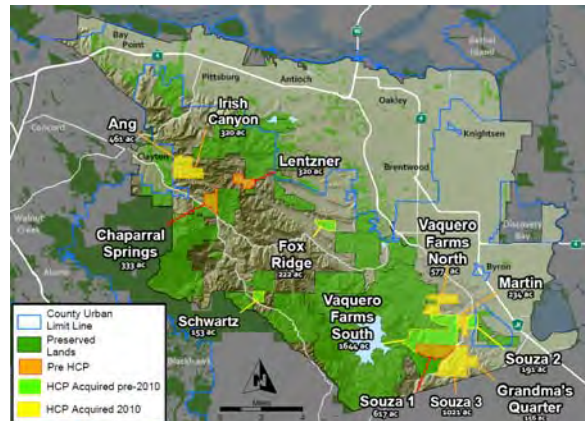


East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan Annual Report 2010



March 2011



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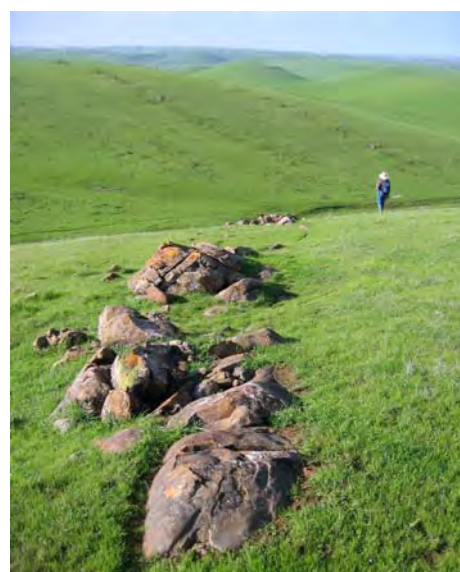
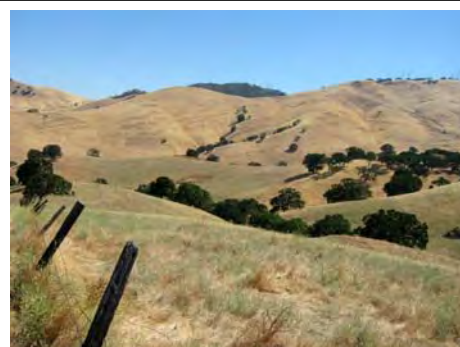
Acronyms and Abbreviations

CDFG	California Department of Fish and Game
CNDDDB	California Natural Diversity Database
Conservancy	East Contra Costa County Habitat Conservancy
EBRPD	East Bay Regional Park District
ESA	Endangered Species Act
HCP/NCCP	Habitat Conservation Plan/ Natural Community Conservation Plan
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

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. Contra Costa County’s population is predicted to grow by 127,000 people by 2025, 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 regional conservation and development guidelines that protect natural resources while improving and streamlining the permit process for state and federally listed species and impacts to regulated wetlands. The Plan was approved by participating local jurisdictions in 2006 and permits were issued by the USFWS and the CDFG in 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 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.

The Conservancy was created to serve as the “Implementing Entity” for the Plan and is responsible for ensuring preserve assembly, habitat restoration and for coordinating overall Plan implementation. This is the second Annual Report prepared by the Conservancy. This Annual Report summarizes implementation activities undertaken between January 1, 2010 to December 31, 2010 per the conditions of the Plan and Implementing Agreement.

Covered Activities

Nine projects received take coverage under the Plan in 2010, including three urban development projects and six rural infrastructure projects, totaling approximately 13.5 acres of permanent impacts and 48.9 acres of temporary impacts.

As required by the HCP/NCCP, impacts resulting from covered activities were tracked by land-cover type and covered plant occurrences. Impacts to aquatic and stream land-cover types were tracked by watershed. Impacts on aquatic land-cover types during the reporting period were limited to the Kellogg watershed and the Brushy watershed.

Land Acquisition and Stay-Ahead

The first three years of Plan implementation resulted in significant progress toward acquisition goals (see Figures ES-1 through ES-4). To date, 13 properties have been acquired for the Preserve System totaling over 6,000 acres. This includes six properties in 2010 and three properties acquired by EBRPD without initial Conservancy involvement. All acquisitions to date have been completed in partnership with EBRPD (i.e. EBRPD will own and manage these Preserve System lands). Highlights of the acquisitions include the following achievements:

- More than 3,600 acres of annual grassland preserved.

- Oak woodland preservation requirement exceeded by 5%.
- 34% of the oak savanna preservation requirements achieved.
- 31% of pond and 17% of alkali wetland preservation requirements achieved.
- 50% of covered plant occurrence preservation requirements achieved.
- intermittent and ephemeral stream preservation requirements achieved.
- Occupied or suitable habitat provided for at least 20 of the 28 covered species.

The Conservancy is in compliance with the Plan's Stay-Ahead Provision. As shown in Table 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 to oak woodland, so each acre of oak woodland conserved to date is in excess of the Stay Ahead requirement. Conservation of other land cover types is less ahead (see Tables ES-2 and ES-3 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 Table 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 a worst case scenario for impacts; the



ultimate requirement may be much less). The Conservancy has been aggressively pursuing the wetlands and pond restoration requirements. During the reporting period, the Conservancy completed one restoration project at Irish Canyon. This project was performed by Save Mount Diablo staff and volunteers and involved planting more than 400 valley oak acorns and buckeye nuts in a denuded stream corridor. To date, four restoration projects have been initiated.

The Conservancy anticipates that when mature, these four restoration projects will successfully have restored or created:

- 0.4 acre of alkali grassland.
- 0.4 acre of native grassland.
- 0.1 acre of alkali wetlands.
- 7.7 acres of seasonal wetland.
- 0.2 acres of perennial wetlands.
- 0.9 acres of riparian woodland.
- 0.3 acres of ponds.
- 3,318 feet of intermittent ephemeral stream.

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

Coordinated Wetland Permitting

The HCP/NCCP was designed to facilitate not only endangered species permitting but also to one day support 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, U.S. Environmental Protection Agency, State Water Resources Control Board, the Regional Water Quality Control Boards, CA Department of Fish and Game and the U.S. Fish and Wildlife Service is ongoing regarding this parallel approach to compliance with wetlands regulations and reliance on the avoidance, minimization, and mitigation measures in the HCP/NCCP as the basis for regional wetlands permitting programs. In 2010, the U.S. Army Corps of Engineers assumed a critical leadership role, developing a potential Regional General Permit related to the HCP/NCCP and reaching out to other wetland regulatory agencies to pursue means for coordinating such a permit with other laws and regulations. In 2010, the Conservancy also prepared and submitted a Prospectus for an In Lieu Fee Program to be considered for approval by the Corps. Such approval would sanction payment of HCP/NCCP fees as suitable mitigation under Corps permits and with the proposed Regional General Permit would achieve significant integration of wetland and species regulations.

Funding

The Conservancy has successfully pursued grants. Various federal, state and private funding sources have generously approved or awarded a total of \$39,952,685 in grant funding since Plan inception, of which \$11,726,928 was spent during the reporting period for Conservancy activities. Most grant funding awarded will be spent in future years. Fees, contributions to recovery and administrative cost reimbursements received in 2010 totaled \$837,587. In addition, EBRPD contributions toward joint acquisitions totaled \$4,679,876 in 2010.

Figure ES-1.Stay Ahead Compliance

This is a graphical representation of data in Table 14.
 The chart compares the pace of conservation to the pace of impacts according to the specific guidelines set forth in the Stay Ahead Provision.
 The green bars show the percent of the acquisition requirements for the various land cover types that have been achieved to date.
 The yellow bars show the percent of impact limits that have been used up.
 To comply with the Stay Ahead Provision, for terrestrial habitats the green bars need to be not more than 5% below the yellow bars.
 With the extensive conservation effort to date, progress toward conservation goals has met, exceeded or vastly exceeded Stay Ahead Requirements.

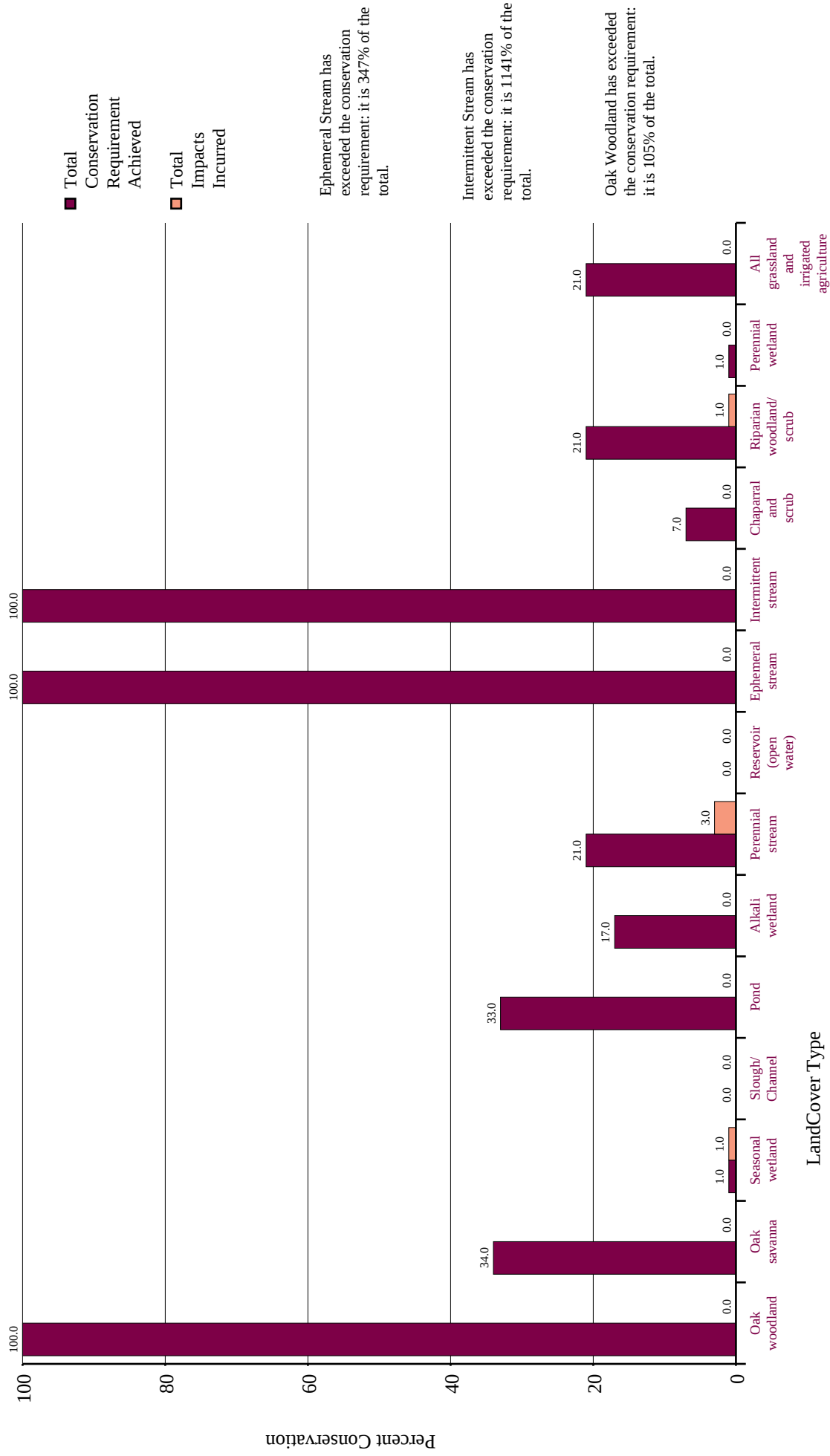


Figure ES-2. Detailed Comparison of Conservation, Conservation Requirements, Impacts and Impact Limits for Terrestrial Land Cover Types

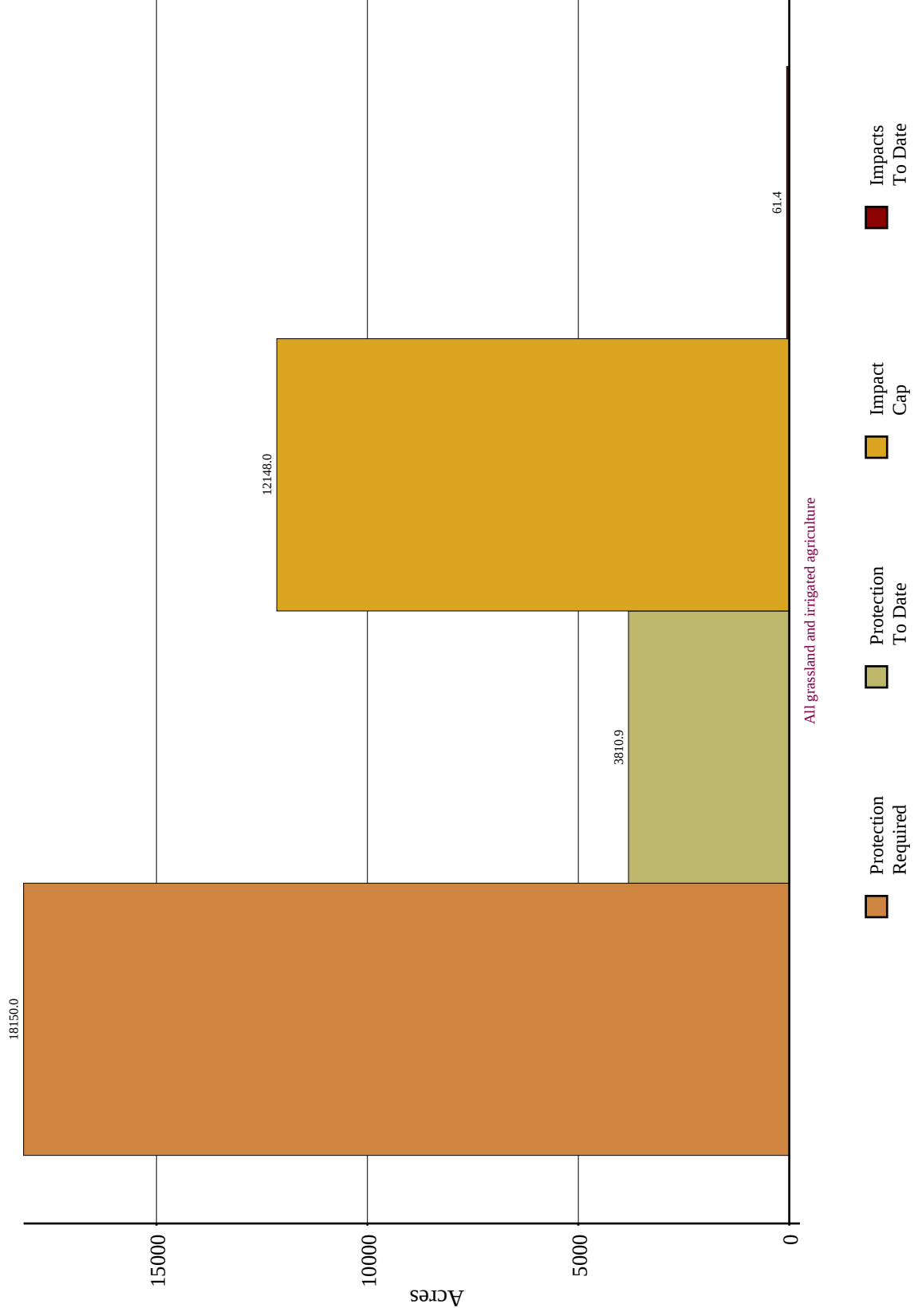


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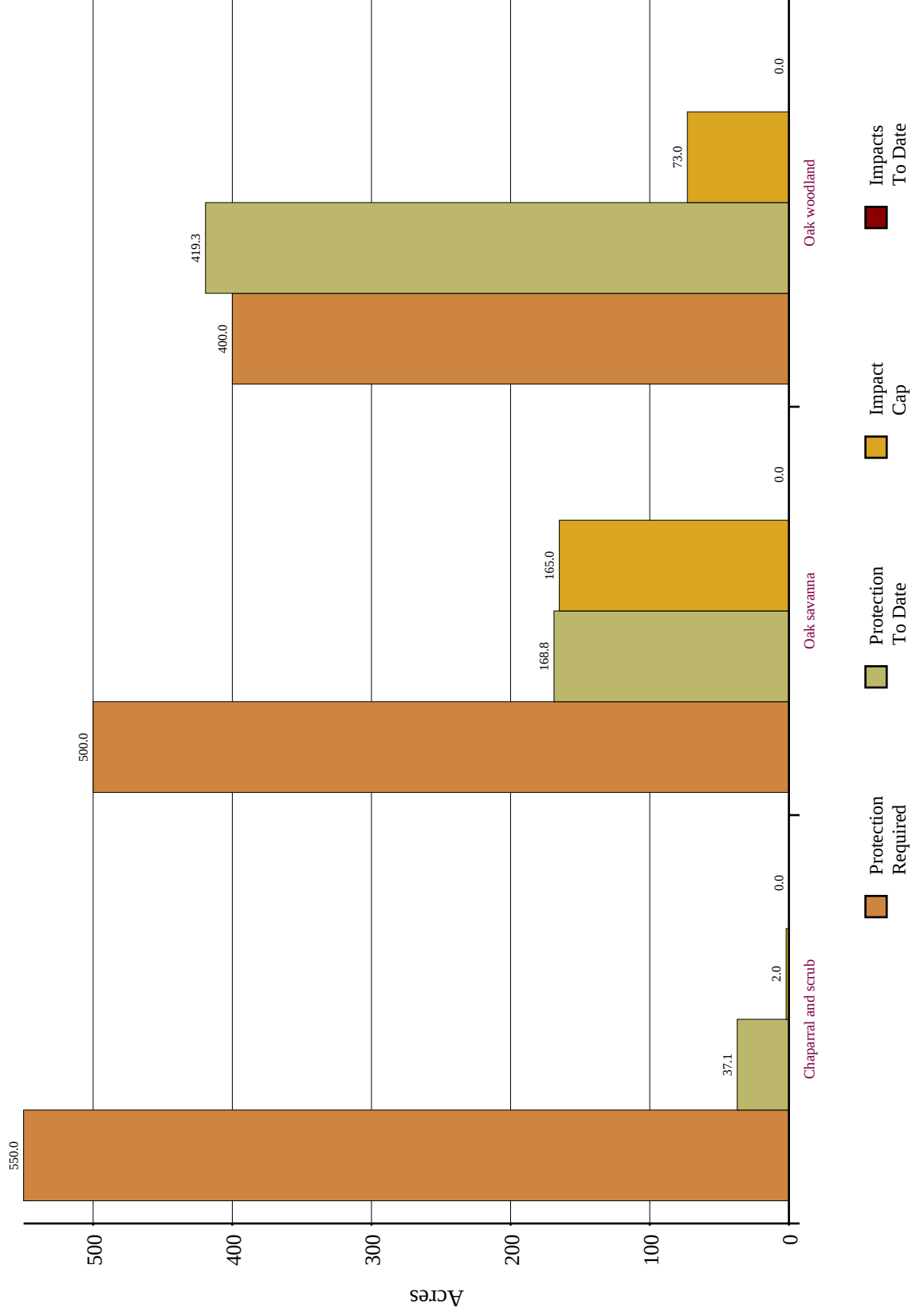
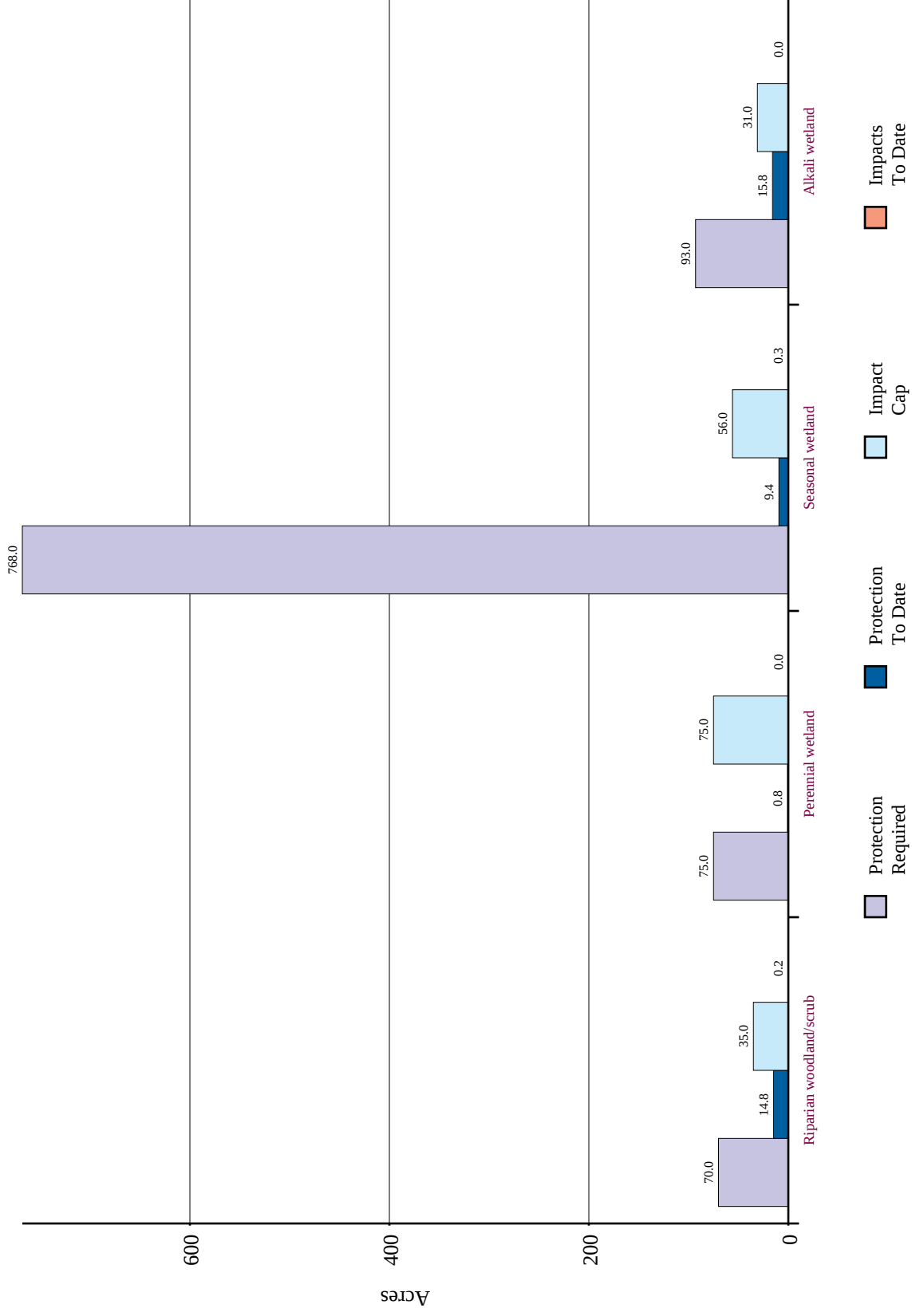


Figure ES-3. Detailed Comparison of Conservation, Conservation Requirements, Impacts and Impact Limits for Aquatic Land Cover Types

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.



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.

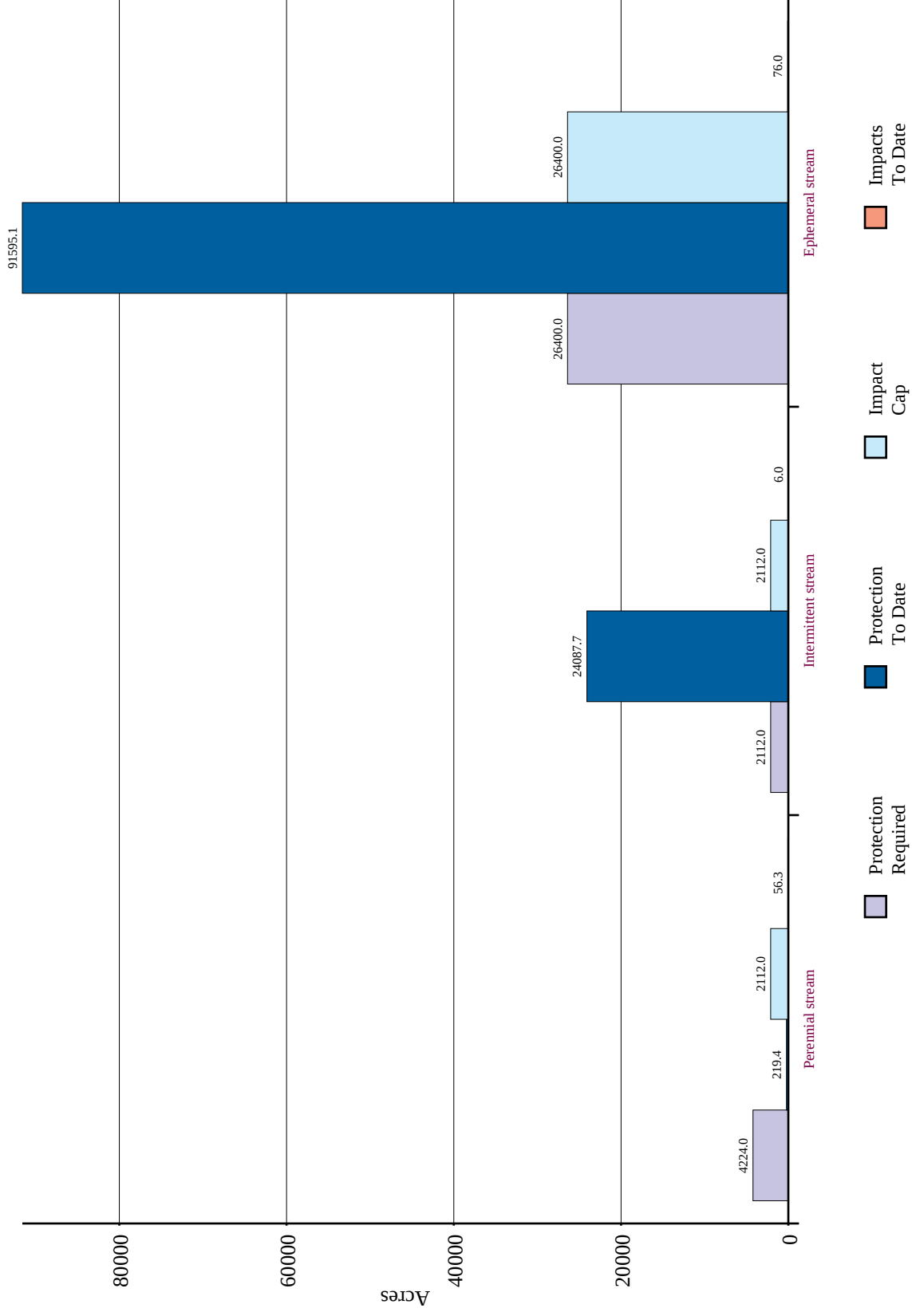
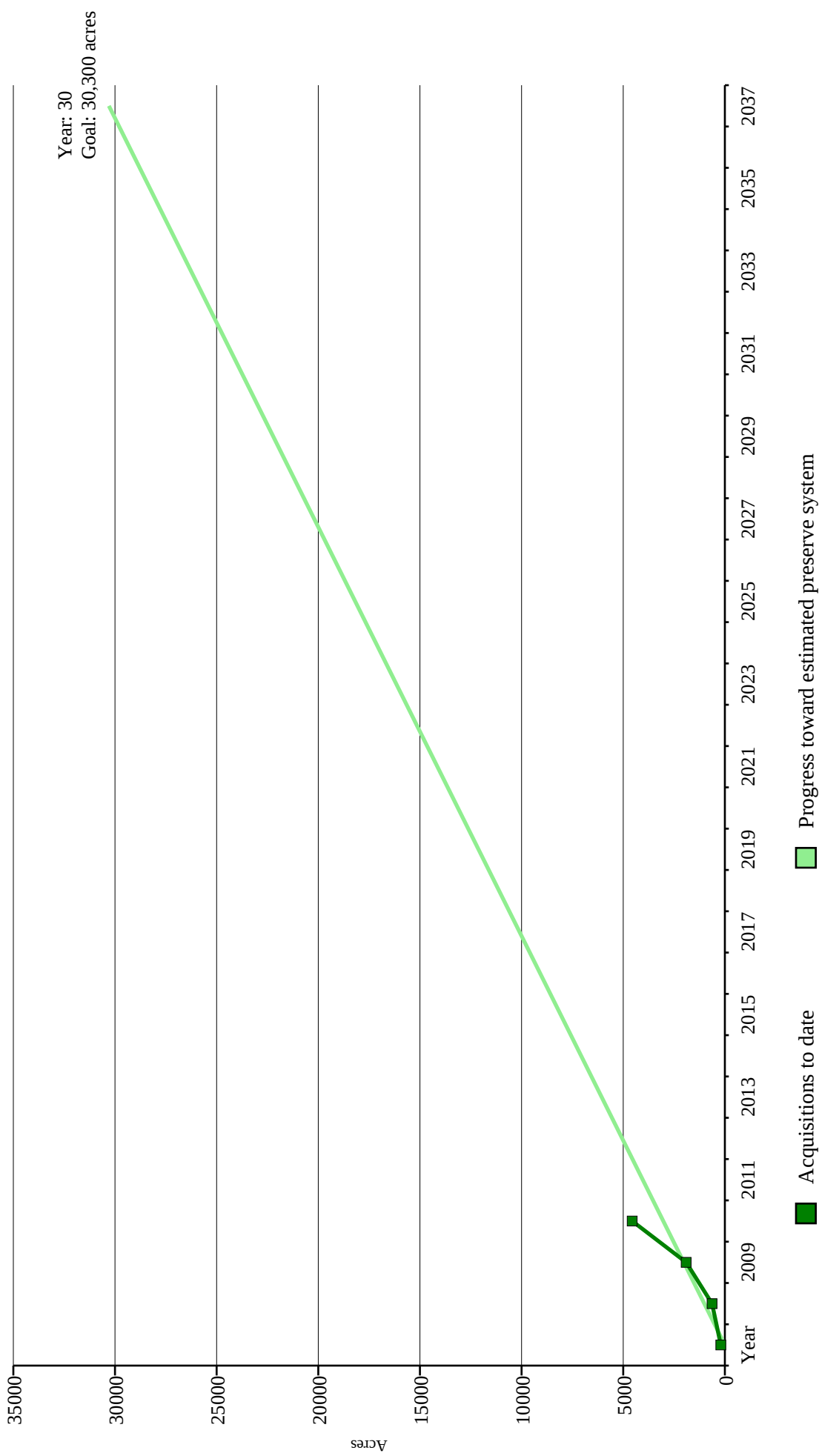


Figure ES-4. Progress Toward Assembling the Preserve System

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 aurora draytonii*), California tiger salamander (*Ambystoma californiense*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), Western burrowing owl (*Athene cunicularia hypugea*), Vernal pool fairy shrimp (*Brachinecta lunchi*), 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 by 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 CDFG and the 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 and ICF International (formerly known as Jones & Stokes) 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 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 wetland restoration, overseeing monitoring and adaptive management, preparing and administering the budget, managing consultants, applying for outside funding and administering approved grants, coordination with external agencies, compilation of 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 second 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:

- 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 to December 31, 2010.

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 was 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.

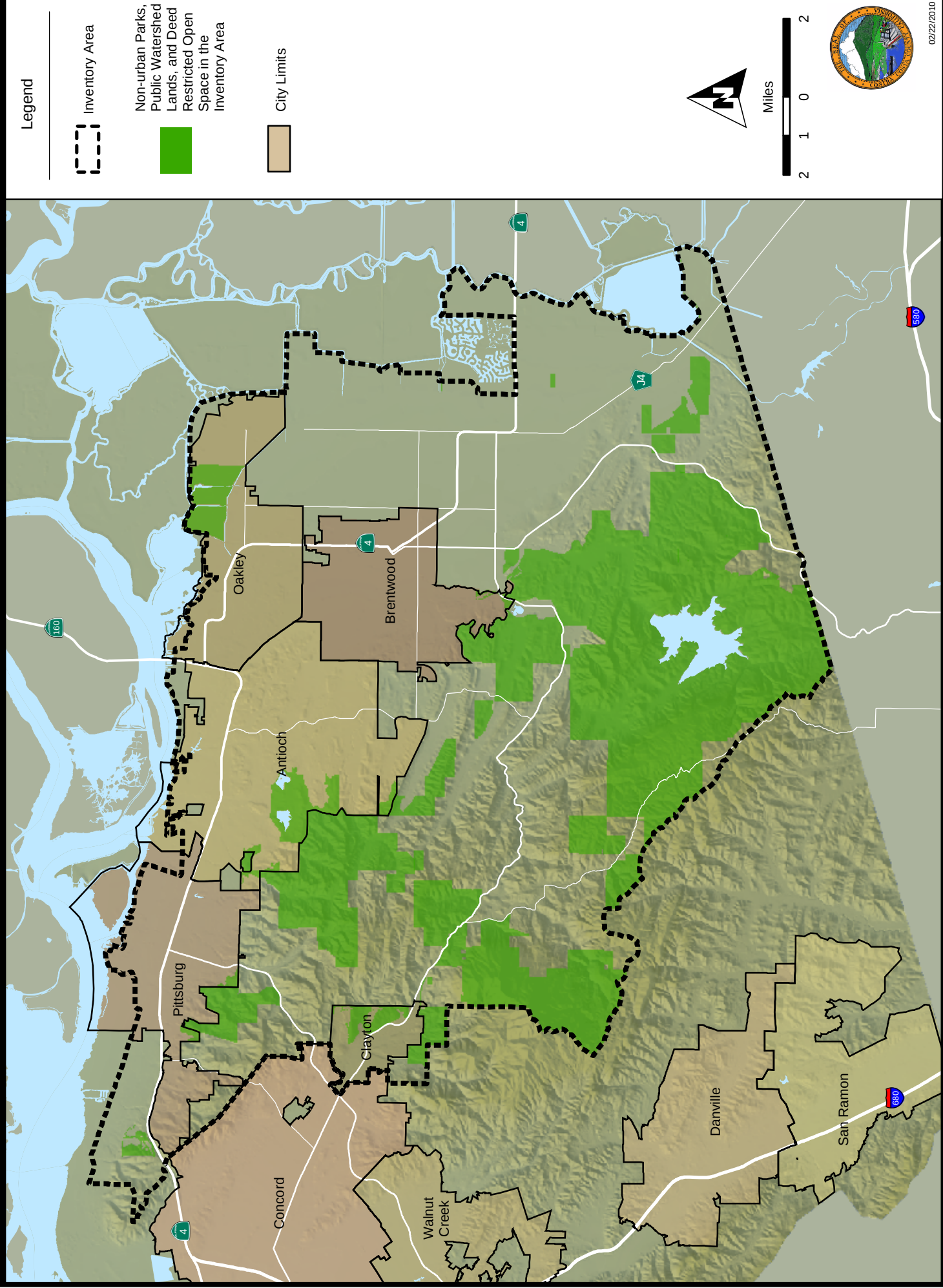
Finances

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 to covered species through a variety of conservation measures. The Plan allows incidental take coverage for the following four activities (Figures 2):

- **Urban Development Area Projects.** All activities and projects associated with urban growth within the Urban Development Area (UDA) 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 within the UDA.
- **Rural Infrastructure Operation and Maintenance Activities.** Road, flood protection facility, and utility line or facility operation and maintenance projects that occur outside the UDA.
- **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 nine projects received take coverage under the Plan during the reporting period (Table 1 and Figure 3). Covered activities include the following:

- Three Urban Development Area Projects
- Six Rural Infrastructure Projects

Of the nine covered activities, three received coverage from City of Pittsburg, two received coverage from Contra Costa County, and four received coverage from the East Contra Costa County Habitat Conservancy. All covered activities mitigated for impacts through the payment of HCP/NCCP fees. Covered projects paid a total of \$837,587 in HCP/NCCP fees, contributions to recovery and administrative charges in 2010. See Table 19 at the end of 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, construction monitoring, 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.

Impacts to 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 13.5 acres of permanent impact and 48.9 acres of temporary impact (Table 4). There were 0.08 acres of impacts to uncommon vegetation³, uncommon features, or habitat elements.⁴ No covered plant occurrences were removed by covered activities (Table 5).

Impacts to aquatic land-cover types during the reporting period were limited to two watersheds (Table 6). In the Brushy watershed there were 0.01 acres of permanent impacts to permanent and seasonal wetlands and 0.12 acres of temporary impacts to permanent, seasonal and alkali wetlands. In addition, 132 feet of permanent impacts and 349 feet of temporary impacts occurred to ephemeral and perennial streams. In the Kellogg watershed, there were 0.41 acres of permanent impacts and 0.40 acres of temporary impacts to riparian woodland scrub, seasonal wetlands, and slough/channel. Six feet of intermittent streams were permanently impacted.

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				
Activities within Urban Development Area	City of Pittsburg	Use of 2515 Antioch-Pittsburg Hwy Site	2515 Antioch-Pittsburg Hwy, Pittsburg Ca	Using of a portion of the site as a yard for equipment and storage of construction materials
Activities within Urban Development Area	City of Pittsburg	USS Posco Site L-A Material Stockpile	900 Loveridge Road, Antioch Pittsburg Hwy, Pittsburg Ca 94565	Import approximately 70,000 cubic yards of clean fill soils and stockpile the entire quantity on a limited 7.81-acre portion of Site L-A. This fill material is being imported to provide material for future grading and development activities on the 135-acre site. The imported fill material will be primarily from the Highway 4 expansion project.
Activities within Urban Development Area	City of Pittsburg	California Avenue Widening Temporary Contractor Storage Site	680 California Ave, Pittsburg Ca	Temporary use of the eastern portion (300 feet by 180 feet) of an undeveloped parcel for a contractor storage yard associated with the California Avenue Widening Project.
Rural Infrastructure Projects				
Utility Construction	ECCC Habitat Conservancy	ConocoPhillips Line 200 Pipeline Repair Project	Vasco Sub-Area and Round Valley Sub-Area	Operational and safety repairs to 5 sites along the existing ConocoPhillips Line 200 Mainline trunk and crude oil pipeline.
Utility Construction	ECCC Habitat Conservancy	Coalinga-Avon Pipeline Repair Project	Northeast and northwest of the Shell Oil Products US	Safety repairs to 13 damaged areas along the Coalinga-Avon pipeline.
Transportation	ECCC Habitat Conservancy	eBART Phase 1 Project	City of Pittsburg: APN 097160045 is 3.5 acres, 088171037 is 2.0 acres, 088171032 portion is 0.4 acres, the Canal Road site is 0.3 acres.	eBART Phase 1 will require the construction of an ancillary building within the Canal Road site. Although eBART will be doing additional project construction, all of those activities will be localized to the existing Caltrans right-of-way. The additional lots will be used as laydown (staging areas) and construction parking areas.
Transportation	ECCC Habitat Conservancy	Caltrans State Route 4 Median Buffer and Shoulder Widening Project	Marsh Creek Road at post mile (PM) 43.9 to the Contra Costa/San Joaquin county line at PM 48.3.	Safety improvement project to install standard shoulders and a median buffer zone on State Route 4 from Marsh Creek Road to the San Joaquin county line.
Transportation	Contra Costa County Public Works Department	Vasco Road Safety Improvement Project	Vasco Road, Contra Costa County	The Vasco Road Safety Improvement Project was designed to improve safety along Vasco Road in East CCCC by installing a concrete median, widening a bridge, connecting two truck climbing lanes to delete a merge, and installing turn lanes. The project covers Vasco Road from engineering station 300 in the north, to station 244, approximately two miles north of the border between Contra Costa and Alameda Counties.
Utility Construction - Cellular Telephone Stations	Contra Costa County	Horizon Tower Telecommunications Facility	17601 Marsh Creek Road, Brentwood, Contra Costa County	Installation of new monopine dell tower and associated equipment within a 50x50 lease area.

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
USS Posco Site L-A Material Stockpile						✓	✓			
Vasco Road Safety Improvement Project	✓						✓			✓
Caltrans State Route 4 Median Buffer and Shoulder Widening Project	✓						✓			
Coalinga-Avon Pipeline Repair Project							✓			
ConocoPhillips Line 200 Pipeline Repair 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	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring
USS Posco Site L-A Material Stockpile				✓								✓	✓	✓		✓	✓		
Horizon Tower Telecommunication s Facility				✓								✓	✓	✓					
Vasco Road Safety Improvement Project	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Caltrans State Route 4 Median Buffer and Shoulder Widening Project				✓				✓				✓	✓						
eBART Phase 1 Project				✓								✓							
Coalinga-Avon Pipeline Repair Project				✓	✓							✓	✓	✓					
ConocoPhillips Line 200 Pipeline Repair 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.

[2] Vasco Road Safety Improvement Project conducted planning surveys for alkali milkvetch, big tarplant, Brewer's dwarf flax, Contra Costa goldfields, diamond-petaled poppy, large-flowered fiddleneck, Mount Diablo buckwheat, Mount Diablo fairy-lantern, round-leaved filaree, showy madia, adobe navarretia, brittlescale, caper fruited tropicocardium, recurved larkspur, and San Joaquin spearscale. AMMs were applied to avoid impacts to San Joaquin spearscale.

Caltrans State Route 4 Median Buffer and Shoulder Widening Project conducted planning surveys for alkali milkvetch, Contra Costa goldfields, and adobe navarretia

Coalinga-Avon Pipeline Repair Project conducted planning surveys for alkali milkvetch, big tarplant, Brewer's dwarf flax, Contra Costa goldfields, diamond-petaled poppy, large-necked fiddleneck, Mount Diablo buckwheat, Mount Diablo fairy-lantern, round-leaved filaree, and showy madia. AMMs were applied to avoid impacts to big tarplant.

ConocoPhillips Line 200 Pipeline Repair Project planning surveys for alkali milkvetch, big tarplant, Brewer's dwarf flax, Contra Costa goldfields, diamond-petaled poppy, large-necked fiddleneck, Mount Diablo buckwheat, Mount Diablo fairy-lantern, round-leaved filaree, showy madia, and diablo helianthella. AMMs were applied to avoid impacts to alkali milkvetch, Brewer's dwarf flax, Contra Costa goldfields, diamond-petaled poppy, large-flowered fiddleneck, Mount Diablo fairy-lantern, round-leaved filaree, showy madia.

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

Project Name	Species-Level Measures[1]													
	Giant Garter Snake				CA Tiger Salamander		CA Red-Legged Frog		Covered Shrimp				Covered Plants [2]	
	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	Minimization	Planning Surveys	Minimization	Planning Surveys	Preconstruction Surveys	AMM	Construction Monitoring	Planning Surveys	AMM
USS Posco Site L-A Material Stockpile														
Horizon Tower Telecommunications Facility														
Vasco Road Safety Improvement Project					✓	✓	✓	✓	✓				✓	✓
Caltrans State Route 4 Median Buffer and Shoulder Widening Project	✓		✓				✓		✓				✓	
eBART Phase 1 Project														
Coalinga-Avon Pipeline Repair Project													✓	✓
ConocoPhillips Line 200 Pipeline Repair 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)

Land Cover Type	Reporting Period		Cumulative	
	Impacts		Impacts	
	(acres, unless otherwise noted)		(acres, unless otherwise noted)	
	Permanent	Temporary	Permanent	Temporary
Terrestrial				
Annual grassland	2.6	6.8	26.0	23.1
Alkali grassland	0.6	1.2	0.6	1.2
Ruderal	8.0	34.3	21.8	57.0
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>11.2</i>	<i>42.2</i>	<i>48.4</i>	<i>82.0</i>
Aquatic				
Riparian woodland/scrub	0.05	0.25	0.24	0.29
Perennial wetland ¹	0.01	0.12	0.01	0.12
Seasonal wetland	0.29	0.01	0.29	0.01
Alkali wetland	0.00	0.00	0.00	0.00
Pond	0.00	0.00	0.00	0.00
Reservoir (open water) ²	0.00	0.00	0.00	0.00
Slough/Channel (includes stream)	0.07	0.14	0.07	0.14
<i>Subtotal aquatic</i>	<i>0.42</i>	<i>0.52</i>	<i>0.61</i>	<i>0.56</i>
Stream (length in linear feet)				
Total stream length	138.0	348.5	138.3	387.2
<i>Stream length by width category</i>	--	--	--	--
≤ 25 feet wide	110.0	230.5	110.0	230.5
> 25 feet wide	28.0	118.0	28.3	156.7
<i>Stream length by type and order</i>	--	--	--	--
Perennial	56.0	282.5	56.3	321.2
Intermittent	6.0	0.0	6.0	0.0
Ephemeral, 3 rd or higher order	0.0	0.0	0.0	0.0
Ephemeral, 1 st or 2 nd order	76.0	66.0	76.0	66.0
<i>Subtotal stream length</i>	<i>138.0</i>	<i>348.5</i>	<i>138.3</i>	<i>387.2</i>
Irrigated agriculture				
Cropland	1.8	6.1	11.3	6.6
Pasture	0.0	0.0	0.0	0.0
Orchard	0.0	0.0	1.7	0.0
Vineyard	0.0	0.0	0.0	0.4
<i>Subtotal irrigated agricultural</i>	<i>1.8</i>	<i>6.1</i>	<i>13.0</i>	<i>6.9</i>
Other				
Nonnative woodland	0.0	0.0	0.0	0.0
Wind turbines	0.0	0.0	0.0	0.6
<i>Subtotal other</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.6</i>
Uncommon Vegetation Types (subtypes of above land cover types)				
Purple needlegrass grassland	0.02	0.00	0.02	0.00
Wildrye grassland	0.01	0.03	0.01	0.00
Wildflower fields	0.00	0.00	0.00	0.00

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)

Land Cover Type	Reporting Period		Cumulative	
	Impacts		Impacts	
	(acres, unless otherwise noted)		(acres, unless otherwise noted)	
	Permanent	Temporary	Permanent	Temporary
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>0.03</i>	<i>0.03</i>	<i>0.03</i>	<i>0.00</i>
Uncommon Landscape Features or Habitat Elements				
Rock outcrop	0.05	0.03	0.05	0.03
Cave	0.00	0.00	0.00	0.00
Springs/seeps	0.00	0.00	0.00	0.00
Scalds	0.00	0.00	0.00	0.00
Sand deposits	0.00	0.00	0.00	0.00
Mines (number)	0.00	0.00	0.00	0.00
Buildings (number)	0.00	0.00	0.00	0.00
Potential nest sites (number)	0.00	0.00	0.00	0.00
<i>Subtotal uncommon landscape features (acres)</i>	<i>0.05</i>	<i>0.03</i>	<i>0.05</i>	<i>0.03</i>
<i>Subtotal uncommon landscape features (number)</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Totals (excludes subtypes)				
Acres	13.5	48.9	62.0	90.0
Linear feet	138.0	348.5	138.3	387.2
¹ Perennial wetlands are equivalent permanent wetlands				
² Reservoir (open water) is equivalent to aquatic				

Table 5. Reporting Period and Cumulative Impacts to Covered Plants

Common Name	Scientific Name	Known Occurrences that May Be Removed by Covered Activities	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. The soil was protected from disturbance, the site was returned to pre-project connections, and seeds collected on site were propagated.

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

Watershed/ Basin	Land Cover Type	Impacts			
		Reporting Period		Cumulative	
		Permanent	Temporary	Permanent	Temporary
Brushy	Aquatic (acres)				
	Riparian woodland/scrub	0.00	0.00	0.00	0.00
	Perennial wetland ¹	0.01	0.12	0.01	0.12
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water) ²	0.00	0.00	0.00	0.00
	Slough/Channel ³ (includes stream)	0.00	0.00	0.00	0.00
	<i>Subtotal aquatic</i>	<i>0.01</i>	<i>0.12</i>	<i>0.01</i>	<i>0.12</i>
	Stream (linear feet)				
	Total stream length	132.00	348.50	132.00	348.50
	<i>Stream length by width category</i>				
	≤ 25 feet wide	110.00	230.50	110.00	230.50
	> 25 feet wide	22.00	118.00	22.00	118.00
	<i>Stream length by type and order</i>				
	Perennial	56.00	282.50	56.00	282.50
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3 rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1 st or 2 nd order	76.00	66.00	76.00	66.00
	<i>Subtotal stream length</i>	<i>132.00</i>	<i>348.50</i>	<i>132.00</i>	<i>348.50</i>
Kellogg	Aquatic (acres)				
	Riparian woodland/scrub	0.05	0.25	0.05	0.25
	Perennial wetland ¹	0.00	0.00	0.00	0.00
	Seasonal wetland	0.29	0.01	0.29	0.01
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water) ²	0.00	0.00	0.00	0.00
	Slough/Channel ³ (includes stream)	0.07	0.14	0.07	0.14
	<i>Subtotal aquatic</i>	<i>0.41</i>	<i>0.40</i>	<i>0.41</i>	<i>0.40</i>
	Stream (linear feet)				
	Total stream length	6.00	0.00	6.00	0.00
	<i>Stream length by width category</i>				
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	6.00	0.00	6.00	0.00
	<i>Stream length by type and order</i>				
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	6.00	0.00	6.00	0.00
	Ephemeral, 3 rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1 st or 2 nd order	0.00	0.00	0.00	0.00
	<i>Subtotal stream length</i>	<i>6.00</i>	<i>0.00</i>	<i>6.00</i>	<i>0.00</i>

**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
Lower Marsh	Aquatic (acres)				
	Riparian woodland/scrub	0.00	0.00	0.00	0.04
	Perennial wetland ¹	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water) ²	0.00	0.00	0.00	0.00
	Slough/Channel ³ (includes stream)	0.00	0.00	0.00	0.00
	<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	0.00	0.00	0.31	38.70
	<i>Stream length by width category</i>	--	--	--	--
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	0.00	0.00	0.31	38.70
	<i>Stream length by type and order</i>	--	--	--	--
	Perennial	0.00	0.00	0.31	38.70
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3 rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1 st or 2 nd order	0.00	0.00	0.00	0.00
	<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	0.00	0.00	0.19	0.00
	Perennial wetland ¹	0.00	0.00	0.00	0.00
	Seasonal wetland	0.00	0.00	0.00	0.00
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water) ²	0.00	0.00	0.00	0.00
	Slough/Channel ³ (includes stream)	0.00	0.00	0.00	0.00
	<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	0.00	0.00	0.00	0.00
	<i>Stream length by width category</i>	--	--	--	--
	≤ 25 feet wide	0.00	0.00	0.00	0.00
	> 25 feet wide	0.00	0.00	0.00	0.00
	<i>Stream length by type and order</i>	--	--	--	--
	Perennial	0.00	0.00	0.00	0.00
	Intermittent	0.00	0.00	0.00	0.00
	Ephemeral, 3 rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1 st or 2 nd order	0.00	0.00	0.00	0.00
	<i>Subtotal stream length</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>

**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
Total	Aquatic (acres)				
	Riparian woodland/scrub	0.05	0.25	0.24	0.29
	Perennial wetland ¹	0.01	0.12	0.01	0.12
	Seasonal wetland	0.29	0.01	0.29	0.01
	Alkali wetland	0.00	0.00	0.00	0.00
	Pond	0.00	0.00	0.00	0.00
	Reservoir (open water) ²	0.00	0.00	0.00	0.00
	Slough/Channel ³ (includes stream)	0.07	0.14	0.07	0.14
	Total aquatic	0.42	0.52	0.61	0.56
	Stream (linear feet)				
	Total stream length	138.00	348.50	138.31	387.20
	<i>Stream length by width category</i>	--	--	--	--
	≤ 25 feet wide	110.00	230.50	110.00	230.50
	> 25 feet wide	28.00	118.00	28.31	156.70
	<i>Stream length by type and order</i>	--	--	--	--
	Perennial	56.00	282.50	56.31	321.20
	Intermittent	6.00	0.00	6.00	0.00
	Ephemeral, 3 rd or higher order	0.00	0.00	0.00	0.00
	Ephemeral, 1 st or 2 nd order	76.00	66.00	76.00	66.00
	Total stream length	138.00	348.50	138.31	387.20

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

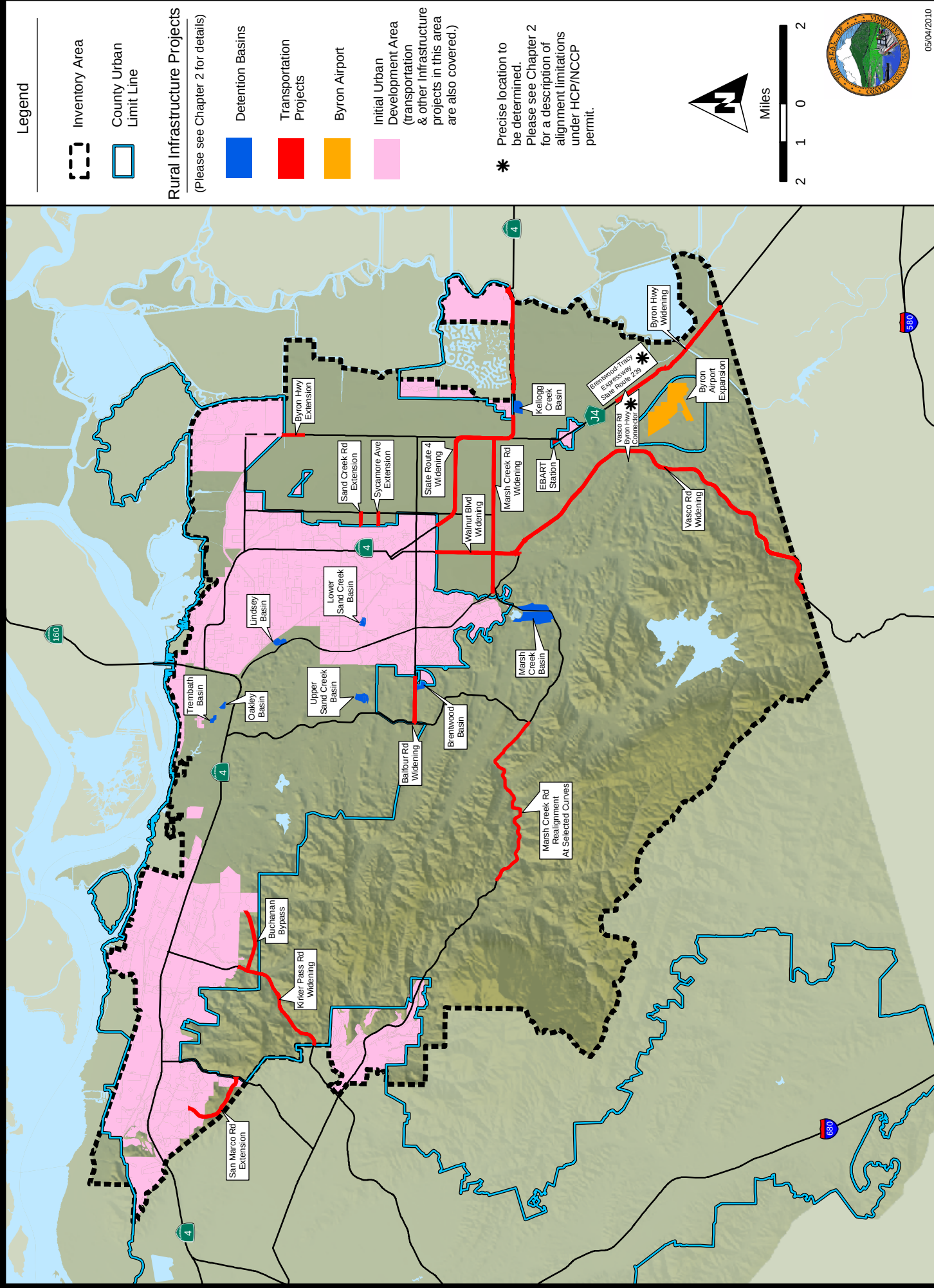
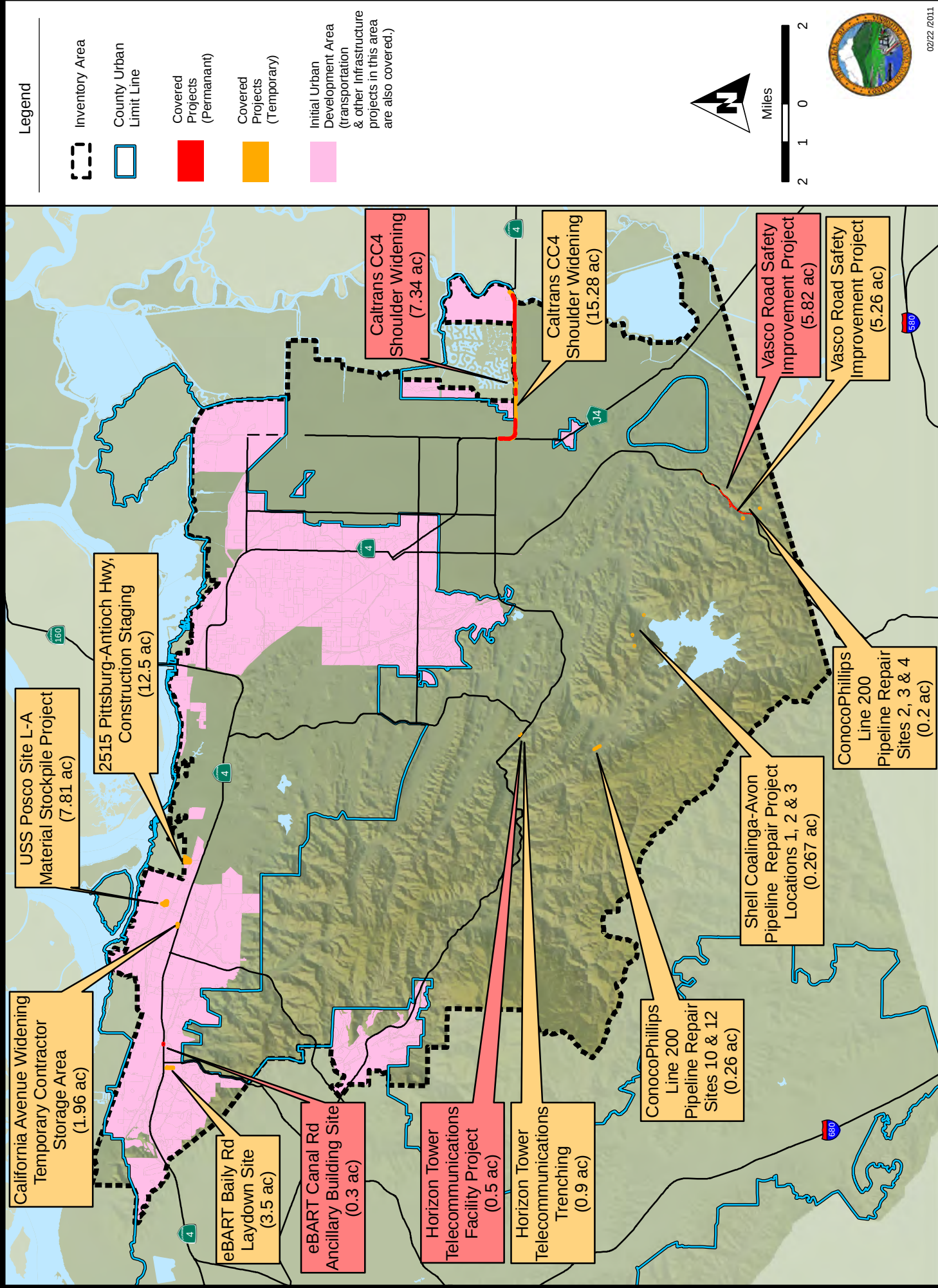


Figure 3. Location of Projects Covered in 2010



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 to 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.

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. Working with EBRPD, the Conservancy acquired six properties for the Preserve System totaling 2,769 acres: Vaquero Farms North (575 acres), Ang (462 acres), Martin (234 acres), Grandma's Quarter (157 acres), Souza 3 (1,026 acres), and Irish Canyon (314 acres) (Table 7 and Table 8b). As with earlier acquisitions, enrollment of these properties into the Preserve System is pending recording of deed restrictions (the Conservancy, EBRPD, CDFG and USFWS are currently finalizing the form of deed restriction; for additional background 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 six acquisitions. Key highlights from the tables are listed below:

- More than 2,300 acres of annual grassland acquired during reporting period with more than 3,600 acres acquired to date (22% of the annual grassland preservation requirement achieved).
- More than 119 and 89 acres of oak savanna and oak woodland acquired during the reporting period with more than 168 and 419 acres acquired to date (34% and 105% of the oak savanna and oak woodland preservation requirements achieved)
- Nearly 14 acres of riparian woodland/scrub acquired during reporting period (20% of the riparian woodland/scrub preservation requirement achieved).
- More than 3 acres of ponds acquired during reporting period with nearly 5 acres acquired to date (31% of the pond preservation requirement).
- Exceeded preservation requirements for intermittent and ephemeral streams.
- Almost 4 acres of rock outcrops acquired during reporting period, with over 9 acres acquired to date.

Table 10 summarizes progress toward preservation requirements of covered plant populations. During the reporting period, 2 occurrences of San Joaquin spearscale were acquired. To date, eight 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 fairy lantern, Mount Diablo manzanita, brittlescale, big tarplant and Diablo helianthella, and three occurrences of San Joaquin Spearscale.

[illegible]

Figure 5. Acquisition Priorities with Initial Urban Development Area

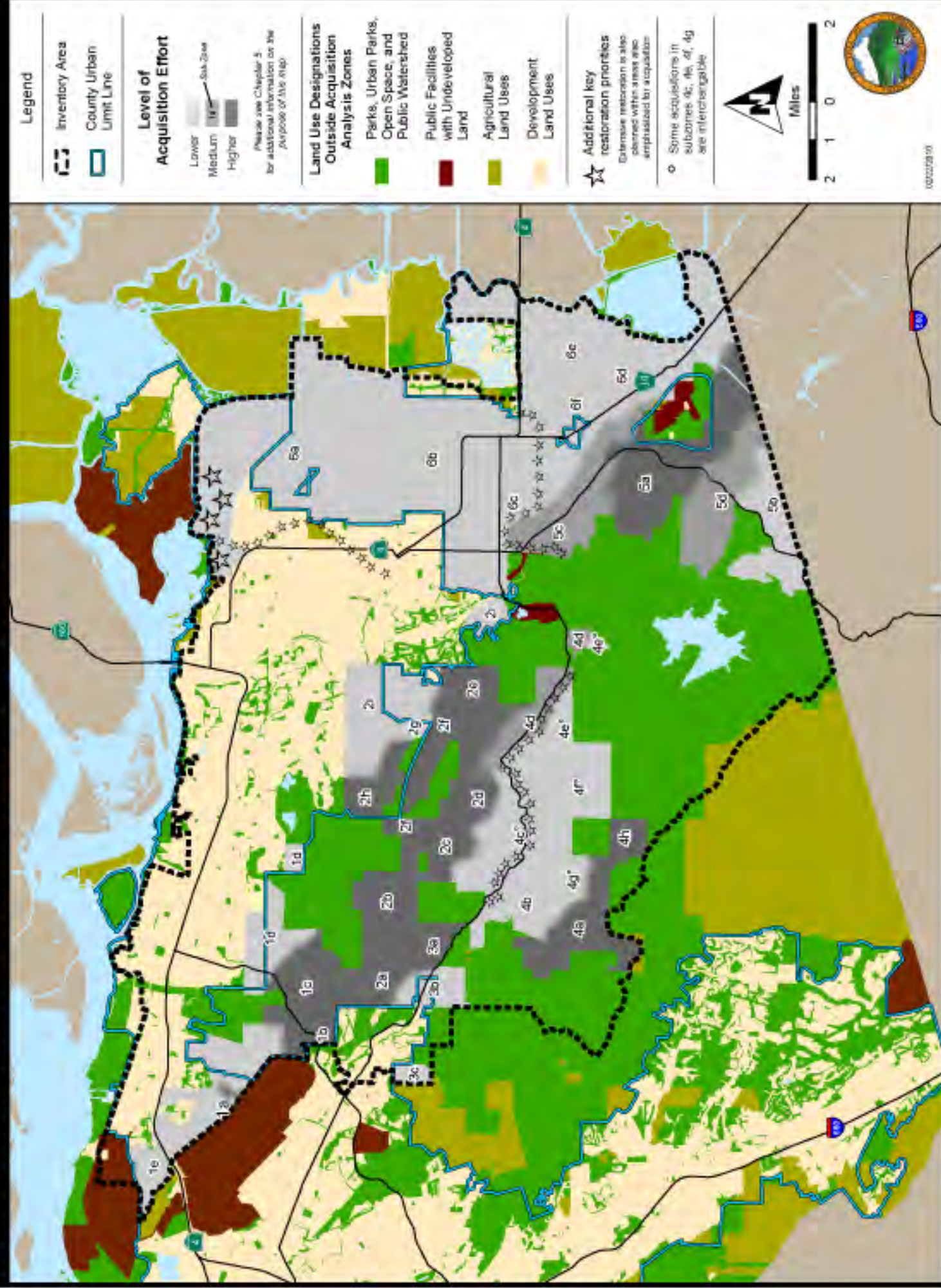


Figure 6. Acquisition Priorities with Maximum Urban Development Area

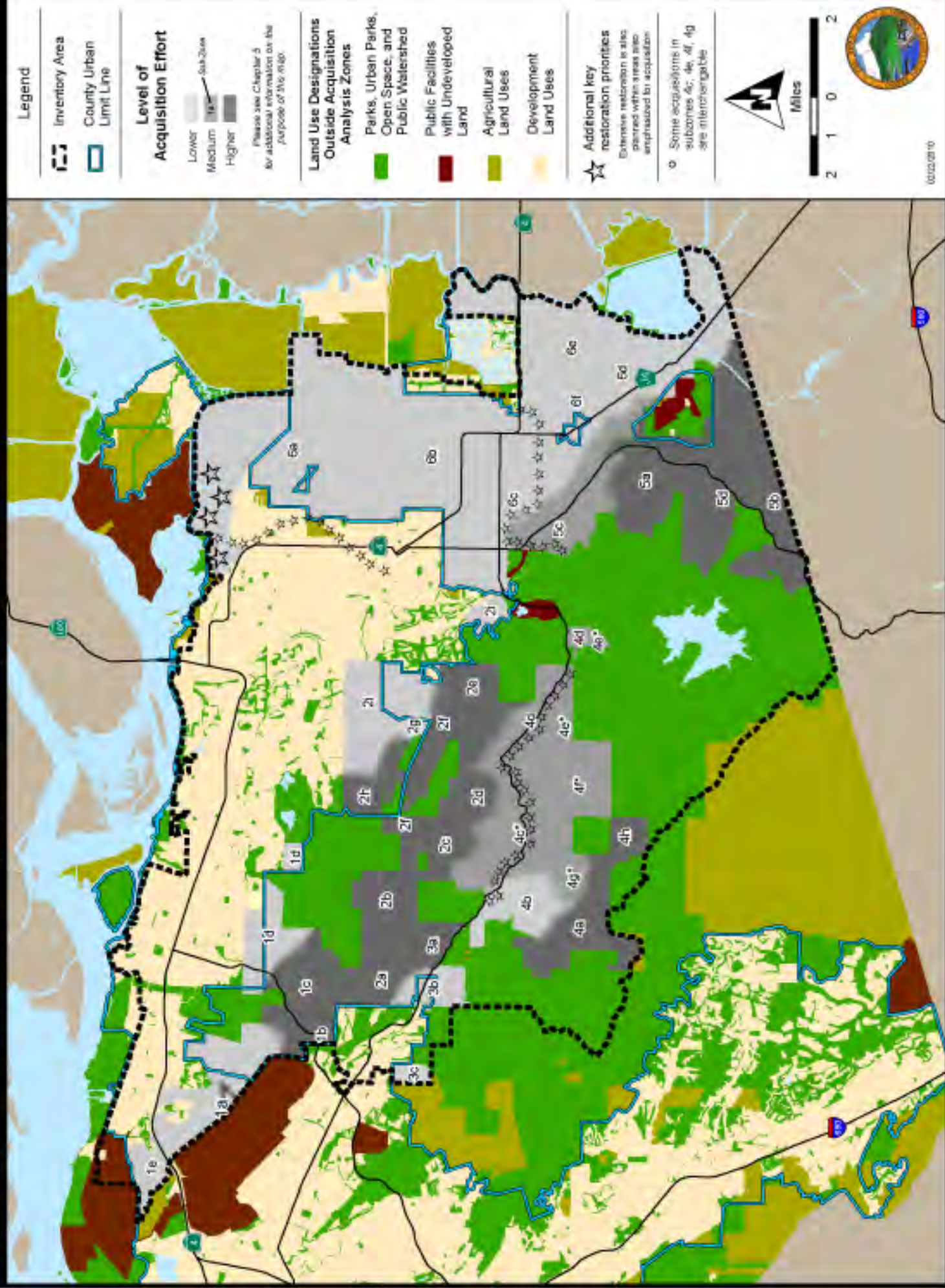


Figure 7. EBRPD Acquisitions Completed and in Progress under HCP as of December 31, 2010

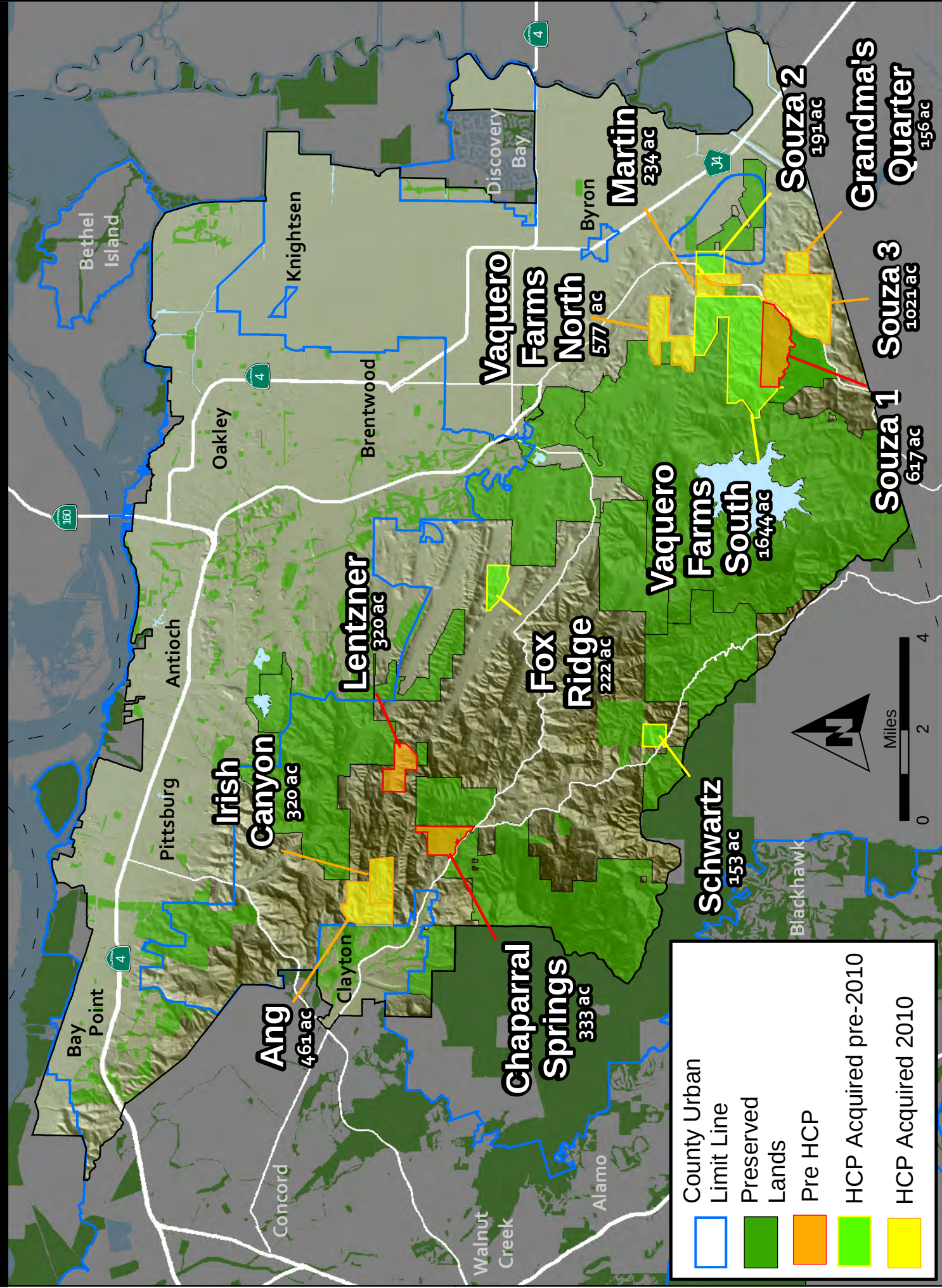


Table 8a. Summary of Natural Community Protection, Restoration, and Creation by Land-Cover Type

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	16500	--	--	--	2305.4	110.3	0.0	0.0	3669.9	1449.4	0.0	0.4	22%	--	--	--
Alkali grassland	1250	--	--	--	63.9	0.6	0.0	0.0	131.6	15.2	0.0	0.4	11%	--	--	--
Ruderal	--	--	--	--	29.9	0.7	0.0	0.0	49.1	22.5	0.0	0.0	--	--	--	--
Chaparral and scrub	550	--	--	--	0.0	0.0	0.0	0.0	37.1	0.0	0.0	0.0	7%	--	--	--
Oak savanna	500	--	165	--	119.5	0.0	0.0	0.0	168.8	23.9	0.0	0.0	34%	--	0%	0%
Oak woodland	400	--	--	--	89.6	0.0	0.0	0.0	419.2	130.8	0.0	0.0	105%	--	--	--
<i>Subtotal terrestrial</i>	<i>19200</i>	--	<i>165</i>	--	<i>2608.3</i>	<i>111.6</i>	<i>0.0</i>	<i>0.0</i>	<i>4475.7</i>	<i>1641.8</i>	<i>0.0</i>	<i>0.8</i>	<i>23%</i>	--	<i>0%</i>	<i>0%</i>
Aquatic																
Riparian woodland/scrub	70	--	55	--	13.9	0.0	0.0	0.9	13.9	0.2	0.0	0.9	20%	--	2%	2%
Perennial wetland ¹	75	--	85	--	0.0	0.0	0.0	0.0	0.7	3.3	0.0	0.2	1%	--	0%	0%
Seasonal wetland	168	--	163	--	0.4	0.0	0.0	0.0	1.7	1.7	0.0	7.7	1%	--	5%	5%
Alkali wetland	93	--	67	--	4.3	0.0	0.0	0.0	15.7	1.9	0.0	0.1	17%	--	0%	0%
Pond	16	--	--	--	3.4	0.0	0.0	0.0	4.9	2.2	0.3	0.0	31%	--	--	--
Reservoir (open water) ²	12	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%	--	--	--
Slough/Channel	36	--	72	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%	--	0%	0%
<i>Subtotal aquatic</i>	<i>470</i>	--	<i>442</i>	--	<i>22.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.9</i>	<i>36.9</i>	<i>9.3</i>	<i>0.3</i>	<i>8.9</i>	<i>8%</i>	--	<i>2%</i>	<i>2%</i>
Stream (length in linear feet)																
Total stream length	32736	--	--	--	58714.4	0.0	0.0	0.0	116569.2	36315.0	0.0	4416.8	356%	--	--	--
<i>Stream length by type and order</i>																
Perennial	4224	--	2112	--	0.0	0.0	0.0	0.0	886.4	0.0	0.0	0.0	21%	--	0%	0%
Intermittent	2112	--	2112	--	8469.9	0.0	0.0	908.8	24087.7	5555.0	0.0	4416.8	1141%	--	209%	209%
Ephemeral	26400	--	26400	--	50244.5	0.0	0.0	0.0	91595.1	30760.1	0.0	0.0	347%	--	0%	0%
<i>Subtotal stream length</i>	<i>32736</i>	--	<i>30624</i>	--	<i>58714.4</i>	<i>0.0</i>	<i>0.0</i>	<i>908.8</i>	<i>116569.2</i>	<i>36315.0</i>	<i>0.0</i>	<i>4416.8</i>	<i>356%</i>	--	<i>14%</i>	<i>14%</i>
Irrigated agriculture																
Cropland	400	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%	--	--	--
Pasture	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
Orchard	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
Vineyard	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
<i>Subtotal irrigated agricultural</i>	<i>400</i>	--	--	--	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0%</i>	--	--	--
Other																
Nonnative woodland	--	--	--	--	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.0	--	--	--	--
Wind turbines	--	--	--	--	20.0	0.0	0.0	0.0	64.0	25.1	0.0	0.0	--	--	--	--
<i>Subtotal other</i>	<i>--</i>	--	--	--	<i>20.7</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>64.7</i>	<i>25.1</i>	<i>0.0</i>	<i>0.0</i>	--	--	--	--
Developed																
Urban	--	--	--	--	1.1	0.0	0.0	0.0	2.5	0.8	0.0	0.0	--	--	--	--
Aqueduct	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
Turf	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
Landfill	--	--	--	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	--	--
<i>Subtotal developed</i>	<i>--</i>	--	--	--	<i>1.1</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>2.5</i>	<i>0.8</i>	<i>0.0</i>	<i>0.0</i>	--	--	--	--

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)	Restoration	Protection	Existing Easement (no credit)	Creation	Protection	Creation	Restoration
Uncommon Vegetation Types (subtypes of above land cover types)												
Purple needlegrass grassland	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Wildrye grassland	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Wildflower fields	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Squirreltail grassland	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
One-sided bluegrass grassland	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Serpentine grassland	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Saltgrass grassland (alkali grassland)	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Alkali sacaton bunchgrass grassland	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Other uncommon vegetation types	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
<i>Subtotal uncommon vegetation types</i>	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Uncommon Landscape Features or Habitat Elements												
Rock outcrop	---	---	---	3.9	0.0	0.0	9.4	4.2	0.0	---	---	---
Cave	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Springs/seeps	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Scalds	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Sand deposits	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Mines (number)	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Buildings (number)	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Potential nest sites (number)	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
<i>Subtotal uncommon landscape features (acres)</i>	---	---	---	3.9	0.0	0.0	9.4	4.2	0.0	---	---	---
<i>Subtotal uncommon landscape features (number)</i>	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---
Totals (excludes subtypes)												
Acres	---	---	---	2656.0	111.6	0.0	4589.2	1681.2	0.3	---	---	---
Linear feet	---	---	---	58714.4	0.0	0.0	116569.2	36315.0	0.0	---	---	---

¹ Perennial wetlands are equivalent permanent wetlands.² Reservoir (open water) is equivalent to aquatic.³ All land cover requirements assume the Maximum Urban Development Area scenario. The requirements for restoration and creation are dependent upon amount of impact. The requirements provided are based on the 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)											
	Vacquero Farms North						Ang					
	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Terrestrial												
Annual grassland	531.7	--	--	--	349.1	--	--	--	230.4	--	--	--
Alkali grassland	33.4	--	--	--	--	--	--	--	0.9	--	--	--
Ruderal	4.0	--	--	--	--	--	--	--	2.3	--	--	--
Chaparral and scrub	--	--	--	--	--	--	--	--	--	--	--	--
Oak savanna	--	--	--	--	61.7	--	--	--	--	--	--	--
Oak woodland	--	--	--	--	49.6	--	--	--	--	--	--	--
Subtotal terrestrial	569.1	0.0	0.0	0.0	460.4	0.0	0.0	0.0	233.5	0.0	0.0	0.0
Aquatic												
Riparian woodland/scrub	--	--	--	--	0.01	--	--	--	0.0	0.0	0.0	0.0
Perennial wetland ¹	--	--	--	--	--	--	--	--	0.0	0.0	0.0	0.0
Seasonal wetland	--	--	--	--	0.4	--	--	--	0.0	0.0	0.0	0.0
Alkali wetland	1.0	--	--	--	0.3	--	--	--	0.0	0.0	0.0	0.0
Pond	0.9	--	--	--	0.5	--	--	--	0.1	0.0	0.0	0.0
Reservoir (open water) ²	--	--	--	--	--	--	--	--	0.0	0.0	0.0	0.0
Slough/Channel	--	--	--	--	--	--	--	--	0.0	0.0	0.0	0.0
Subtotal aquatic	1.9	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Stream (length in linear feet)												
Total stream length	3646.7	--	--	--	19678.1	--	--	--	681.7	--	--	--
<i>Stream length by type and order</i>												
Perennial	0.0	--	--	--	0.0	--	--	--	0.0	--	--	--
Intermittent	2373.1	--	--	--	2227.4	--	--	--	0.0	--	--	--
Ephemeral	1273.6	--	--	--	17450.7	--	--	--	681.7	--	--	--
Subtotal stream length	3646.7	--	--	--	19678.1	0.0	0.0	0.0	681.7	--	--	--
Irrigated agriculture												
Cropland	--	--	--	--	--	--	--	--	--	--	--	--
Pasture	--	--	--	--	--	--	--	--	--	--	--	--
Orchard	--	--	--	--	--	--	--	--	--	--	--	--
Vineyard	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal irrigated agricultural	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other												
Nonnative woodland	--	--	--	--	--	--	--	--	--	--	--	--
Wind turbines	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Developed												
Urban	--	--	--	--	0.3	--	--	--	0.8	--	--	--
Aqueduct	--	--	--	--	--	--	--	--	--	--	--	--
Turf	--	--	--	--	--	--	--	--	--	--	--	--
Landfill	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal developed	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0	0.0

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

	Reporting Period Land Acquisitions (acres)											
	Vacquero Farms North				Ang				Martin			
Land Cover Type	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Uncommon Vegetation Types (subtypes of above land cover types)												
Purple needlegrass grassland	---	---	---	---	---	---	---	---	---	---	---	---
Wildrye grassland	---	---	---	---	---	---	---	---	---	---	---	---
Wildflower fields	---	---	---	---	---	---	---	---	---	---	---	---
Squirreltail grassland	---	---	---	---	---	---	---	---	---	---	---	---
One-sided bluegrass grassland	---	---	---	---	---	---	---	---	---	---	---	---
Serpentine grassland	---	---	---	---	---	---	---	---	---	---	---	---
Saltgrass grassland (alkali grassland)	---	---	---	---	---	---	---	---	---	---	---	---
Alkali sacaton bunchgrass grassland	---	---	---	---	---	---	---	---	---	---	---	---
Other uncommon vegetation types	---	---	---	---	---	---	---	---	---	---	---	---
Subtotal uncommon vegetation types	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncommon Landscape Features or Habitat Elements												
Rock outcrop	3.9	---	---	---	---	---	---	---	---	---	---	---
Cave	---	---	---	---	---	---	---	---	---	---	---	---
Springs/seeps	---	---	---	---	---	---	---	---	---	---	---	---
Scalds	---	---	---	---	---	---	---	---	---	---	---	---
Sand deposits	---	---	---	---	---	---	---	---	---	---	---	---
Mines (number)	---	---	---	---	---	---	---	---	---	---	---	---
Buildings (number)	---	---	---	---	---	---	---	---	---	---	---	---
Potential nest sites (number)	---	---	---	---	---	---	---	---	---	---	---	---
Subtotal uncommon landscape features (acres)	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal uncommon landscape features (number)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals (excludes subtypes)												
Acres	574.9	0.0	0.0	0.0	461.9	0.0	0.0	0.0	234.3	0.0	0.0	0.0
Linear feet	3646.7	---	---	---	19678.1	0.0	0.0	0.0	681.7	---	---	---

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)											
	Grandma's Quarter				Souza 3				Irish Canyon			
	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Terrestrial												
Annual grassland	154.8	--	--	--	836.7	110.3	--	--	202.8	--	--	--
Alkali grassland	0.4	--	--	--	29.2	0.6	--	--	--	--	--	--
Ruderal	1.7	--	--	--	21.8	0.7	--	--	--	--	--	--
Chaparral and scrub	--	--	--	--	--	--	--	--	--	--	--	--
Oak savanna	--	--	--	--	--	--	--	--	57.8	--	--	--
Oak woodland	--	--	--	--	--	--	--	--	40.0	--	--	--
Subtotal terrestrial	157.0	0.0	0.0	0.0	887.7	111.6	0.0	0.0	300.6	0.0	0.0	0.0
Aquatic												
Riparian woodland/scrub	--	--	--	--	1.2	--	--	--	12.6	--	--	0.9
Perennial wetland ¹	--	--	--	--	--	--	--	--	--	--	--	--
Seasonal wetland	--	--	--	--	--	--	--	--	--	--	--	--
Alkali wetland	--	--	--	--	3.0	--	--	--	--	--	--	--
Pond	--	--	--	--	1.6	--	--	--	0.3	--	--	--
Reservoir (open water) ²	--	--	--	--	--	--	--	--	--	--	--	--
Slough/Channel	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal aquatic	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	12.9	0.0	0.0	0.9
Stream (length in linear feet)												
Total stream length	5850.8	--	--	--	15912.6	--	--	--	12944.5	--	--	908.8
<i>Stream length by type and order</i>												
Perennial	0.0	--	--	--	0.0	--	--	--	0.0	--	--	--
Intermittent	0.0	--	--	--	3869.4	--	--	--	0.0	--	--	908.8
Ephemeral	5850.8	--	--	--	12043.2	--	--	--	12944.5	--	--	--
Subtotal stream length	5850.8	0.0	0.0	0.0	15912.6	--	0.0	0.0	12944.5	0.0	908.8	908.8
Irrigated agriculture												
Cropland	--	--	--	--	--	--	--	--	--	--	--	--
Pasture	--	--	--	--	--	--	--	--	--	--	--	--
Orchard	--	--	--	--	--	--	--	--	--	--	--	--
Vineyard	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal irrigated agricultural	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other												
Nonnative woodland	--	--	--	--	0.7	--	--	--	--	--	--	--
Wind turbines	--	--	--	--	20.0	--	--	--	--	--	--	--
Subtotal other	0.0	0.0	0.0	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Developed												
Urban	--	--	--	--	--	--	--	--	--	--	--	--
Aqueduct	--	--	--	--	--	--	--	--	--	--	--	--
Turf	--	--	--	--	--	--	--	--	--	--	--	--
Landfill	--	--	--	--	--	--	--	--	--	--	--	--
Subtotal developed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

Land Cover Type	Reporting Period Land Acquisitions (acres)											
	Grandma's Quarter				Souza 3				Irish Canyon			
	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration	Protection	Existing Easement (No credit)	Creation	Restoration
Uncommon Vegetation Types (subtypes of above land cover types)												
Purple needlegrass grassland	---	---	---	---	---	---	---	---	---	---	---	---
Wildrye grassland	---	---	---	---	---	---	---	---	---	---	---	---
Wildflower fields	---	---	---	---	---	---	---	---	---	---	---	---
Squirreltail grassland	---	---	---	---	---	---	---	---	---	---	---	---
One-sided bluegrass grassland	---	---	---	---	---	---	---	---	---	---	---	---
Serpentine grassland	---	---	---	---	---	---	---	---	---	---	---	---
Saltgrass grassland (alkali grassland)	---	---	---	---	---	---	---	---	---	---	---	---
Alkali sycation bunchgrass grassland	---	---	---	---	---	---	---	---	---	---	---	---
Other uncommon vegetation types	---	---	---	---	---	---	---	---	---	---	---	---
Subtotal uncommon vegetation types	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncommon Landscape Features or Habitat Elements												
Rock outcrop	---	---	---	---	---	---	---	---	---	---	---	---
Cave	---	---	---	---	---	---	---	---	---	---	---	---
Springs/seeps	---	---	---	---	---	---	---	---	---	---	---	---
Scalds	---	---	---	---	---	---	---	---	---	---	---	---
Sand deposits	---	---	---	---	---	---	---	---	---	---	---	---
Mines (number)	---	---	---	---	---	---	---	---	---	---	---	---
Buildings (number)	---	---	---	---	---	---	---	---	---	---	---	---
Potential nest sites (number)	---	---	---	---	---	---	---	---	---	---	---	---
Subtotal uncommon landscape features (acres)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotal uncommon landscape features (number)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals (excludes subtypes)												
Acres	157.0	0.0	0.0	0.0	914.3	111.6	0.0	0.0	313.5	0.0	0.0	0.9
Linear feet	5850.8	0.0	0.0	0.0	15912.6	--	0.0	0.0	12944.5	0.0	908.8	908.8

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 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	13.9	13.9	20%
Preserve-wide Perennial wetland (acres)	75.0	0.0	0.7	1%
Preserve-wide Seasonal wetland (acres)	168.0	0.4	1.7	1%
Preserve-wide Alkali wetland (acres)	93.0	4.3	15.7	17%
Preserve-wide Pond (acres)	16.0	3.4	4.9	31%
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	58,714.4	116,569.2	356%
<i>Stream length by type and order</i>				
Perennial (feet)	4,224.0	0.0	886.4	21%
Intermittent (feet)	2,112.0	8,469.9	24,087.7	1141%
Ephemeral (feet)	26,400.0	50,244.5	91,595.1	347%

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	0	1	50% (25%)
San Joaquin spearscale	<i>Atriplex joaquiniana</i>	0	2	3	--
Big tarplant	<i>Blepharizonia plumosa</i>	3	0	1	33%
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	0	0	0%
Diablo helianthella	<i>Helianthella castanea</i>	2	0	1	50%
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)		8	

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	0.0	0.0	0%
1c	Annual grassland (1,450 acres combined w/ 1c)	TBD		0.0	0.0	0%
1d	25% of total area	478	478	0.0	0.0	0%
1e	No specific requirements	0	0	0.0	0.0	--
All	Estimated minimum requirement	2,100	2,250	0.0	0.0	0%
All	Estimated maximum requirement	2,850	3,150	0.0	0.0	0%
Zone 2						
2a	At least 60% of subzone	1,104	1,104	431.3	444.1	40%
2a	Annual grassland (850 acres)	--	850	327.1	327.1	38%
2a	90% of chaparral in 2a, 2b, and 2c (122 acres total)	--	see below	0.0	0.0	--
2a	Land to protect Mount Diablo manzanita	--	--	0.0	0.0	--
2b	Annual grassland (450 acres)	450	450	0.0	0.0	0%
2b	Connection b/w Black Diamond R.P. and Clayton Ranch (w/ 2c)		see below	0.0	183.8	--
2b	90% of chaparral in 2a, 2b, and 2c (122 acres total)		see below	0.0	0.0	--
2c	Annual grassland (400 acres)	400	400	0.0	10.3	3%
2c	0.5-mile wide connect b/w Black Diamond and Clayton Ranch (w/2b)			0.0	13.0	--
2c	90% of chaparral in 2a, 2b, and 2c (122 acres total)		see below	0.0	0.0	--
2c	Seven (7) of thirteen (13) ponds for TCB, CTS, WPT, or CRLF		7	0.0	0.0	0%
2d	Annual grassland (800 acres)	800	800	0.0	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	--

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
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%
2h	Known occ. of Mt. Diablo manzanita and Brewer's dwarf flax (number)	2	2	0.0	0.0	0%
2h	San Joaquin kit fox (75%)			0.0	0.0	--
2h	Silvery legless habitat, if present			0.0	0.0	--
2h	See 2e/2f/2h below		see below	0.0	0.0	--
2i	No specific requirements	--	--	0.0	0.0	--
2a/2b/2c	Chaparral habitat (90%)	122	122	0.0	4.7	4%
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	431.3	862.0	11%
All	Estimated maximum requirement	9,550	9,550	431.3	862.0	9%
All	Alternative Stay Ahead Measurement for Zone 2		4,900	431.3	862.0	18%
Zone 3						
3a	90% of modeled AWS suitable core habitat	159	159	0.0	17.5	11%
3a	Land to increase linkage from chaparral in zone to Mt. Diablo chaparral			0.0	162.7	
3b	No specific requirements	0	0	0.0	30.6	--
3c	No specific requirements	0	0	0.0	0.0	--
All	Estimated minimum requirement	400	400	30.6	193.3	48%
All	Estimated maximum requirement	750	750	30.6	193.3	26%

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 4						
4a	75% of natural land cover types	1,700	1,700	0.0	0.0	0%
4a	Known occ. of Diablo helianthella and Brewer's dwarf flax			0.0	0.0	
4a	See 4a/4h below		see below	0.0	0.0	--
4b	Known occ. for Mt. Diablo fairy lantern if extant.	0	0	0.0	0.0	
4c	See 4c/4e/4f/4g below	--	see below	0.0	0.0	--
4d	60% of natural land cover types	953	953	0.0	0.0	0%
4e	See 4c/4e/4f/4g below	--	see below	0.0	0.0	
4f	Known occ. for Brewer's dwarf flax (number)	TBD	TBD	0.0	0.0	
4f	See 4c/4e/4f/4g below	--	see below	0.0	0.0	
4g	See 4c/4e/4f/4g below	--	see below	0.0	0.0	
4h	75% of natural land cover types	791	791	0.0	152.2	19%
4h	Linkage between Morgan Territory Ranch, Morgan Territory RP and Mt. Diablo	--	--	0.0	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%
All	Chaparral/Scrub	270	270	0.0	15.0	6%
All	Estimated minimum requirement	4,900	6,050	0.0	152.2	3%
All	Estimated maximum requirement	6,150	8,350	0.0	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	1.0	1.0	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	--	--	--

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
5a/5d	2 (IUDA) or 4 (MUDA) of the occ. of brittlescale	4,300		--	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	530.7	1,541.2	22%
All	Grassland	5,300	8,100	531.7	1,542.2	19%
All	Alkali grassland	750	900	33.4	90.8	10%
All	Alkali wetland	40	40	1.0	12.0	30%
All	Vernal pool invertebrate suitable habitat, wherever possible			Yes (not quantified)	8.8	
All	Estimated minimum requirement	6,100	9,050	574.9	1,734.3	19%
All	Estimated maximum requirement	7,200	11,450	574.9	1,734.3	15%
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	2,656.0	4,589.2	18%
All	Estimated maximum requirement	27,050	34,350	2,656.0	4,589.2	13%
Footnote 1: The requirements in this table are a summary of the land acquisition requirements in Chapter 5 of the HCP/NCCP; consult that chapter for a complete description of all land acquisition requirements						

Table 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 Zone 3 and Subzones 2a, 5a, and 5d.

New Preserve System Acquisitions

Vaquero Farms North, Martin, Grandma's Quarter, and Souza 3 are all located in what will be called, for management planning purposes, the Byron Hills what will be called, for management planning purposes, the Management Area (Acquisition Zone 5). This is where the eastern edge of the Diablo Range transitions to the San Joaquin Valley. Martin, Grandma's Quarter, and Souza 3 contain headwaters and tributaries of Brushy Creek, a stream channel that provides a key linkage between the Mount Diablo foothills to the west and the Delta lowlands to east. Together with Souza 1, Souza 2, and Vaquero Farms South, the 2010 Byron Hills Management Area acquisitions build a contiguous block of protected lands in southeastern Contra Costa County, linking the Byron Airport Habitat Management Lands to Vasco Caves Regional Preserve and the Los Vaqueros Reservoir Watershed lands. They also form part of a broader regional block of protected lands across Alameda and San Joaquin Counties to preserve important habitat corridors for the San Joaquin kit fox. In addition to providing suitable movement and breeding habitat for the San Joaquin kit fox, these properties also contain important habitat for Western burrowing owl, golden eagle, Swainson's hawk, among others. There is also potential habitat for covered plant species restricted to alkali soils, including Subzone 5a target species brittlescale and recurved larkspur.

On the western edge of the Plan Area, the Ang and Irish Canyon acquisitions protect a different but equally important set of resources. These properties support a mosaic of habitat types, including oak woodland and savanna, grasslands and wetlands. They encompass part of the headwaters of Irish Canyon Creek and provide excellent habitat for California red-legged frog and other species. The properties are located adjacent to Clayton, include spectacular views and one day will be an outstanding location for public access.

The 2010 acquisitions are known to support or have the potential to support several covered species. This includes:

- Alameda whipsnake
- California tiger salamander
- California red-legged frog
- western pond turtle
- tricolored blackbird
- Swainson's hawk
- western burrowing owl
- Golden Eagle

- vernal pool fairy shrimp
- San Joaquin spearscale (2 - known)
- recurved larkspur
- alkali milk-vetch
- brittlescale
- big tarplant
- Brewer's dwarf flax
- Diablo helianthella
- Mount Diablo fairy lantern

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 differ by no more than 1% for each property. 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.

Wetland Preservation Acres Undercounted

Though the Conservancy's land cover map has been improved during Plan implementation and does include some field verification, the map is still largely based on aerial photo interpretation. Wetlands are small, isolated and difficult to see in aerial photos. A comprehensive field assessment of wetlands in Preserve System lands has not yet been performed (it will be performed as part of the inventory phase of management planning in 2011). Therefore, the wetland acres shown in the tables probably under estimate their actual extent.

Pre-Existing Conservation Easements

The Plan provides the Conservancy the choice of counting or not counting toward conservation requirements the areas within pre-existing conservation easements. If they are counted, the impacts associated with the development projects mitigated by these conservation easements must be counted toward impact allocations. A number of conservation easements were proposed or recorded on acquisition properties prior to the Conservancy's involvement (see below for details). The proposed but as yet unrecorded easements are awaiting legal review by

the CDFG. In this report, areas within easements are not counted toward preservation requirements.

Vaquero Farms North

Vaquero Farms North is a 575-acre property adjacent to the Los Vaqueros Reservoir Watershed lands (Figures 8 and 9). It is situated entirely west of Vasco Road, with primary access from Vasco Road. The property was acquired for \$2,770,000 by the California Wildlife Foundation (CWF) in 2009 using pre-HCP/NCCP development fees secured by CDFG and USFWS and held by CWF in trust for the Conservancy. EBRPD, in partnership with the Conservancy, then purchased the property using a grant from the USFWS Cooperative Endangered Species Conservation Fund.

Topography consists of moderately sloping, rolling hills. Elevation ranges from approximately 100 to 485 feet above sea level. The property is subject to leases for wind-energy access and support facilities; however, the leases are not in use and no wind turbines or support facilities exist on the property.

This acquisition protects key natural communities and suitable covered species habitat. It contributes to the protection of key habitat linkages in Acquisition Zone 5, Subzone 5a and 5c (Tables 8 and 11). Annual grassland is the dominant land-cover type with alkali grasslands, alkali wetlands, rock outcrops, ponds, and ruderal also present. A number of drainage features, including springs, seeps, and ravines are interspersed throughout the property, including nearly 1 mile of intermittent and ephemeral streams. Freshwater marshes and seeps are present, consisting of areas with permanently or seasonally saturated soils supporting few to several perennial and annual herbaceous hydrophytic plant species. A number of wildlife species are known to be present near or on the site, including San Joaquin kit fox, California tiger salamander, California red-legged frog, and western burrowing owl. Golden eagles breed and forage within the adjacent 20,000-acre Los Vaqueros Reservoir and Watershed lands and are known to forage on the site. Suitable habitat exists for tricolored blackbird, Swainson's hawk, and vernal pool fairy shrimp. The alkali grasslands, scalds, and wetlands along the valley bottom provide suitable habitat for recurved larkspur, San Joaquin spearscale, alkali milk-vetch, and brittlescale.

Ang

Ang is a 462-acre property located just east of Clayton and adjacent to Black Diamond Mines Regional Preserve (Figures 10 and 11). It borders the Oakhurst subdivision and City of Clayton open space on the east. The property was purchased in partnership with the EBRPD for \$2,763,840 (Table 7). A grant to the Conservancy from the USFWS Cooperative Endangered Species Conservation Fund provided significant funding.

Springs and seeps dot the property on the western slopes of Kreiger Peak, supporting wetland habitats. The property is generally moderately to steeply sloping, with an area of lesser slopes comprising the southwest quarter of the property. The site topography is dominated by northwest-trending ridgelines, with rounded northeast-trending secondary ridges.

Figure 8. Vaquero Farms North Property - Landcover Map

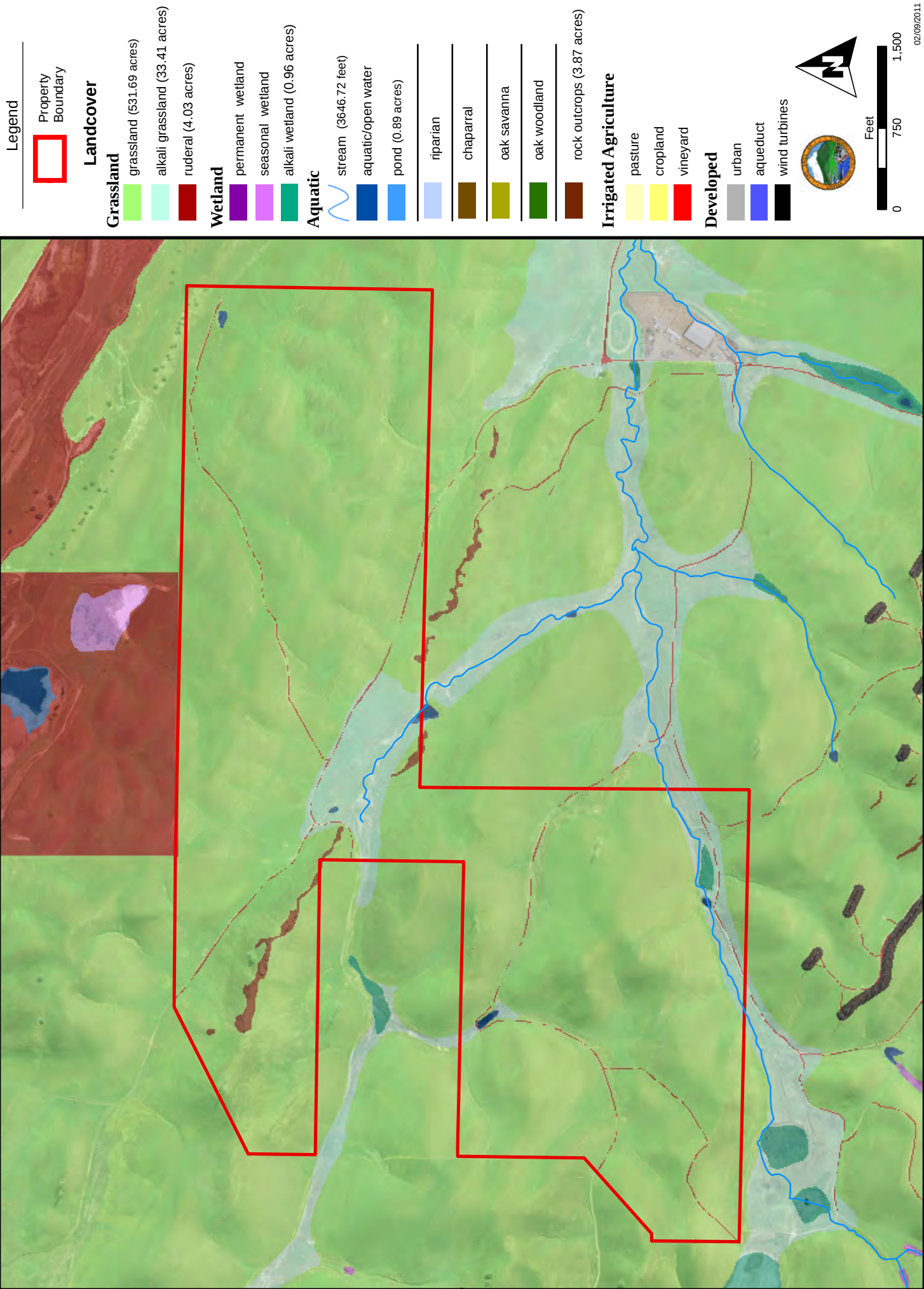


Figure 9. Vaquero Farms North - Representative Photographs



Oaks on Sandy Soil



Wetlands



Ponds



Large rock outcrops



Figure 10. Ang Property - Landcover Map

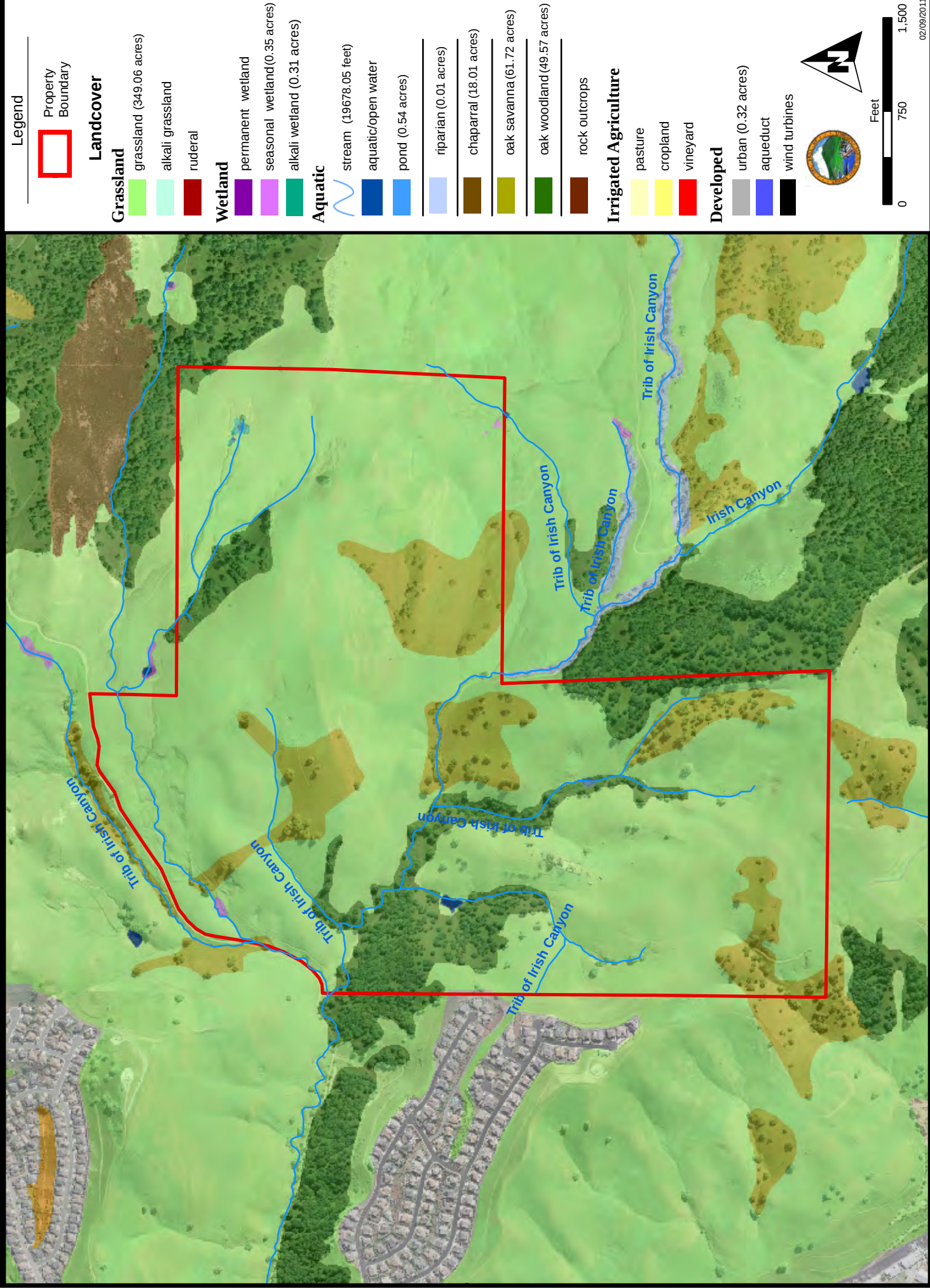


Figure 11. Ang - Representative Photographs



Ponds



Sweeping Views



Old Structures at Homestead



Wetlands



Bettencourt Homestead on the edge of Clayton



Creek

Development is limited to a small ranch house. The current land use is grazing, and the site has been grazed heavily.

The property provides an important buffering function to existing residential development in the Oakhurst subdivision. The Black Diamond Way public trail passes through it, connecting a staging area at Clayton Road to Black Diamond Mines Regional Preserve. Mount Diablo State Park is situated to the south of the property, south of Marsh Creek Road. Acquisition of the property enables pro-active management for urban interface issues such as water quality and will buffer other parts of the property and neighboring portions of the Preserve System from urban influences.

This acquisition protects key natural communities and suitable covered species habitat in Acquisition Zones 2 and 3, Subzones 2a and 3b (Tables 8 and 11). Annual grassland is the dominant land-cover type. Oak savanna, oak woodlands, seasonal wetlands, riparian, alkali wetlands, wetlands, and pond land-cover types are also present. The site contains nearly 4 miles of streams, including a portion of the headwaters for Irish Canyon Creek. The property provides suitable habitat for Alameda whipsnake, California red-legged frog, California tiger salamander, western pond turtle, western burrowing owl, golden eagle, big tarplant, Brewer's dwarf flax, Diablo helianthella, and Mount Diablo fairy lantern.

Martin

Martin is a 234-acre property located along the east and west frontages of Vasco Road, south of Camino Diablo (Figures 12 and 13). The property was purchased in partnership with the EBRPD for \$2,745,395 with federal and non-federal funds (Table 7). The Conservancy contributed 41% (\$1,115,579) from federal grants, and EBRPD contributed 59% (\$1,629,816) with eligible non-federal funds.

The property has slightly to moderately sloping terrain, with elevations ranging from about 100 feet in the northerly section of the property to a maximum of 240 feet on the hilltops in the central and southerly section of the property. The westerly area of the property has the same terrain, but with a greater percentage of slightly sloping lands. The property drains to the North Fork of Brushy Creek. Annual grassland is the dominant natural community on the property. Ruderal land cover and a perennial wetland are also present. The property contains support facilities for most of the grazing activity in this portion of the Preserve System and includes several barns and a ranch house. Four cellular communication facilities exist on the property and lease revenues now support land management and other HCP/NCCP implementation tasks.

This acquisition protects key natural communities and suitable covered species habitat in Acquisition Zone 5, Subzone 5a (Tables 8 and 11). The 230.37 acres of grassland within the parcel contributes to Subzone 5a land cover acquisition targets, as well as the preserve-wide grassland acquisition requirement. Alkali grasslands, perennial wetlands, and the North Fork of Brushy Creek also contribute to preserve-wide acquisition targets. Important breeding and foraging habitat for Western burrowing owl and golden eagle, as well as limited habitat for

Figure 12. Martin Property - Landcover Map

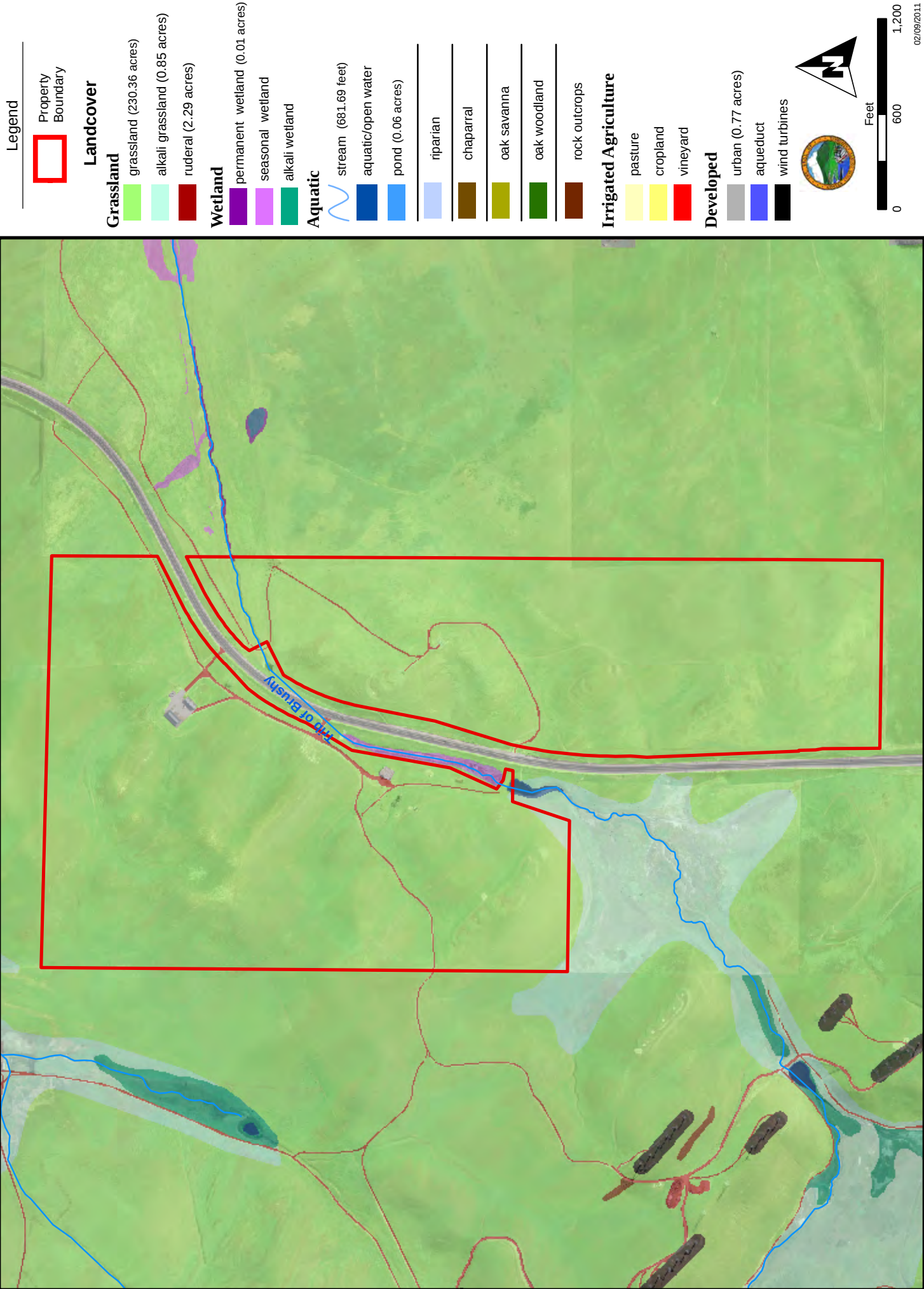


Figure 13. Martin - Representative Photographs



View looking to the west across Vasco Road



Wetland monitoring



California red legged frog on Martin



American flag barn by the ponds on Martin

Swainson's hawk is also present. Finally, the property contains known occurrences of California red-legged frog and California tiger salamander.

Grandma's Quarter

Grandma's Quarter is a 157-acre property located approximately 0.5 miles south of Armstrong Road, southwest of the unincorporated community of Byron (Figures 13 and 15). The property was purchased in partnership with the EBRPD for \$1,036,200 with a combination of EBRPD funds and the Conservancy's federal grants.

Elevations range from 190 feet along the north property line to 520 feet in the far southwest corner across a variety of environmental gradients. Topography ranges from rolling to moderately sloping hills, with two areas of steeper gradient in the southwest and northeast portions of the property. The property contains a Brushy Creek tributary

The current land use on the property is grazing and development is limited. There is a spring box-fed water trough. An all weather gravel road extends to the middle of the property to connect with an east-west gravel paved road in the southerly area maintained by the wind power lessee to the west (on an adjacent property). Four sets of electrical transmission line towers traverse the central part of the property within a PG&E easement. Although the property is located within a Wind Energy Resource Area, as defined in the 2005 County General Plan, there are no longer any wind turbines on the property, the prior turbines having been removed in 2007. A wind lease is still extant and royalties are paid. There is no major subdivision activity in this area. Adjacent to the property, there are several large wind turbines and one rural home site (approximately 0.1 miles from the property).

This acquisition protects key natural communities and suitable covered species habitat in Acquisition Zone 5, Subzone 5a (Tables 8 and 11). The property also provides suitable breeding and foraging habitat for Western burrowing owl, golden eagle, California tiger salamander and California red-legged frog. There is a known occurrence of San Joaquin spearscale.

Souza 3

Souza 3 is 1,026-acre property (Figures 16 and 17). It is located east of Vasco Road, south of Armstrong Road, and southwest of the unincorporated community of Byron. The property was purchased in partnership with the EBRPD for \$5,300,400, with a combination of funding from the Gordon and Betty Moore Foundation, EBRPD and the Federal Cooperative Endangered Species Conservation Fund.

The property has a varied topography and is located in an agricultural area. A series of ridgelines dominate the westerly, north-central, and easterly areas. Elevations range from 640 to 850 feet. The terrestrial land cover types include annual grassland, alkali grassland, riparian, non-native woodland, and ruderal. Aquatic land cover types include perennial wetland, alkali wetlands, and a pond. The length of the stream (Brushy Creek headwater) that traverses the property is approximately 12,913 linear feet. The current land use is grazing. Development includes a bunk house, weighing shed and scales, hay shed, two small storage sheds, cattle chute, and corral fencing. There are also 31 wind turbines and 3 leased cellular communication antenna sites and lease revenue from these facilities now fund management and other

Figure 14. Grandma's Quarter Property - Landcover Map

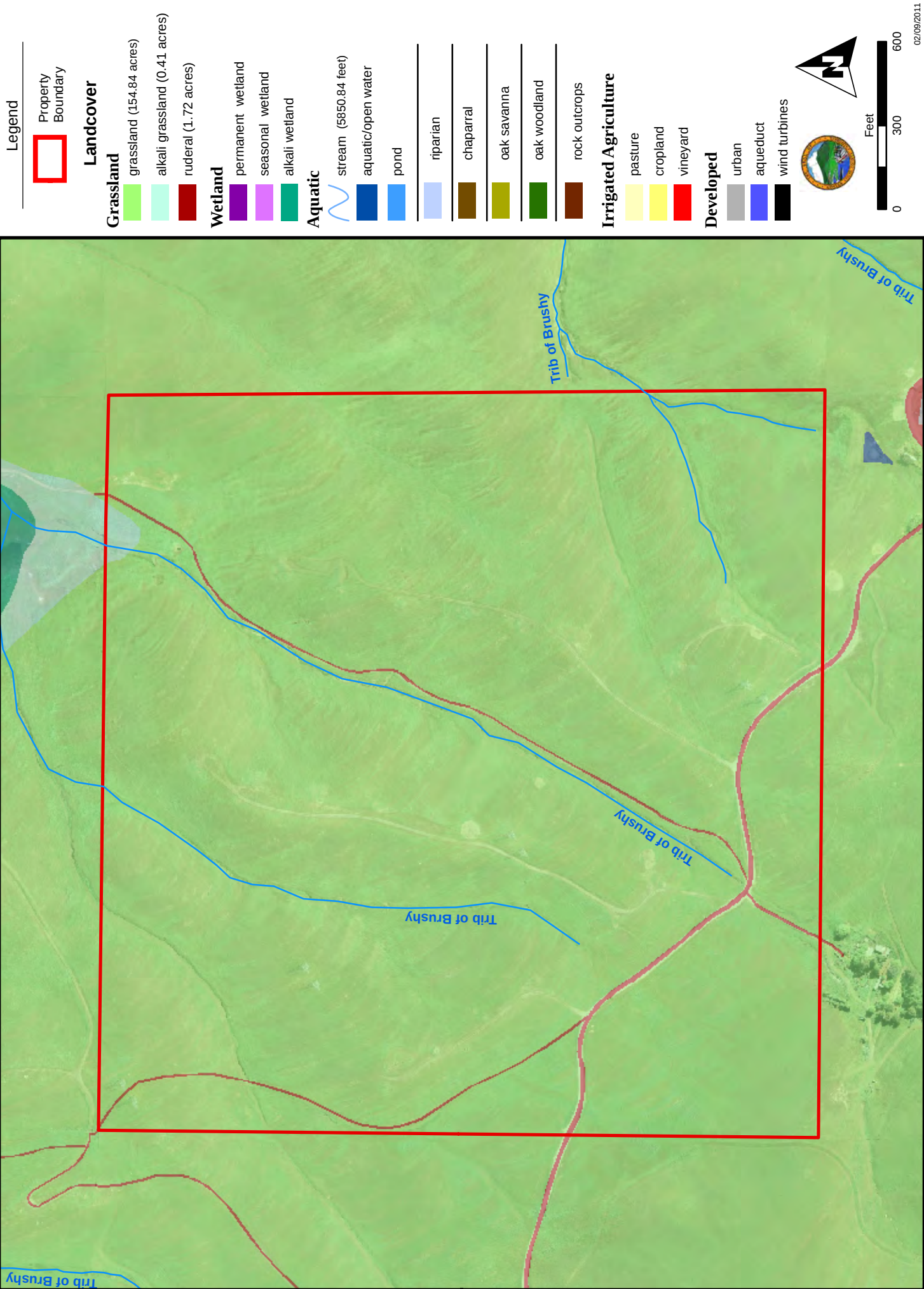


Figure 15. Grandma's Quarter - Representative Photographs



Rock veins



Rolling hills and creek drainage looking east toward the Delta



Surveying wetlands



Looking up creek drainage toward Souza III

Figure 16. Souza III Property - Landcover Map

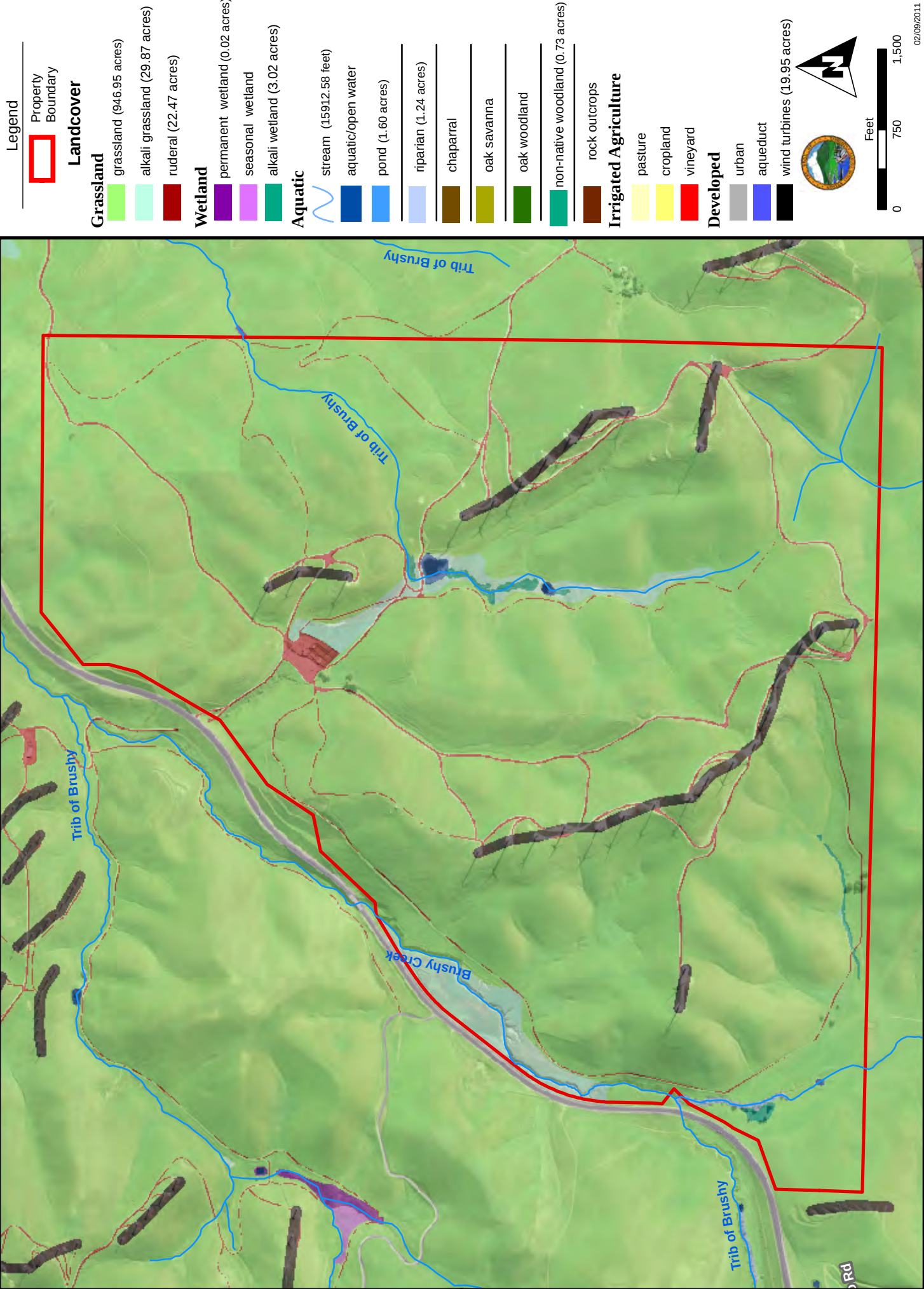


Figure 17. Souza III - Representative Photographs



Creek corridor adjacent to Vasco Road



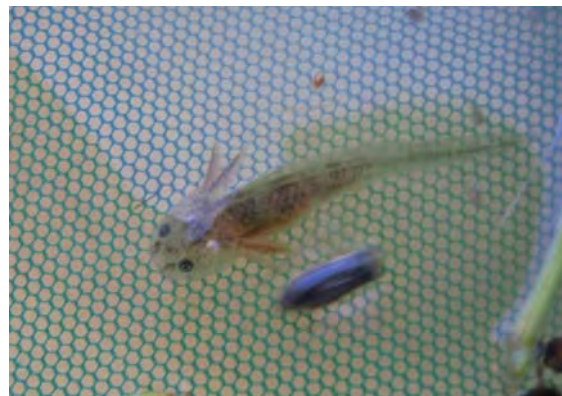
Looking up large drainage above main ponds



A pond on Souza III



Wetland survey near barn



California tiger salamander larva

Figure 18. Irish Canyon Property - Landcover Map

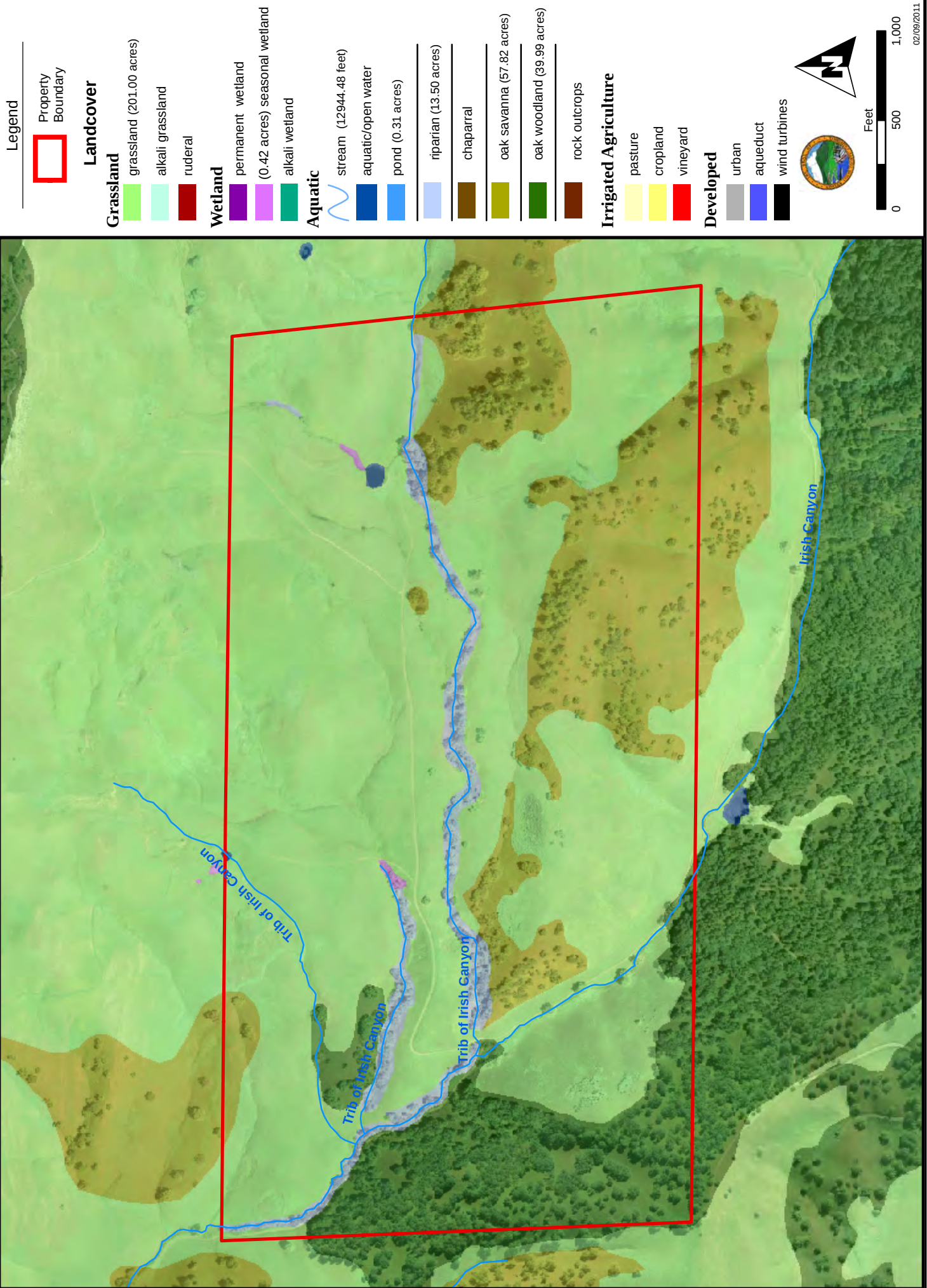


Figure 19. Irish Canyon - Representative Photographs



View of Irish Canyon property from the pond berm



Upper pond



Spring



Lower drainage on property

HCP/NCCP implementation tasks. A line of high voltage transmission towers is located within an easement that bisects the easterly portion of the property. There are well maintained gravel access roads across the site. There is no major subdivision activity in this area

The property is located within Acquisition Zone 5, subzones 5a, 5b, and 5d. There are 935.7 acres of grassland land cover that contributes to targets for subzones 5a, 5b, and 5d, as well as, the overall grassland acquisition requirement. Alkali grasslands, alkali wetlands, perennial wetlands and tributaries from the main stem of Brushy Creek contribute to preserve-wide acquisition targets.

There are known occurrences of California tiger salamander, California red-legged frog, and San Joaquin spearscale. Purple needlegrass, an uncommon vegetation type, is also known to occur on the property.

Irish Canyon

Irish Canyon is a 314-acre property located north of Marsh Creek Road and approximately one mile east of the City of Clayton. The property is near the Black Diamond Way public trail that connects a trailhead at Clayton Road to Black Diamond Mines Regional Preserve. The property was purchased in partnership with the EBRPD for \$842,000. The property had been valued at \$1,760,000. The seller, Save Mount Diablo, agreed to a more than 50% reduction from the purchase price, reflecting a pass-through of a grant Save Mount Diablo received from the Gordon and Betty Moore Foundation that covered a portion of their initial purchase price as well as a donation of Save Mount Diablo funds.

The property contains modest variations in elevation and highly varied topography. Irish Canyon Creek and various tributaries traverse the property. Springs and seeps dot the property on the southern slopes of Kreiger Peak supporting wetland habitats as well as the perennial pond. The small tributaries on the northern half of the property support healthy riparian communities in some areas. There are no constructed facilities on the property. Save Mount Diablo originally purchased the property in 2007 and has agreed to continue to perform restoration and management activities for the next three years.

The property serves a critical connectivity between open space and other acquired lands for wildlife species in the area. Natural communities found on the property include annual grassland, oak savanna, oak woodland, seasonal wetlands, ephemeral streams, and a pond. Annual grassland is the dominant community on the property.

This acquisition protects key natural communities and suitable covered species habitat in Acquisition Zone 2, Subzone 2a. The parcel contains 196 acres of grassland land cover which contribute to land cover acquisition targets for Subzones 2a and to the overall acquisition requirement for grassland. The presence of oak savanna and oak woodland, a pond and wetland contribute to preserve-wide acquisition targets. California red-legged frogs breed in the large pond in the northeast corner of the property and golden eagles forage on the property. The property provides suitable habitat for numerous other covered species, including California tiger salamander, Western burrowing owl, Alameda whipsnake, and various plant species.

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 Measures 2.1, 2.3 and 2.10 in the Plan require wetland and stream restoration and 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 NCCP Act.

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. However, in the first three years of Plan implementation, less than an acre of permanent impacts to wetlands has occurred, requiring less than one acre of restoration to mitigate. The pace is expected to fluctuate in the future.

During the reporting period, the Conservancy constructed one restoration project and continues to monitor three restoration projects that have not yet met success criteria. The projects are as follows:

- Irish Canyon Riparian Restoration Project (constructed 2010).

- Lentzner Springs Restoration Project (constructed 2008)
- Souza I Restoration Project (constructed 2008)
- Souza II Restoration Project (constructed 2009)

For each project, a discussion of goals and objectives, contribution to restoration and creation requirements, and performance criteria and monitoring is provided below. Table 8b provides natural community-level and property specific restoration and creation summaries. Table 12 provides a summary of aquatic and stream land-cover restoration and creation by watershed. During the reporting period, the one restoration project initiated (Irish Canyon Riparian Restoration) resulted in:

- 0.9 acre riparian habitat restored
- 688.5 linear feet stream restored

The four restoration projects constructed provide a range of benefits to covered species. The Irish Canyon Riparian Restoration Project is expected to benefit covered amphibian species. Wetland restoration on the Lentzner, Souza I, and Souza II properties increase habitat value for California red-legged frog and California tiger salamander, and for covered vernal pool crustaceans. Restoration on Lentzner and Souza II also increases habitat value for covered alkali grassland and alkali wetland plant species.

Irish Canyon Riparian Restoration Project

Project Overview

The Irish Canyon Riparian Restoration Project is located on the 314-acre Irish Canyon property in the Mt. Diablo Creek watershed (Figure 20). 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 three denuded stream reaches. Planting sites were caged and watering took place every three weeks after the rains stopped at the end of May 2010.

The project is expected to result in the restoration of 0.91 acres 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 the Conservancy and EBRPD consistent with the long-term management plan to be developed for the site.

Monitoring and Adaptive Management to Date

As of June 10th, 2010, 92 of the 150 sites planted were occupied by one or more saplings. Additional mortality was observed after June, as several sites were permanently lost on a south facing slope presumably due to poor soils and lack of water. Of surviving sites, as of August 2010, 90% looked robust. All vacant sites were replanted in December 2010/January 2011.

Recommendations/Future Actions

The site will continue to be monitored for two more years and all plantings will be watered for two more summers. Weeding will continue as needed around the plantings.

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 sub-basin of the Marsh Creek Watershed (Figure 20).⁵ 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 13a). 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 2 monitoring for the Lentzner Springs restoration project was conducted on June 1, 2010 (Nomad Ecology 2010a). Monitoring results found that the restoration site is meeting its performance criteria of at least 75% survival of the planted species. Three of the planted species, saltgrass (*Distichlis spicata*), alkali heath (*Frankenia salina*), and Great Valley gumweed

⁵ Project is located within the Oil Canyon Creek sub-basin of the Sand Creek sub-basin within the Marsh Creek Watershed.

(*Grindelia camporum* var. *camporum*) are surviving and spreading. One of the species planted, bulrush (*Scirpus* sp.) has entirely died off. Although the performance criteria are being met, observations of the restoration site suggest it may initially be functioning more like an alkali grassland than an alkali wetland.

Recommendations/Future Actions

Recommendations provided in the 2010 monitoring report (Nomad Ecology 2010a) include sampling protocol modifications, performance standard revisions, mapping of wetland features on site, additional plantings, and weed control. Additionally, continued weeding and herbicide spraying will be conducted by Thunder Mountain on the Lentzner restoration site in 2011.

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 20). 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 project 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 13b). 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. Failure to meet the performance criteria may result in further improvements to the pond, including grade adjustments, planting and seeding.

Monitoring and Adaptive Management to Date

The pond restoration was monitored in 2010 by Monk and Associates. The created pond met the hydrology and overall vegetation performance criteria for Year 2, although the pond was found to be overgrown with non-native Italian ryegrass, and so it was re-seeded with a native seed mix consisting of various native grasses, toad rush (*Juncus bufonius*), and coyote thistle (*Eryngium vaseyi*) in September of 2010. Monk and Associates reported that the pond has attracted a minimum of seven bird species, three mammal species, and three amphibian species, including California tiger salamander which successfully breeds in the pond.

Recommendations/Future Actions

Monk and Associates recommended that the pond be fenced off from sheep grazing through the remainder of the five-year establishment period of the pond. They also recommended against rodent control in the pond vicinity, to allow for establishment of burrows that would benefit California tiger salamander, California red-legged frog and western burrowing owl.

In 2011 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 20). 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 wetland and pond are being monitored using a number of performance criteria (Table 13c). 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

The restoration project was completed in 2009, and Year One monitoring was conducted in late spring 2010. Overall plants survival and average absolute cover of native plants are well below the performance standards. Areas that appeared to pond water well had the highest percent survival of planted plants, and the lowest cover of non-native vegetation that outcompeted plantings. Areas with strongly alkaline soils had low survival of native wetland species and low cover of non-native species; these areas are better characterized as alkaline seasonal wetlands and scalds rather than emergent wetlands. Erosion was observed in areas where work had been performed and vegetation had not become re-established.

All the locations marked as seeded with brittlescale (*Atriplex depressa*) were visited and no brittlescale was observed but the common native species, valley saltbush (*Atriplex fruticulosa*), was observed at all these locations. It was determined that this species had originally been misidentified as brittlescale. Thus, seed of valley saltbush rather than brittlescale had been collected and seeded on the restoration site. Valley saltbush was doing well where it was seeded and will likely reseed and vegetate the surrounding areas.

Wetland and pond acreage monitoring did not occur during the late spring 2010 monitoring because it was not possible to tell the extent of wetlands and ponds so soon after the restoration was completed. Hydrologic connectivity monitoring, depth and duration monitoring, and in-stream pool monitoring had not yet been completed for Year One in the late spring 2010 monitoring “and will occur after a major storm event in winter 2010/2011”

Remedial measures were implemented in late 2010 in response to the observation of erosion problems. The BMPS were reinforced, saltgrass was planted in the BMP areas, and additional salt grass plugs were planted along the banks to armor these areas and protect against further erosion.

Additionally, fairy shrimp inoculum was translocated to restored seasonal wetlands on the Souza II property from a site on Deer Valley Road, where impacts to a wetland occupied by this species are anticipated. The top 2 inches of soil were collected from the salvage site, transported to the Souza II site, and spread in a thin layer in the deepest part of the restored seasonal wetland during its dry period.

Recommendations/Future Actions

Recommendations provided by Nomad Ecology (2010b) include re-mapping and re-characterizing of vegetation communities; modifying the plant palette based on an assessment of location hydrology and reference sites, and re-planting areas as appropriate based on modified plant palettes; introducing special status plants; revising monitoring protocol and performance standards; use of more aggressive hand weeding and grazing to control Italian ryegrass and thatch; repairing eroded areas; and armoring banks and controlling flows with vegetation, straw wattles, etc., to protect against future erosion. As described above, measures were implemented in late 2010 to repair eroded areas, armor banks, control flows and protect against future erosion, consistent with recommendations in the monitoring report. The remaining recommendations will be implemented in 2011.

Figure 20. Location of Habitat Restoration and Creation Projects

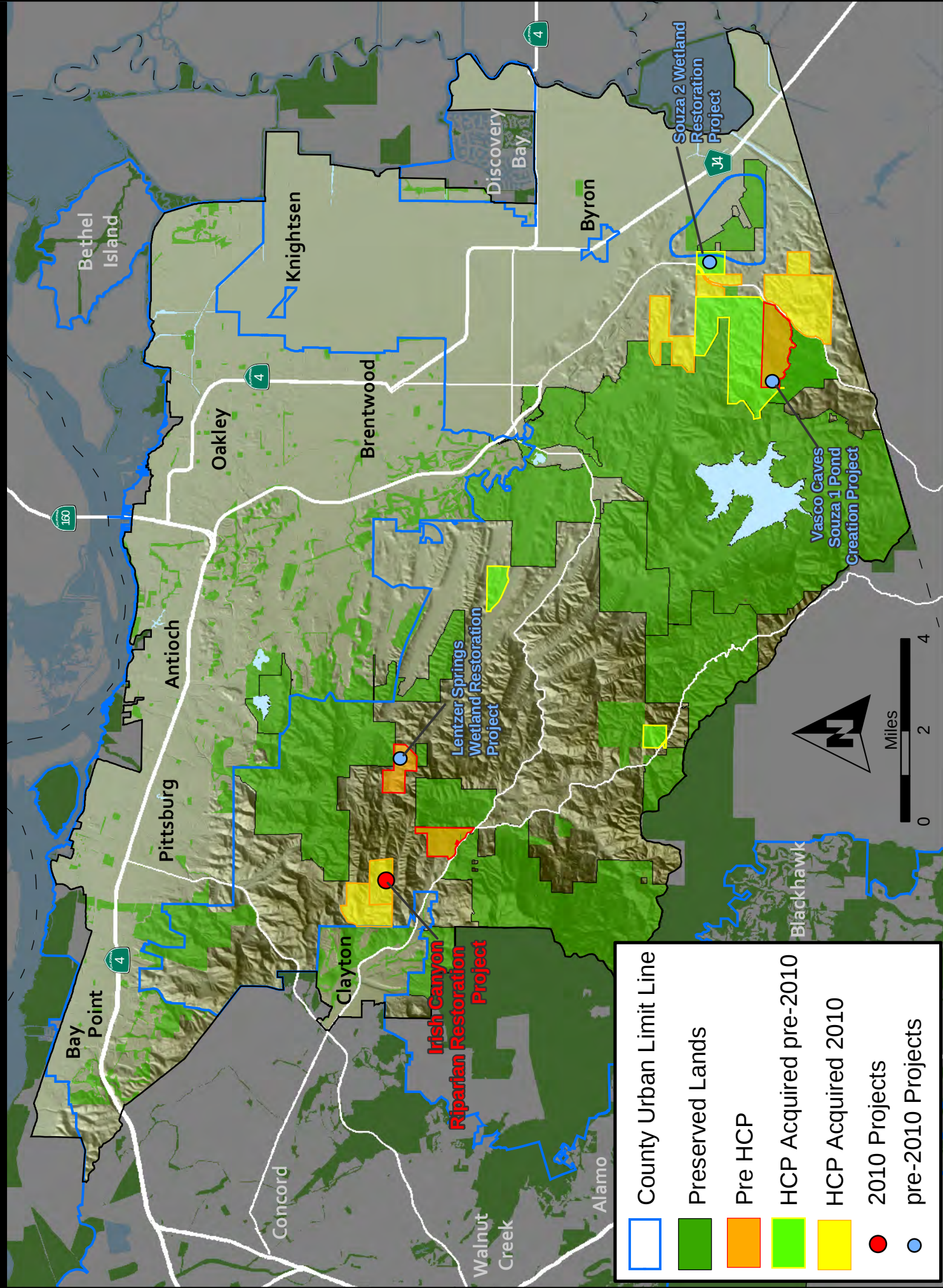


Table 12. Aquatic and Stream Land Cover Restoration and Creation by Watershed

Basin/Watershed	Aquatic Land Cover (acres)								Stream Land Cover (linear feet)			
	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												
Restoration	--	0.2	7.7	--	--	--	--	7.9	--	2,409.4	--	2,409.4
Creation	--	--	--	--	0.3	--	--	0.3	--	--	--	--
<i>subtotal</i>	<i>0.0</i>	<i>0.2</i>	<i>7.7</i>	<i>0.0</i>	<i>0.3</i>	<i>0.0</i>	<i>0.0</i>	<i>8.2</i>	<i>0.0</i>	<i>2,409.4</i>	<i>0.0</i>	<i>2,409.4</i>
Sand												
Restoration	--	--	--	0.1	--	--	--	0.1	--	--	--	0.0
Creation	--	--	--	--	--	--	--	--	--	--	--	--
<i>subtotal</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.1</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
Upper Mt. Diablo												
Restoration	0.9	--	--	--	--	--	--	0.9	--	908.8	--	908.8
Creation	--	--	--	--	--	--	--	--	--	--	--	--
<i>subtotal</i>	<i>0.9</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.9</i>	<i>0.0</i>	<i>908.8</i>	<i>0.0</i>	<i>908.8</i>
Total for Inventory Area	0.9	0.2	7.7	0.1	0.3	0.0	0.0	9.2	0.0	3,318.2	0.0	3,318.2
¹ Perennial wetlands include wetlands of indeterminate hydrology. In Appendix J, perennial wetlands are classified as wetlands												
² The term <i>aquatic</i> used in Appendix J refers to reservoirs and open water. <i>Reservoir (open water)</i> is used to in place of <i>aquatic</i> in this table to remain consistent with the other tables in this report.												

Table 13a. 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 13b. 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)
	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 and 3		
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 13c. 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	60% native cover
1-5	Cover of non-native invasive	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 management is consistent with the Plan's goals and objectives.

Preserve management plans are prepared within one year of land being added to the Preserve System. 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 lands acquired to date in Acquisition Analysis Zone 5. This management plan covers five properties that have been acquired for the Preserve System: Vaquero Farms North, Vaquero Farms South, Souza I, Souza II, Souza III, and Martin. This Byron Hills Management Plan is the first preserve management plan prepared by the Conservancy and can be expanded to include future acquisitions. As such, it will likely become a template for future preserve management plans prepared for other parts of the Preserve System.

As of December 2010, 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 2010 reporting period, and provides an effort-to-date summary of the extent of land cover types enhanced.

2010 Reporting Period

- Milk thistle eradication on Souza II and Martin properties: A large (40+-acre) area infested with milk thistle was aerially sprayed via helicopter in 2010 (similar spraying had been performed in 2009). 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 3 string electric fence with a solar generator was installed (late November 2010). Cattle have responded well to the new fencing and have not grazed the newly seeded area inside the fence.

- 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 five inches apart.

Land Management

This section summarizes all land management activities undertaken on the HCP/NCCP Preserves during the 2010 reporting period, and discusses management issues facing the Conservancy.

For the 2010 reporting period, management consisted of the enhancement actions described above (weed control and planting small-flowered morning glory). 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 2010 reporting period.

VI. MONITORING, RESEARCH, AND ADAPTIVE MANAGEMENT

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

Monitoring

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

Effectiveness Monitoring

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

Restoration monitoring is a type of effectiveness monitoring that is specific to restoration projects. Restoration monitoring is discussed above in 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 2010, 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. The only surveys conducted during the 2010 monitoring period were for vernal pool crustaceans, as described below.

Vernal Pool Crustacean Surveys: In February 2010, surveys for covered vernal pool crustacean were conducted on the Souza I, Souza II, Vaquero Farms North, and Vaquero Farms South properties (Condor Country Consulting 2010). These surveys detected vernal pool fairy shrimp (*Branchinecta lynchii*) on the Souza I, Souza II, and Vaquero Farms South properties, and versatile fairy shrimp (*Branchinecta lindahli*) on the Souza II, Martin, and Vaquero Farms South properties. Additionally, observations of California red-legged frog and California tiger salamander were documented during the crustacean surveys. Adult California red-legged frogs were observed on Souza II and Vaquero Farms South, juveniles were observed on Martin and Vaquero Farms south, and eggs were observed on Vaquero Farms south. California tiger salamander eggs were observed on Souza I, Souza II, Martin, and Vaquero Farms North, and larvae were observed on Vaquero Farms South.

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 2010, 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.

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.

In August 2010, the Conservancy received a grant from the Gordon and Betty Moore Foundation which will fund research related to raptors and wind turbine mortality. A specific research project has not yet been designed, but the funds will be used for research that fills existing data gaps related to raptor behavior in relation to wind turbines, weather and seasonal effects on mortality, and/or effectiveness of various mortality reduction measures.

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.

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 and Figure ES-1 and ES-2). For all land-cover types, the percent ahead ranges from 0% to over 100%. The Conservancy is 3,759 acres ahead of the stay-ahead requirement for grassland and irrigated agriculture land-cover types (the requirement is 92 acres). For plant occurrences, the Conservancy is at least 100% of all impacts (Table 15).

Jump-Start Guidelines

To support the Plan's Stay-Ahead provision, the Plan provides Jump-Start Guidelines recommending that approximately 2% of the expected preservation requirement be acquired prior to ESA and NCCPA permit issuance. The Conservancy complied with the Jump-Start Guidelines prior to the reporting period.

Table 14. Stay-Ahead Assessment: Land Cover

Land Cover Type	Conservation		% of Required	Impact		Acres Required to be Ahead	% Ahead ³ (Conservation % - Impacts %)
	Protection Required (acres)	Protection to date (acres)		Impact	Impacts to date (acres)		
Terrestrial							
All grassland & irrigated agriculture	18,150	3,850.6	21.2%	12,148	61.4	0.5%	21%
Chaparral and scrub	550	37.1	7%	2	0.0	0.0%	7%
Oak savanna	500	168.8	34%	165	0.0	0.0%	34%
Oak woodland	400	419.2	105%	73	0.0	0.0%	105%
Subtotal terrestrial	37,750	4,475.7	12%	24,536	61.4	0%	12%
Aquatic							
Riparian woodland/scrub	70	13.90	20%	35	0.24	1%	19%
Perennial wetland ¹	75	0.70	1%	75	0.01	0%	1%
Seasonal wetland	768	1.70	0%	56	0.29	1%	0%
Alkali wetland	93	15.70	17%	31	0.00	0%	17%
Pond	16	4.90	31%	8	0.00	0%	31%
Reservoir (open water) ²	12	0.00	0%	12	0.00	0%	0%
Slough/Channel	36	0.00	0%	72	0.07	0%	0%
Subtotal aquatic	1070	36.9	3%	289	0.61	0%	3%
Stream (length in linear feet)							
Perennial stream	4,224	886.4	21%	2,112	56.3	3%	21%
Intermittent stream	2,112	24,087.7	1141%	2,112	6.0	0%	1141%
Ephemeral stream	26,400	91,595.1	347%	26,400	76.0	0%	347%
Subtotal stream length	32,736	116,569.2	356%	30,624	138.3	0%	356%
Totals							
Acres	38,820	4,512.6	12%	24,825	62.0	0%	11%
Linear feet	32,736	116,569.2	356%	30,624	138.3	0%	356%
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	--	1	100%
Brittlescale	<i>Atriplex depressa</i>	1	--	1	100%
San Joaquin spearscale	<i>Atriplex joaquiniana</i>	3	--	3	100%
Big tarplant	<i>Blepharizonia plumosa</i>	1	--	1	100%
Mount Diablo fairy lantern	<i>Calochortus pulchellus</i>	1	--	1	100%
Recurved larkspur	<i>Delphinium recurvatum</i>	0	--	0	--
Round-leaved filaree	<i>Erodium macrophyllum</i>	0	[see note ¹]	0	--
Diablo helianthella	<i>Helianthella castanea</i>	1	--	1	100%
Brewer's dwarf flax	<i>Hesperolinon breweri</i>	0	--	0	--
Showy madia	<i>Madia radiata</i>	0	--	0	--
Adobe navarretia	<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i>	0	--	0	--
Total		8	0	8	--

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 connections, and seeds collected on site were propagated.

VIII. CHANGED CIRCUMSTANCES AND REMEDIAL MEASURES

The No Surprise 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 circumstances occurred during the reporting period. No remedial measures were implemented.

IX. FINANCES

Budget

The Conservancy's Approved 2010 Budget is presented in Table 16. During the reporting period, expenditures focused on land acquisition, management and restoration planning and design, program administration and environmental compliance. This focus partly reflects the necessary emphasis when starting a new conservation program and partly reflects the abundance of grant funding for land acquisition. Funding for preserve management, maintenance and monitoring, and research and adaptive management were under-spent relative to Plan projections because the first pieces of the Preserve System were just acquired. Table 17 compares actual expenditures to budgeted expenditures. Of the Conservancy's total approved Budget in 2010 of \$15,834,433, the amount actually spent in 2010 was \$11,788,315. Revenues totaled \$12,564,515. The difference between revenues and expenditures was \$776,200. As noted in Table 17, all year-end figures are preliminary.

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 funding: Acquisition and management of land by local agencies, including park districts, cities, and the county, using local tax revenues. The Conservancy has also required Participating Special Entities to contribute funds over and above fee requirements in order to contribute to the recovery of species in the inventory area.
- State, federal and private grants: Funding from the state and federal government to assemble, manage, and monitor Preserve System lands.

Of the total of \$12,564,515 in revenue that was received in the reporting period, funding from grants was by far the largest source. Various federal, state and private funding sources have generously approved or awarded a total of \$39,952,685 in grant funding since Plan inception, of which \$11,726,928 was spent during the reporting period for Conservancy activities. Most grant funding awarded will be spent in future years, with approximately \$22 million unspent at the end of 2010. More detailed information on approved grants is provided in Table 18. In addition to grant funds, EBRPD contributions toward joint acquisitions totaled \$4,679,876 in 2010.

Fees, contributions to recovery and administrative cost reimbursements received in 2010 totaled \$837,587. These revenues were generated from ten projects, nine covered in 2010 and

one project for 2011 that paid some administrative costs in 2010. Table 19 provides additional detail on fee revenues.

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 million⁶ 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 and expects to make more progress on planning in 2011. In addition the Conservancy has begun to secure potential sources for long term funding. Properties acquired in 2010 will provide approximately \$375,000 per year in lease revenue from existing cellular communications facilities and wind turbines with long term leases. 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.

⁶ 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

Approved 2010 Conservancy Budget

Cost Category	Proposed 2010 Expenditures								
	Development Fee Account	Dev. Fee Revenues Accrued in 2010 ¹	Wetland Mitigation Fee Account ²	Wetland Mitigation Fee Revenues Accrued in 2010 ²	CDFG's California Wildlife Foundation Account ³	Grant Funding ⁴	TOTAL (2010)	% of Total	% Change from 2009
Program Administration	\$257,094	0%	\$0	0%	\$257,094	\$0	\$514,189	3%	4%
Land Acquisition	\$0	20%	\$0	0%	\$100,000	\$13,946,303	\$14,046,303	89%	0%
Management, Restoration & Recreation Planning & Design	\$52,856	0%	\$0	20%	\$79,283	\$100,000	\$232,139	1%	-29%
Habitat Restoration/Creation	\$0	0%	\$40,960	20%	\$40,960	\$250,000	\$331,920	2%	-66%
Environmental Compliance	\$75,000	0%	\$10,000	0%	\$10,000	\$56,303	\$151,303	1%	-9%
HCP/NCCP Preserve Management and Maintenance	\$99,384	20%	\$0	0%	\$198,768	\$0	\$298,151	2%	2%
Monitoring, Research, and Adaptive Management	\$20,000	0%	\$20,000	0%	\$129,565	\$0	\$169,565	1%	80%
Remedial Measures	\$6,000	0%	\$0	0%	\$0	\$0	\$6,000	0%	0%
Contingency Fund (5% of non-land acquisition costs)	\$84,863	0%	\$0	0%	\$0	\$0	\$84,863	1%	-28%
TOTAL 2010 EXPENDITURES	\$595,197	40%	\$70,960	40%	\$815,670	\$14,352,606	\$15,834,433	100%	-4%
PROJECTED BALANCE ON JANUARY 1, 2010	\$940,000		\$280,000		\$850,000	\$20,247,054	\$22,317,054		
Amount of Projected January 1, 2010 Balance To Be Reserved For Future	\$344,803	60%	\$209,040	60%	\$34,330	\$5,894,448	\$6,482,621		

Notes:

(1) Percentages reflect the recommended porportion of new revenues accrued in 2010 to be spent on each cost category.

(2) Projected Wetland Mitigation Fee balance on 1-1-08 reflects projected expenditures for remainder of 2009 as well as pending \$549K transfer from CWF Account.

(3) This account was set up specifically for the HCP. Wildlife agencies must approve disbursements. Projected balance reflects pending \$549k transfer to Wetland account. Upon anticipated closing of Vaquero Farms North in early 2010, available funds in the CWF account will increase by \$2,770,000. See Table II for more information.

(4) Grant funding total reflects funding that remains from approved grants. Does not include \$5M grant that has been offered by WCB staff. See Table III for grant funding details.

Table 17: 2010 Year-End Budget Status: Actual Expenditures Compared to Conservancy's Approved 2010 Budget (expenditures and revenues include Conservancy's own funds as well as grant funds disbursed on behalf of the Conservancy)					
	<i>Expenditures</i>				
	<i>A</i>	<i>B</i>	<i>E= A minus D</i>	<i>F= E/A*100</i>	
	<i>Approved 2010 Conservancy Budget¹</i>	<i>Actual Expenditures as of 12/31/10²</i>	<i>Budget Not Spent</i>		<i>Percent Remaining</i>
Program Administration	\$514,189	\$560,165	-\$45,976		-9%
Land Acquisition	\$14,046,303	\$10,875,616	\$3,170,686		23%
Management, Restoration and Recreation Planning and Design	\$232,139	\$46,674	\$185,465		80%
Habitat Restoration/Creation	\$331,920	\$54,571	\$277,349		84%
Environmental Compliance	\$151,303	\$91,988	\$59,315		39%
HCP/NCCP Preserve Management and Maintenance	\$298,151	\$12,730	\$285,422		96%
Monitoring, Research, and Adaptive Management	\$169,565	\$146,572	\$22,992		14%
Remedial Measures	\$6,000	\$0	\$6,000		100%
Contingency Fund (5% of non-land acquisition costs)	\$84,863	\$0	\$84,863		100%
TOTAL EXPENDITURES	\$15,834,433	\$11,788,315	\$4,046,117		26%
FEE REVENUES IN 2010² (includes fees, contributions to recovery & admin charges)		\$837,587			
GRANT REVENUE IN 2010²		\$11,726,928			
TOTAL REVENUE IN 2010²		\$12,564,515			
DIFFERENCE BETWEEN 2010 REVENUES & EXPENDITURES²		\$776,200	(surplus)		

Notes:

(1) Budget amounts do not reflect augmentation formulas. The approved Budget allowed the expenditure limits for certain categories to increase in proportion to revenues. These augmentations are not included here in order to keep the comparison of expenditures to budget simple and conservative.

(2) Preliminary accounting only. Year-end account reconciliation still in progress.

Table 18
Grants Awarded for ECCC HCP/NCCP Implementation

<i>Funding Source</i>	<i>Agency</i>	<i>Purpose</i>	<i>Amount</i>	<i>Required Match</i>	<i>Amount Expended (12/31/10)</i>	<i>Remain (12/31/10)</i>	<i>Match non-federal?</i>	<i>Need to be used by...</i>	<i>Complete?</i>
Section 6 (2006)	USFW	Acquisition	\$6,531,054	\$7,982,399	\$6,531,054	\$0	yes	June 30 2010	✓
Section 6 (2007)	USFW	Acquisition	\$7,000,000	\$8,555,600	\$4,975,905	\$2,024,095	yes	June 30, 2011	
Section 6 (2008)	USFW	Acquisition	\$6,000,000	\$7,333,333	\$1,372,500	\$4,627,500	yes	May 14, 2011	
Section 6 (2009)	USFW	Acquisition	\$2,500,000	\$3,055,556	\$0	\$2,500,000	yes	August 1, 2012	
Section 6 (2010)	USFW	Acquisition	\$6,000,000	\$7,333,333	\$0	\$6,000,000	yes	July 31, 2013	
CVPIA - HRP	USBR	Acquisition	\$1,241,631	\$500,000	\$1,241,631	\$0	yes	September 2010	✓
IRWMP - Prop 50	DWR	Acquisition or restoration	\$750,000	\$500,000	\$750,000	\$0	no	June 2012	✓
IRWMP - Prop 50 (reprogrammed)	DWR	Acquisition or restoration	\$1,400,000	\$500,000	\$0	\$1,400,000	no	March 2012	
NCCP Local Assistance Funds (2006)	CDFG	Start-up staffing	\$40,000	'=====	\$40,000	\$0	no	June 2008	✓
NCCP Local Assistance Funds (2007)	CDFG	Start-up wetlands restoration	\$60,000	\$120,000	\$60,000	\$0	no	Dec 2008	✓
NCCP Local Assistance Funds (2008)	CDFG	Wetlands restoration at Souza 2	\$150,000	=====	\$139,000	\$11,000	no	April 2011	
NCCP Local Assistance Funds (2009)	CDFG	Riparian restoraion	\$150,000	\$111,000	\$0	\$150,000	no	March 2012	
Moore Foundation		Acquisition Fox Ridge	\$880,000	50% match desired	\$880,000	\$0	no	12/31/09	✓
Moore Foundation		Acquisition and research Souza 3	\$2,250,000	50% match desired	\$2,000,000	\$250,000	no	Sep 2012	
Prop 84 NCCP account ¹	WCB	Acquisition	\$5,000,000	=====	\$0	\$5,000,000	no	=====	
TOTAL			\$39,952,685	\$35,991,221	\$17,990,090	\$21,962,595			

Note 1: The Prop 84 item related to WCB is an initial allocation for future projects agreed to by WCB staff. Individual grants must be approved by the WCB Board.

HCP/NCCP Fees, Contributions to Recovery and Administrative Costs Reimbursement Received in 2010¹

Note 1: Preliminary accounting only. Year-end account reconciliation still in progress.

X. PROGRAM ADMINISTRATION

Minor and Major Amendments

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

Implementation Policies

The Conservancy and the Wildlife Agencies clarified the protocols for acquiring land in Wind Turbine Areas. The implementation policy clarifies the process by which land preservation is credited to the Preserve System on lands that also support wind turbines. This policy also identifies avoidance and minimization measures for management of wind farms in the Preserve System. Clarifications included, but were not limited to:

- Lands credited to the Preserve System must include all wind rights, other than Vaquero Farms South and Vaquero Farms North, or implementation of measures to reduce biological impacts of wind turbines. Measures to reduce biological impacts include preparing and implementing an Avian Protection Plan, siting of turbines to minimize impacts, reducing the number of turbines, not increasing the current energy output during repowering, road removal and reduction, restoration of past effects from wind activity. For those properties that the Conservancy does not own the wind rights, those rights will be acquired when they become available.
- Rationale for wind lease renewal on Preserve System lands must be provided to the Wildlife Agencies in a letter from the Conservancy Board.
- Applications to modify, extend, including repowering, or renew existing wind generation activities will be reviewed by the Conservancy and Wildlife Agencies. Measures to reduce biological effects will be recommended. If recommended measures do not reduce biological effects of wind turbine operation, supplementary measures will be developed in cooperation with the Conservancy, Wildlife Agencies, land owner, and wind turbine company. The ability for the Conservancy and Wildlife Agencies to enforce recommendations will be agreed on prior to land acquisition.
- Properties acquired with Section 6 funds will incorporate measures to retire existing wind leases at the end of their terms.
- Accounting for wind turbine infrastructure (i.e., area excluded from preservation credit) will be adjusted for the wind turbine size and extent of supporting infrastructure. This includes mapping roads and supporting infrastructure to a minimum mapping unit of 0.1-acre to exclude infrastructure from land acquisition credits. Wind turbine infrastructure removal and reclamation will result in preservation credits.

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APPENDIX A: GLOSSARY

Definitions of Key Terms and Concepts

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