting period, management consisted of the enhancement actions described above. Currently the primary management issue facing the Conservancy is the pervasiveness of non-native invasive plants. The Conservancy will continue its aggressive approach to controlling invasive plants in the Preserve System. Additionally, management activities in the Preserve System to meet the ECCC HCP/NCCP management related biological goals and objectives will increase once the Byron Hills Preserve Management Plan has been finalized.

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 2011 reporting period.

Figure 19. Preserve Management: Milk Thistle Eradication



Figure 20. Preserve Management: Oil Spill Site Clean-up and Restoration



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 the *Habitat Restoration and Creation* section.

Monitoring Design Phase

The monitoring design phase must occur within the first 5 years of Plan implementation. 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.

As of December 2011, the monitoring design is underway. Protocols are being developed for the Byron Hills Management area for monitoring the effectiveness of monitoring actions and the status and trend of focal species. Once these protocols are developed, 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 monitoring design will include 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. This phase will continue for acquired lands once the monitoring protocols have been developed during the monitoring design phase. Prior to finalization of standardized survey protocols, limited inventory is being implemented in the Preserve System. Monitoring in the reporting year is summarized below.

HCP plant species (covered and no-take species) inventories and focused botanical surveys were conducted in April, May, and September 2011 (Nomad Ecology 2011c, Nomad Ecology 2011d). Ten high-priority Preserve System properties (Barron, Grandma's Quarter, Land Waste Management, Vaquero Farms North, Vaquero Farms South, Martin, Souza I, Souza II, Souza III, and Thomas/Austin 1) and 11 target species were identified for inventory. The target species included large-flowered fiddleneck (*Amsinckia grandiflora*), alkali milk-vetch (*Astragalus tener* var. *tener*), brittlescale, San Joaquin spearscale, big tarplant, round-leaved filaree (*California [Erodium] macrophyllum*), recurved larkspur (*Delphinium recurvatum*), Diablo helianthella, Contra Costa goldfields (*Lasthenia conjugens*), Mount Diablo manzanita, showy madia (*Madia radiata*), and adobe navarretia (*Navarretia nigelliformis* ssp. *Nigelliformis*). In addition to the Nomad Ecology inventory, focused botanical surveys for round-leaved filaree were conducted as part of the PG&E's Contra Costa-Las Positas 230 kilovolts (kV) Transmission Line Reconductoring Project's mitigation and restoration strategy. Focused botanical surveys were also conducted for the Upper Hess Restoration Project (Land Waste Management property) for HCP plant species, uncommon vegetation types and uncommon landscape features.

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 characteristics 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.

Five covered plant species were observed during the inventory and focused botanical surveys. These include brittlescale, San Joaquin spearscale, big tarplant, round-leaved filaree, and Diablo helianthella. Overall, a total of 11 populations of covered plant species were recorded with an estimated number of 3,884 individuals represented. In addition, crownscale was also observed at multiple locations within the Preserve System. One sensitive natural community and two uncommon habitat types were identified on Land Waste Management, including three-square bulrush, saltgrass, and alkaline scalds. The results of the inventory and focused surveys are incorporated in the annual report. New species occurrences are credited toward the current reporting year rather than the year of the acquisition.

A wetland assessment and mapping of Preserve System acquisitions was also conducted (Nomad Ecology 2011e). 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 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, permanent wetland, pond, seasonal wetland, riparian, alkali grassland, rock outcrops, native grassland, and seeps/springs for Vaquero Farms North and South, Souza 1 (portion) and 3, Martin, Grandma's Quarter, and Barron.

Other targeted monitoring efforts were not conclusive. In 2010, vernal pool fairy shrimp inoculant was placed in the largest wetlands south of the creek on Souza II. There was too much rain in the 2010–2011 rainy season and not enough rain by the end of 2011 to verify species presence. For the small-flowered morning glory, monitoring in 2011 did not indicate that the seeds germinated. Both sites will be monitored again in 2012.

Wildlife baseline inventories included vernal pool species surveys and covered species sitings during routine management or restoration monitoring. For example, forty-two California red-legged frogs were counted in a small complex of five collapsing spring boxes on Land Waste Management during restoration construction. California tiger salamanders continue to be present and breed in the pond at the Vasco Caves Souza I Pond Creation Project.

Long-Term Monitoring Phase

The long-term monitoring phase will occur as soon as 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.

As of December 2011, long-term monitoring has not yet commenced.

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.

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.

- 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 paper 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.

The research outcomes would be ready for application as early as 2013. The research project would occur in 2012 and 2013. Trapping, tagging, and data collection would occur in the first year, and additional data collection, data analysis, and development of maps and papers would

occur in the second year. It is anticipated that the project results would be used to reduce raptor mortality and inform repowering in the APWRA and in other areas of California with similar species composition and topography.

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 2011, implementation of adaptive management was limited to restoration sites. As discussed in Section IV, each site was monitored to measure progress toward achieving success criteria. Management was adjusted based on monitoring results.

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%. The Conservancy is 5,060 acres ahead of the stay-ahead requirement for grassland and irrigated agriculture land cover types (the requirement is 129 acres). For plant occurrences, the Conservancy is at least 100% ahead of all impacts (Table 15).

Table 14. Stay-Ahead Assessment: Land Cover

Land Cover Type	Conservation			Impact			Acres Required to be Ahead	Acres Ahead	% Ahead ³ (Conservation % - Impacts %)
	Protection Required (acres)	Protection to date (acres)	% of Required	Impact	Impacts to date (acres)	% of Impacts			
Terrestrial									
All grassland & irrigated agriculture	18,150	5,146.7	28.4%	12,148	86.3	0.7%	128.9	5,060.4	28%
Chaparral and scrub	550	115.3	21%	2	0.0	0.0%	0.0	115.3	21%
Oak savanna	500	279.6	56%	165	0.0	0.0%	0.0	279.6	56%
Oak woodland	400	1,071.5	268%	73	0.0	0.0%	0.0	1,071.5	268%
<i>Subtotal terrestrial</i>	<i>37,750</i>	<i>6,613.2</i>	<i>18%</i>	<i>24,536</i>	<i>86.3</i>	<i>0%</i>	<i>132.8</i>	<i>6,480.4</i>	<i>17%</i>
Aquatic									
Riparian woodland/scrub	70	17.35	25%	35	0.24	1%	0.5	16.9	24%
Perennial wetland ¹	75	4.41	6%	75	0.01	0%	0.0	4.4	6%
Seasonal wetland	768	12.68	2%	56	0.29	1%	4.0	8.7	1%
Alkali wetland	93	13.29	14%	31	0.00	0%	0.0	13.3	14%
Pond	16	6.52	41%	8	0.00	0%	0.0	6.5	41%
Reservoir (open water) ²	12	0.00	0%	12	0.00	0%	0.0	-	0%
Slough/Channel	36	0.00	0%	72	0.07	0%	0.0	(0.0)	0%
<i>Subtotal aquatic</i>	<i>1070</i>	<i>54.3</i>	<i>5%</i>	<i>289</i>	<i>0.61</i>	<i>0%</i>	<i>2.3</i>	<i>52.0</i>	<i>5%</i>
Stream (length in linear feet)									
Perennial stream	4,224	886.4	21%	2,112	56.3	3%	112.6	773.8	18%
Intermittent stream	2,112	24,087.7	1141%	2,112	65.0	3%	65.0	24,022.7	1137%
Ephemeral stream	26,400	130,038.3	493%	26,400	76.0	0%	76.0	129,962.3	492%
<i>Subtotal stream length</i>	<i>32,736</i>	<i>155,012.4</i>	<i>474%</i>	<i>30,624</i>	<i>197.3</i>	<i>1%</i>	<i>210.9</i>	<i>154,801.5</i>	<i>473%</i>
Totals									
Acres	38,820	6,667.5	17%	24,825	86.9	0%	135.9	6,531.6	17%
Linear feet	32,736	155,012.4	474%	30,624	197.3	1%	210.9	154,801.5	473%

¹ Perennial wetlands are equivalent permanent wetlands.² Reservoir (open water) is equivalent to aquatic.³ The Plan allows a 5% deviation from Stay Ahead requirements. For terrestrial land cover, the Plan provides that Stay Ahead be measured against the following categories: chaparral, oak savanna, oak woodland and the sum of all grassland and irrigated agricultural land cover types

Table 15. Stay-Ahead Assessment: Plants

Common Name	Scientific Name	Conservation	Impacts	Difference	% Ahead
Mount Diablo manzanita	<i>Arctostaphylos auriculata</i>	1	0	1	100%
Brittlescale	<i>Atriplex depressa</i>	2	--	2	100%
San Joaquin spearscale	<i>Atriplex joanquiniana</i>	9	0	9	100%
Big tarplant	<i>Blepharizonia plumosa</i>	3	0	3	100%
Mount Diablo fairy lantern	<i>Calochortus pulchellus</i>	1	0	1	100%
Recurved larkspur	<i>Delphinium recurvatum</i>	0	0	0	--
Round-leaved filaree	<i>Erodium macrophyllum</i>	1	[see note ¹]	1	--
Diablo helianthella	<i>Helianthella castanea</i>	2	0	2	100%
Brewer's dwarf flax	<i>Hesperolinon breweri</i>	0	0	0	--
Showy madia	<i>Madia radiata</i>	0	0	0	--
Adobe navarretia	<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	0	0	0	--
Total		19	0	19	--

¹ Temporary impacts occurred to round-leaved filaree as part of the PG&E Contra Costa Las Positas Project. The soil was protected from disturbance, the site was returned to pre-project conditions, seeds collected on site were propagated, and monitoring reports document that round-leaved filaree persists on site and is as abundant as before the project.

VIII. CHANGED CIRCUMSTANCES AND REMEDIAL MEASURES

The No Surprises Regulation established by 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, 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 CDFG 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 CDFG 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.

No changed circumstance occurred in 2011.

They are applying for retroactive coverage as a covered activity. Add that to this section. If this doesn't belong here then, put in preserve management.

IX. FINANCES

Budget

The Conservancy analyzed cost projections from the HCP, the previous years' actual costs and the anticipated 2011 work plan to develop the 2011 budget (Table 16). During the reporting period, the Conservancy stayed within each cost category budget as well as the total 2011 budget. During the reporting period, the largest budgeted item and expenditure was land acquisition followed by restoration planning, design, and construction, program administration and monitoring, research, and adaptive management. 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. During the reporting year, the Conservancy funded extensive plant and wetland surveys of Reserve System properties. All in all, the Conservancy continues to implement the Plan within its allocated budget.

Revenue Sources

Three main revenue sources are used to fund the Plan.

- Fee collection: Development, wetland, rural road, and temporary impact fees are utilized to mitigate impacts on special-status species and natural communities.
- Local public funding and foundation grants: Acquisition and management of land by local agencies, including park districts, cities, and the county, use local tax revenues. Foundation grants (e.g., Gordon and Betty Moore Foundation) were awarded to the Conservancy to 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* fees on covered activities. Contribution to Recovery fee payment is required for Participating Special Entities to contribute funds over and above fee requirements in order to contribute to the recovery of species in the inventory area.

A total of \$13,747,229 was received, approved, or provided as match in the reporting period (Tables 17 and 18). This amount includes development fees from 13 covered activities (\$478,600), contribution to recovery fees from four covered activities (\$317,425), stream fees from two covered activities (\$52,722), local funding (\$2,266,900), and grants (\$10,631,582). Local funding came from various EBRPD funds and a grant from the Gordon and Betty Moore Foundation. All grants awarded to date are summarized in Table 19. Most of the grant funding awarded will actually be spent in future years.

Funding in Perpetuity

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 million⁷ 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, 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 has initiated planning for this requirement. In addition, the Conservancy has begun to secure potential sources for long-term funding. Properties acquired through 2011 will provide lease revenue from existing PG&E facilities, cellular communications facilities and wind turbines with long-term leases to EBRPD. 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.

⁷ 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. 2011 Conservancy Budget: Expenditures and Comparison to Budget Projections

HCP/NCCP Projected Cost Estimate					2011							
Information					Budgeted funding by Revenue Source						Expenditures	
Cost Category	Years 1-5	Average Cost	% of	Existing	Existing	Mitigation	CDFG's	Grant	TOTAL	% of	Total	
		Per Year										Development
		(Years 1-5) ¹	Total	Fee	Revenues	Revenues	Foundation			Total	for 2011	
Program Administration	\$ 3,065,485	\$ 613,097	5.8%	\$	303,491	\$ -	\$ 303,491	\$ -	\$ 606,981	4%	\$ 578,907	
Land Acquisition	\$ 37,337,984	\$ 7,467,600	71.2%	\$	-	\$ -	\$ 100,000	\$ 13,925,099	\$ 14,025,099	84%	\$ 7,814,469	
Management, Restoration and Recreation Planning and Design	\$ 1,861,131	\$ 372,226	3.5%	\$	103,259	\$ -	\$ -	\$ 200,000	\$ 303,259	2%	\$ 240,731	
Habitat Restoration/Creation	\$ 3,625,657	\$ 725,131	6.9%	\$	-	\$ 21,630	\$ 21,630	\$ 800,000	\$ 843,259	5%	\$ 761,760	
Environmental Compliance	\$ 459,000	\$ 91,800	0.9%	\$	95,770	\$ 10,000	\$ 10,000	\$ 50,000	\$ 165,770	1%	\$ 141,160	
HCP/NCCP Preserve Management and Maintenance	\$ 3,191,980	\$ 638,396	6.1%	\$	88,086	\$ -	\$ 176,171	\$ -	\$ 264,257	2%	\$ 59,911	
Monitoring, Research, and Adaptive Management	\$ 2,159,819	\$ 431,964	4.1%	\$	20,000	\$ 20,000	\$ 73,817	\$ 150,000	\$ 263,817	2%	\$ 145,154	
Remedial Measures	\$ 30,000	\$ 6,000	0.1%	\$	6,000	\$ -	\$ -	\$ -	\$ 6,000	0%	\$ -	
Contingency Fund (5% of non-land acquisition costs)	\$ 719,654	\$ 143,931	1.4%	\$	122,367	\$ -	\$ -	\$ -	\$ 122,367	1%	\$ -	
TOTAL	\$ 52,450,710	\$ 10,490,145	100.0%	\$	738,972	\$ 51,630	\$ 685,108	\$ 15,125,099	\$ 16,600,808	100%	\$ 9,742,092	
TOTAL FUNDS RECEIVED OR AWARDED				\$	2,288,489	\$ 36,191	\$ 2,782,388	\$ 15,702,685	\$ 20,809,753			
BALANCE (TO Be Reserved For Future Years)				\$	1,549,517	\$ (15,439)	\$ 2,097,280	\$ 577,586	\$ 4,208,945			

¹ The annual average of the initial five year cost estimate may provide an unrealistic estimate of early annual costs because the level of effort on some categories ramps up from

Table 17. Summary of All Revenues Received/Approved

Type¹	Reporting Period Total		Cumulative Total	
Development fees	\$	478,600	\$	2,023,162
Contributions to Recovery	\$	317,425	\$	456,478
Stream fees	\$	52,722	\$	170,878
Wetland fees	\$	-	\$	79,431
Local Funding	\$	2,266,900	\$	11,467,427
Grants	\$	10,631,582	\$	45,746,267
<i>Total</i>	\$	<i>13,747,229</i>	\$	<i>59,943,642</i>

¹ Local funding includes grants awarded to local partners. Grants are grants awarded to the Conservancy for Conservation Plan implementation. For some of the land acquisitions (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.

Table 18. Summary Accounting of Fee and Grant Revenues Received in Reporting Period (includes grant funds approved but not received)

Type ¹	Source	Date	Amount
Development fees			
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project		10/14/2011	\$ 29,278
Oakley Generating Station Project - First Amendment		10/27/2011	\$ 3,440
Oakley Generating Station Project		5/31/2011	\$ 230,441
ConocoPhillips Line 200 Pipeline Repair Project - Second Amendment		7/13/2011	\$ 1,066
Coalinga-Avon Pipeline Repair Extension - First Amendment		10/13/2011	\$ 2,132
Balfour Road Culvert Repair Project		9/22/2011	\$ 11,869
Byron Highway Shoulder Widening Project (Phase I)		6/7/2011	\$ 48,408
Morgan Territory Road Telecommunications Facility		7/26/2011	\$ 9,768
Vasco Camino Diablo Intersection Project		5/11/2011	\$ 48,243
J4 Byron Hot Springs Communications Facility		5/23/2011	\$ 5,487
Camino Diablo Vasco Telecommunications Facility Project		11/18/2011	\$ 46,778
Stonewood III- Unit 1 of Subdivision #9183		7/11/2011	\$ 23,563
New Meetinghouse for Brentwood 2nd and Marsh Creek Wards		7/11/2011	\$ 18,125
<i>Development fees subtotal</i>			\$ 478,600
Contributions to Recovery			
ConocoPhillips Line 200 Pipeline Repair and Anode Bed Project (recovery)		10/14/2011	\$ 14,639
Oakley Generating Station Project - First Amendment (recovery)		10/27/2011	\$ 1,720
Oakley Generating Station Project (recovery)		5/31/2011	\$ 200,000
Oakley Generating Station Project (conservation planning)		5/31/2011	\$ 100,000
Coalinga-Avon Pipeline Repair Extension - First Amendment (recovery)		10/13/2011	\$ 1,066
<i>Contribution to Recovery subtotal</i>			\$ 317,425
Stream Fees			
Balfour Road Culvert Repair Project		9/22/2011	\$ 11,522
Byron Highway Shoulder Widening Project (Phase I)		6/7/2011	\$ 41,200
<i>Stream fees subtotal</i>			\$ 52,722
Other Fees			
<i>Other fees subtotal</i>			
Grants			
Section 6 (acquisition of various properties)	USFWS administered by WCB	various	\$ 4,463,936
IRWMP - Prop. 84	Department of Water Resources	7/16/2011	\$ 650,000
NCCP Local Assistance (wetland/rare plant inventory)	CDFG	11/9/2011	\$ 40,000
NCCP Local Assistance (restoration project monitoring)	CDFG	11/9/2011	\$ 50,000
NCCP Local Assistance (preserve mgmt. plan development)	CDFG	11/9/2011	\$ 75,000
Gordon and Betty Moore Foundation		10/19/2011	\$ 1,300,000
Prop. 84 NCCP (acquisition of Barron)	WCB	2/24/2011	\$ 973,930
Prop. 84 NCCP (acquisition of Thomas)	WCB	6/2/2011	\$ 1,842,966
Prop. 84 NCCP (acquisition of Affinito)	WCB	12/8/2011	\$ 1,005,750
Prop. 84 NCCP (acquisition of Vaquero Farms Central)	WCB	12/8/2011	\$ 230,000
<i>Grants subtotal</i>			\$ 10,631,582
Local Matching Funds			
EBRPD		(see Table 7)	\$ 2,266,900
<i>Local funding subtotal</i>			\$ 2,266,900
Total			\$ 13,747,229

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 acquisitions (Table 7), the lands were acquired for less than the appraised value. This is considered

Table 19. Grants Awarded to Conservancy for Implementation of East Contra Costa County HCP/NCCP¹

<i>Funding Source</i>	<i>Agency</i>	<i>Purpose</i>	<i>Amount</i>	<i>Required Match</i>	<i>Amount Expended (12/31/11)</i>	<i>Remain (12/31/11)</i>	<i>Needs to be used by...</i>	<i>Complete ?</i>	<i>Notes</i>
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	\$2,788,709	\$3,211,291	5-14-12		\$1.4M encumb.
Section 6 (2009)		Acquisition	\$2,500,000	\$3,055,556	\$0	\$2,500,000	8-1-12		
Section 6 (2010)		Acquisition	\$6,000,000	\$7,333,333	\$0	\$6,000,000	7-31-13		\$1.08M encumb.
Section 6 (2011)		Acquisition	\$4,463,936	\$5,455,922	\$0	\$4,463,936	2014		end date TBD
CVPIA - HRP	USBR	Acquisition	\$1,241,631	\$500,000	\$1,241,631	\$0	Sep 2010	√	
IRWMP - Prop 50	SWRCB	Acquisition or restoration	\$750,000	\$500,000	\$750,000	\$0	June 2012	√	
IRWMP - Prop 50 (reprogrammed)	SWRCB	Acquisition or restoration	\$1,400,000	\$500,000	\$1,400,000	\$0	Mar 2012		reimbursement pending
IRWMP - Prop 84	DWR	Acquisition or restoration	\$650,000	\$650,000	\$0	\$650,000	2015		end date TBD
NCCP Local Assistance (2006)	CDFG	Start-up staffing	\$40,000	'=====	\$40,000	\$0	June 2008	√	
NCCP Local Assistance (2007)	CDFG	Start-up wetlands restoration	\$60,000	\$120,000	\$60,000	\$0	Dec 2008	√	
NCCP Local Assistance (2008)	CDFG	Wetlands restoration at Souza 2	\$150,000	=====	\$125,100	\$0	April 2011	√	
NCCP Local Assistance (2009)	CDFG	Hess Construction	\$150,000	\$111,000	\$135,700	\$14,300	Mar 2012		reimbursement pending
NCCP Local Assistance (2010)	CDFG	Wetland and rare plant inventory	\$27,000	\$0	\$27,000	\$0	April 2013		reimbursement pending
NCCP Local Assistance (2010)	CDFG	Restoration project monitoring/maint.	\$85,000	\$0	\$85,000	\$0	April 2013		reimbursement pending
NCCP Local Assistance (2010)	CDFG	Preserve monitoring plan development	\$50,000	\$0	\$0	\$50,000	April 2013		
NCCP Local Assistance (2011)	CDFG	Wetland and rare plant inventory (phase 2)	\$40,000	\$0	\$0	\$40,000	April 2014		
NCCP Local Assistance (2011)	CDFG	Restoration project monitoring/maintenance	\$50,000	\$0	\$0	\$50,000	April 2014		
NCCP Local Assistance (2011)	CDFG	Preserve management plan development	\$75,000	\$0	\$8,500	\$66,500	April 2014		reimbursement pending
Gordon and Betty Moore Foundation		Acquisition Fox Ridge	\$880,000	50% match desired	\$880,000	\$0	12/31/09	√	
Gordon and Betty Moore Foundation		Acquisition and research Souza 3	\$2,250,000	50% match desired	\$2,000,000	\$250,000	Sep 2012		
Gordon and Betty Moore Foundation		Acquisition Fan, Galvin, Moss Rock&VF Central	\$1,300,000	50% match desired	\$0	\$1,300,000			received & encumbered; not spent
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	\$0	\$1,005,750	Dec 2012		to be disbursed soon
Prop 84 NCCP account	WCB	Acquisition of Vaquero Farms Central	\$230,000	\$0	\$0	\$230,000	Dec 2012		to be disbursed soon
TOTAL			\$45,746,267	\$42,097,143	\$25,889,590	\$19,831,777			

Note 1: Funding from partners not included. EBRPD has contributed more than \$13 million of its own funds or its grants funds to joint land acquisitions.

Explanation of Acronyms:

CDFG: California Department of Fish and Game

CVPIA HRP: Central Valley Project Improvement Act Habitat Restoration Program

DWR: Department of Water Resources

EBRPD: East Bay Regional Park District

IRWMP: Integrated Regional Water Management Plan

NCCP: Natural Community Conservation Plan

Section 6: Cooperative Endangered Species Conservation Fund, HCP Land Acquisition subaccount (authorized in Section 6 of federal Endangered Species

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 CDFG)

X. PROGRAM ADMINISTRATION

Minor and Major Amendments

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

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 U.S. Army Corps of Engineers (Corps), U.S. Environmental Protection Agency, State Water Resources Control Board, the Regional Water Quality Control Boards, CDFG 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.

Significant progress was made in 2011.

- The Corps issued a Draft Regional General Permit (RGP) related to the HCP/NCCP, solicited public comments, and received eleven supportive comment letters by the deadline. The RGP would allow for expedited Corps authorization of activities that are covered under the HCP/NCCP and meet the impact limitations specified in the RGP (e.g., less than 1.5 acres of impacts to waters). A key purpose of the RGP is to coordinate the Corps permitting requirements with those of the HCP/NCCP. The RGP would do this by relying on the HCP/NCCP conservation strategy, mitigation ratios, regional wetland avoidance strategy and other conservation measures for the bulk of the RGP conditions. Project proponents would still need to apply individually to Corps for authorization under the RGP, but the permit conditions are defined in the RGP and closely match the HCP/NCCP. (The RGP was issued by the Corps on May 4, 2012 as this Annual Report went to press.)
- The Sacramento District was officially designated the lead Corps District for the Conservancy's RGP. The Sacramento District will be responsible for approving and implementing the RGP throughout the entire HCP/NCCP Plan Area, including areas that are outside the Sacramento District boundaries.

- The Corps Sacramento District initiated programmatic consultation on the RGP under Section 7 of the ESA with the USFWS. (USFWS issued a Biological Opinion on the RGP on April 30, 2012.)
- The Corps Sacramento District also requested a General 401 Water Quality Certification under Section 401 of the Clean Water Act from the State Water Resources Control Board for activities that would be authorized under the Corps proposed implementation of the RGP.
- The Corps issued a Public Notice on an In-Lieu Fee Program Prospectus prepared by the Conservancy. The seven related to the HCP/NCCP, solicited public comments, and received seven supportive comment letters by the deadline. The Conservancy is seeking to establish an In-Lieu Fee (ILF) program to 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. 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.

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. This audit was completed in 2011 to assess HCP/NCCP costs through Year 3 of Plan implementation.

The audit concluded the HCP/NCCP development fees did not require an additional adjustment at this time; however, wetland mitigation fees required adjustment. Wetland mitigation costs were adjusted based on the Conservancy’s experience to date, a review of costs of other restoration projects, and other sources. The Conservancy Board approved the fee adjustment report on July 22 and recommended the adjustments to the cities and the County. The cities and the County are in the process of considering this recommendation.

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XII. LIST OF PREPARERS

East Contra Costa County Habitat Conservancy

John Kopchik

Krystal Hinojosa

Abigail Fateman

Chris Howard

Emma Maack

ICF International

Terah Donovan

Kathryn Gaffney

Silas Toms

Tami Mihm

Corrine Ortega

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 CDFG 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 CDFG 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.