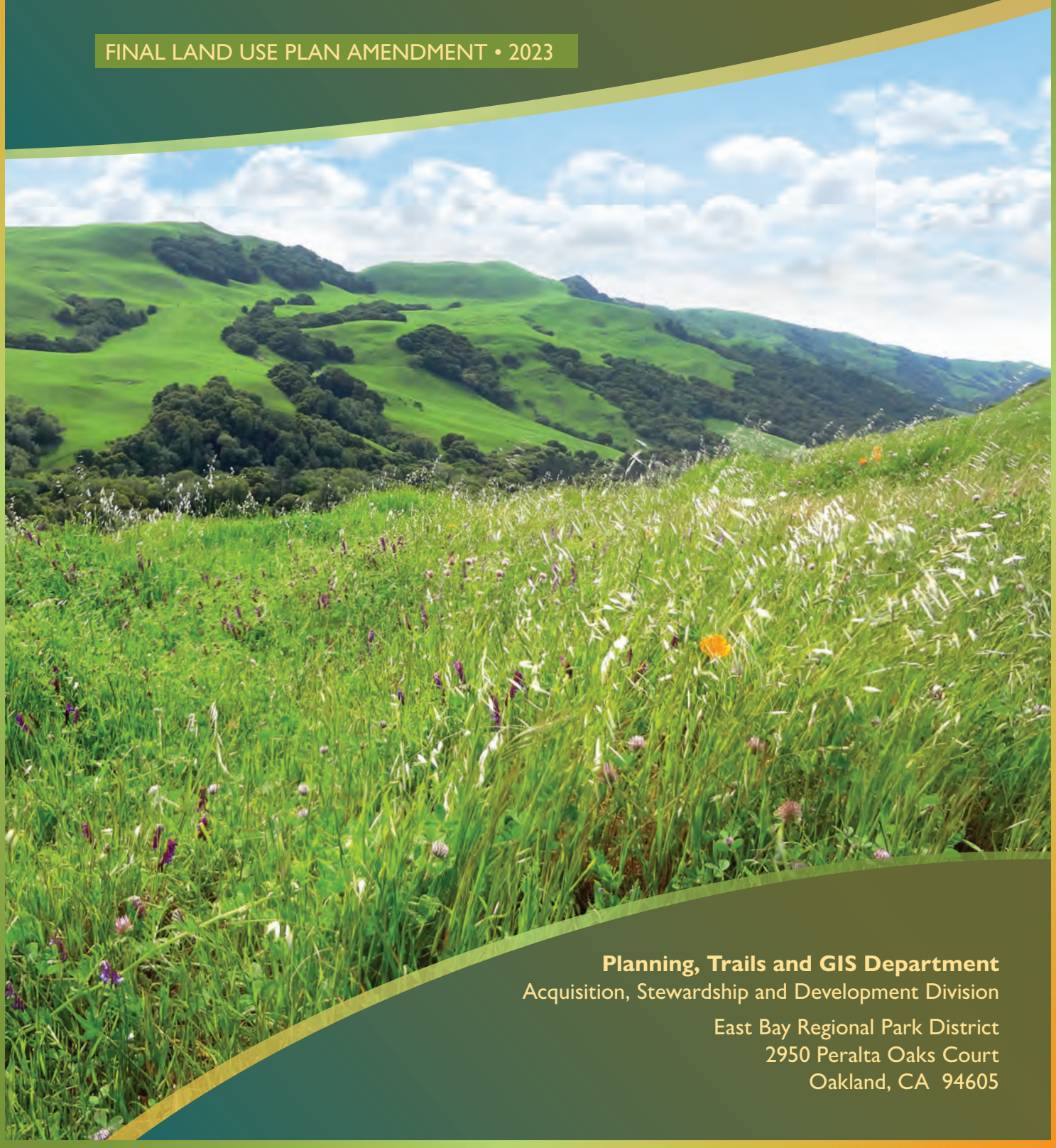
Southern Las Trampas Wilderness Regional Preserve

East Bay Regional Park District

Healthy Parks Healthy People

FINAL LAND USE PLAN AMENDMENT • 2023



Planning, Trails and GIS Department
Acquisition, Stewardship and Development Division

East Bay Regional Park District
2950 Peralta Oaks Court
Oakland, CA 94605

SOUTHERN LAS TRAMPAS WILDERNESS REGIONAL PRESERVE

FINAL LAND USE PLAN AMENDMENT

February 2023

Adopted:
Resolution No.:

Planning, Trails, and GIS Services Department
Acquisition, Stewardship & Development
East Bay Regional Park District
2950 Peralta Oaks Court
Oakland, California 94605
www.ebparks.org

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EXECUTIVE SUMMARY

PROJECT OVERVIEW

The East Bay Regional Park District (Park District) prepared a Land Use Development Plan (LUDP) for Las Trampas Wilderness Regional Preserve (Las Trampas) in 1993. At that time, the southernmost parcel of Las Trampas, the Peters Ranch property, was not contiguous with Las Trampas and was recommended to be included in future planning efforts, when connections between Peters Ranch and the larger Las Trampas could be made. Since 1993, the Park District has acquired additional open space lands in the southern portion that connect Peters Ranch to the larger Las Trampas parkland. This Land Use Plan Amendment (LUPA) acts as the guiding document for the long-range plan to formally include these lands into Las Trampas, outline adequate management of the lands, and provide for public access. The southern portion of Las Trampas is located in south-central Contra Costa County, on the western periphery of the San Ramon Valley within the City of San Ramon, Town of Danville, and unincorporated areas. Refer to *Figure 1: Project Location* for project location.

The 756-acre project area consists of the former Peters Ranch, Chen, Elworthy, Podva, and Faria properties and reflects the region's wealth of steep topography and diverse natural resources. The project area is being added to a parkland classified as a Regional Preserve to be "protected for their intrinsic value as well as for the enjoyment and education of the public," and more specifically as a Wilderness Preserve to "protect the qualities of the wilderness," as indicated in the 2013 Park District Master Plan.

Common fiddleneck

PURPOSE

The primary goal for this LUPA is to provide a framework for the natural resource management and associated public staging/access and trails needed to maintain a balance between conserving significant resources and providing the public and staff with improved access and facilities and increased opportunities for low-intensity recreational use and interpretation within the project area.

The main purposes of this LUPA are therefore to:

- Evaluate 756 acres of open space for the purpose of natural resource protection, public use for passive recreation and interpretation.
- Evaluate and incorporate appropriate trail connections, including the alignments, appropriate trail use, access and parking, and routine maintenance requirements.
- Provide recommendations for one new staging area near Bollinger Canyon Road on the Chen property that would accommodate at least 25 vehicles, benches, restroom, trail connections, a cattle corral, information signs, and landscaping while minimizing harm to biological resources, to the extent feasible; providing safe sight distances for vehicle ingress and egress; and allowing for Park District staff to adequately patrol the staging area from Bollinger Canyon Road.
- Preserve the rich heritage of natural and cultural resources and provide open space, and safe and healthful recreation and environmental education.

ORGANIZATION OF THE REPORT

The LUPA presents the results of resource inventories and site evaluations and provides recommendations for restoration, protection, and management of resources as well as recommendations for improvements to existing facilities and new public access features within the project area.

The primary topics covered in each chapter are outlined below:

Chapter 1 – Introduction. This chapter presents the purpose and goals of the project, describes the project area and acquisition history, and provides an overview of the planning process.

Chapter 2 – Existing Conditions. This chapter describes the planning context, including prior studies and the historical context, and identifies the existing resources, infrastructure, ongoing land management programs, and parkland services.

Chapter 3 – Land Use Plan Recommendations. This chapter presents the recommended actions proposed to meet the project goals, including parkland designations and public access improvements.

Chapter 4 – Implementation and Phasing. This chapter sets forth tasks and priorities for implementing the LUPA, including construction activities, cost estimates, and potential and existing funding sources.

Chapter 5 – Report Preparation and References. This chapter identifies the project team that contributed to the development of the LUPA and provides a list of supporting documents and resources used in the preparation of the LUPA.

Mount Diablo as seen from the project area.

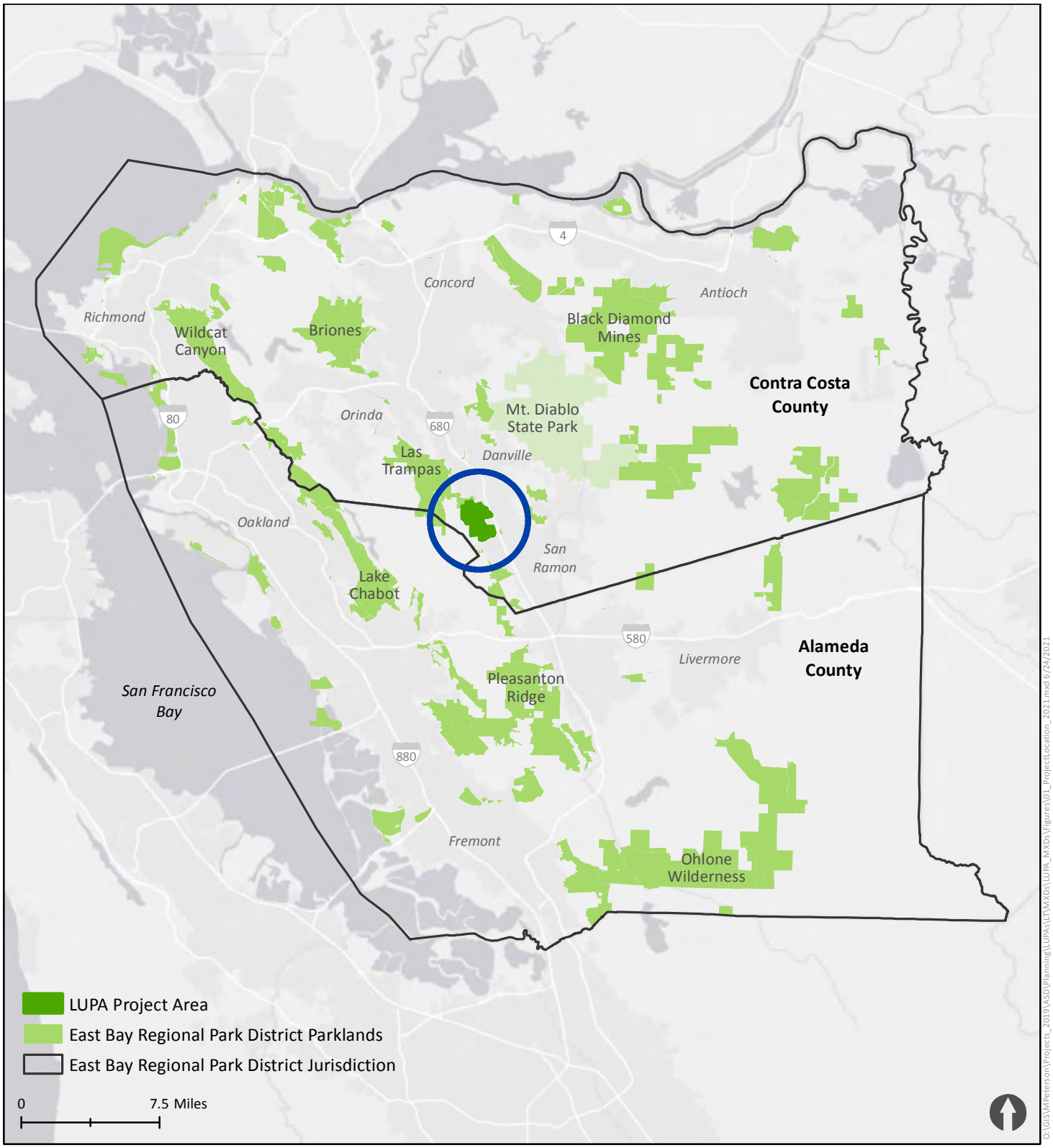


FIGURE 1: PROJECT LOCATION

OVERVIEW OF RECOMMENDATIONS

This LUPA identifies the following recommendations to support the project goal and purpose:

OPEN LAND BANK PROPERTIES

Open the land bank properties for public access within the 756-acre project area. The 141-acre Faria property will remain in land bank once transferred to the Park District until it is safe and suitable for public access.

PARKLAND DESIGNATIONS

Designate 99 percent of the project area as a natural unit, with less than 1 percent as a recreation/staging unit.

Designate 201 acres as Special Resource Protection Areas, which would include three Special Protect Features: a 35-acre wetland complex area and two areas encumbered with a conservation easement.

PUBLIC ACCESS POINTS

Develop a staging area off Bollinger Canyon Road on the Chen property to serve as the southern gateway to Las Trampas, with all-weather parking to accommodate up to 25 vehicles, benches, restroom, trail connections, information signs and landscaping. Construction would include a new corral within the grading footprint of the staging area This will be the Old Time Corral Staging Area.

Provide public access into Las Trampas from a walk-in entrance on Podva property off Wingfield Court and Midland Way. This will be the Podva Walk-in Entrance.

Provide public access into Las Trampas from a walk-in entrance on Peters Ranch property from City of San Ramon trail system on the Geological Hazard Abatement District (GHAD) open space lands around the Preserve (formerly Faria Preserve) subdivision. This will be the Saudade Walk-in Entrance.

TRAILS

Construct a new 1.1-mile access road on the Chen property to allow pedestrian, bicycle, equestrian and maintenance and emergency vehicle access into Las Trampas from existing roads and trails and connect to Bollinger Canyon Road. Approximately 0.1 miles of the new access road would incorporate an existing natural surface, multi-use trail alignment. This will be the Sabertooth Trail.

Construct a new 0.9-mile natural surface, multi-use trail segment of the Calaveras Ridge Regional Trail (Calaveras Ridge Trail) on the Peters Ranch property, connecting future City of San Ramon public trails on an adjacent property to existing trails on the Elworthy property. Approximately 0.1 miles of the new trail would incorporate an existing natural surface, multi-use trail alignment.

Construct a new 0.8-mile loop trail on the Chen property from the proposed staging area. This will be the Warbler Loop Trail.

Designate an existing 0.9-mile access road on the Podva property as a natural surface, multi-use trail to allow pedestrian, bicycle, and equestrian and maintenance and emergency vehicle access into Las Trampas. This will be part of the Heritage Pear Trail.

Designate an existing 0.5-mile access road on existing Las Trampas parkland as a natural surface, multi-use trail to allow pedestrian, bicycle, and equestrian and maintenance and emergency vehicle access into Las Trampas from the Podva property. This will be part of the Heritage Pear Trail.

Close and abandon 0.4 miles of an existing unused ranch road within the Peters Ranch property.

Close and abandon 0.6 miles of an existing over steep and eroded ranch road within the Chen property.

As illustrated in *Figure 2: Project Overview,* the project includes:

756 acres of open space

201 acres designated as Special Resource Protection Areas

4.2 miles of additional trails open to the public

3 new public access points

Table ES-1: Project Components provides a summary of the existing conditions with proposed actions within the project area.

Trees can provide shade and respite along the proposed Calaveras Ridge Trail extension.

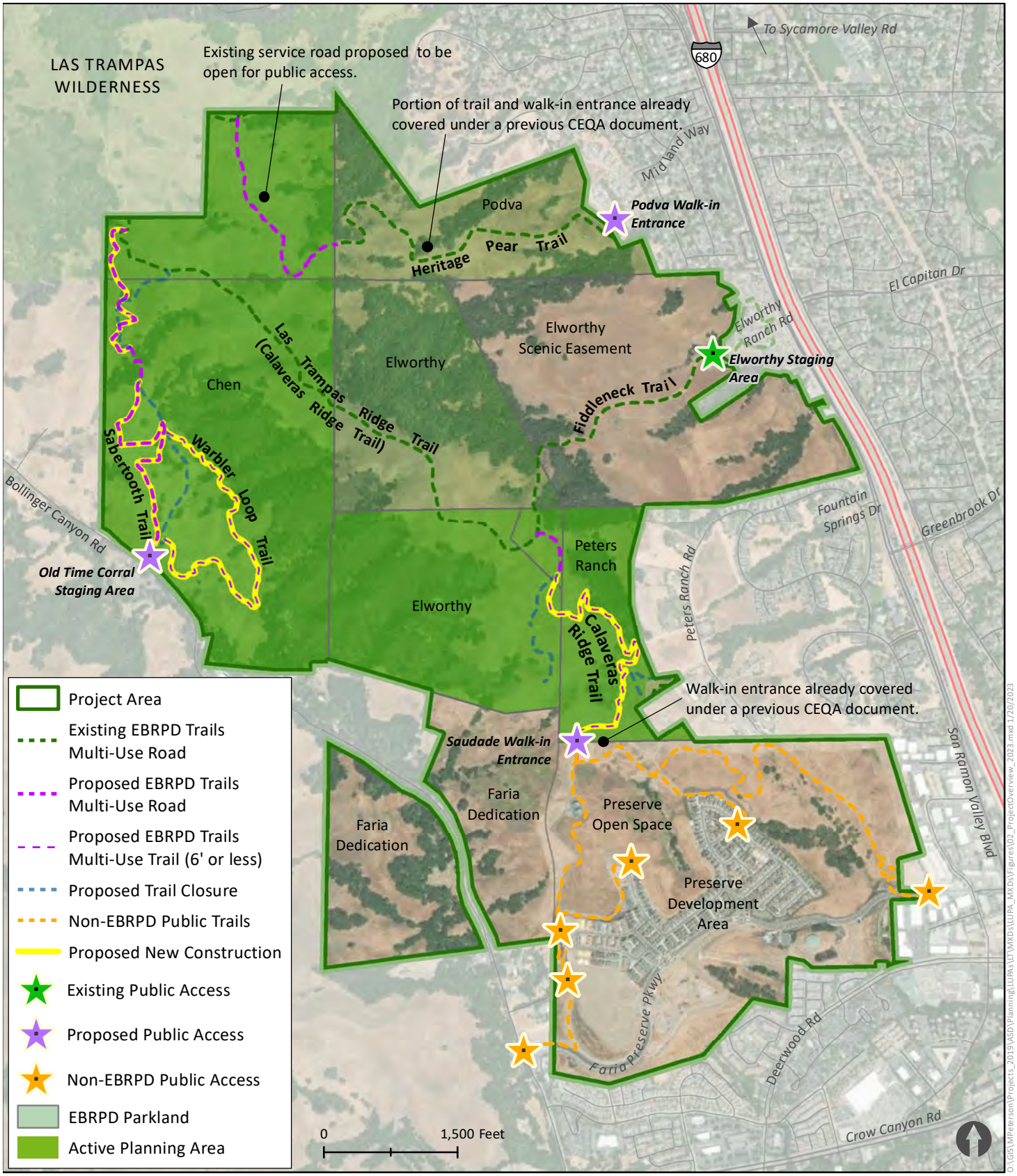


FIGURE 2: PROJECT OVERVIEW

The shrubland and woodland habitat on the western slopes of Las Trampas Ridge can be seen from the Faria property.

Table ES-1: Project Components

Existing Conditions	Proposed Actions
Total Acreage	
232 acres open for public use • 5,964 total acres for all of Las Trampas	756 acres inforporated into Las Trampas • 615 acres open to the public • 141 acres to remain in land bank • 6,105 total acres for all of Las Trampas
Special Protection Feature Designation	
N/A	201 acres formally established as a Special Protection Feature area to protect state and federally-listed species habitat, including conservation easement areas
Trail System	
1.9 miles of trails currently open to the public	4.2 miles of additional trails open to the public for recreation • 2.5 miles of this will be multi-use access road with emergency vehicle and maintenance access (EVMA) • 1.7 miles of this will be multi-use trail
	Approximately 1 mile of existing ranch roads that are not open to the public will be decommissioned and abandoned
Access Points	
12-car Elworthy Staging Area	3 additional access points: • 25-car staging area on the Chen property • Walk-in entrance with on-street parking off Wingfield Court • Walk-in entrance on Peters Ranch from Preserve residential development

PLANNING FOR MULTIPLE BENEFITS

The recommendations in this LUPA are aimed to achieve the targeted outcomes of opening up land bank properties, providing additional public access points and trails into Las Trampas, providing important habitat protection and management for sensitive species in the project area, and designating portions of the project area as natural units and recreation/staging units; however, the benefits of these recommendations extend beyond the primary purpose and goals of the project, as exemplified below.

Active Transportation and Health Benefits

The proposed trails within the project area will close gaps along the Calaveras Ridge Trail, which is a regional trail that promotes active transportation between regional parks throughout the Park District and provides benefits to the larger regional community.

The proposed trails can also provide both physical and mental health benefits as well. According to the Centers for Disease Control and Prevention (CDC), only one in five of American adults meet overall physical activity guidelines. More locally, only about one-third of students in Contra Costa County are meeting physical fitness standards, according to the California Department of Education. By providing public access into Las Trampas from the urban areas of Danville and San Ramon, this LUPA will provide physical activity opportunities to more people. This will also address the rising demographic of people who value physical activity as part of a healthy lifestyle. Recent studies have also shown the positive effects of being in nature on mental health. New York Times articles in 2018 and 2019 indicate that being out in nature for 120 minutes a week can improve mental health and combat stress.

Protection of Special Status Species and Associated Habitats

As part of the acquisition of the Podva property and the anticipated Faria property, conservation easements are required to be placed over 30 acres of the 96-acre Podva property and over 136 acres of the 141-acre Faria property for a total of 166 acres of land that will be protected in perpetuity in the project area. The conservation easements will place restrictions and additional land management requirements to protect the sensitive species and their respective habitat within the project area.

The LUPA recommends that a mosaic of wetlands found to be important habitat for California red-legged frogs (*Rana draytonii*) and California tiger salamanders (*Ambystoma californiense*) be designated as a Special Resource Protection Area (SRPA) within a natural unit. Signage would be installed year-round to indicate to the public that the 35-acre area is a Special Resource Protection Area for special-status species. Park District staff would implement monitoring for any California red-legged frog and California tiger salmander eggs during breeding season at the site.

BEING OUT IN NATURE FOR 120 MINUTES A WEEK CAN IMPROVE MENTAL HEALTH AND COMBAT STRESS.

ONGOING PROGRAMS AND SERVICES

Existing Habitat Management

The project area contains a wide range of natural communities including grassland, woodland, shrub habitat, and riparian habitat – much of which has been substantially altered over time by human activities that have included road and trail construction, introduction of non-native species, and the suppression of wildfires.

Most of the project area is in a land bank status. Ongoing land management actions have focused on vegetation management to control weeds, reduce fire fuels, and to improve the general appearance of the site. The remainder of the project area is open to the public as a staging area, a trail through private property and open parkland, and land anticipated to be conveyed to the Park District.

Interpretive and Recreation Services

The Park District's Interpretive and Recreation Services Department seeks to connect visitors to the cultural, historical, and natural environment through stimulating experiences that instill an appreciation of the region's resources and motivate participants to conserve and protect them. In this effort, the Park District provides a variety of programs and services for school groups, families, and adult visitors.

Public Safety - Police and Fire Services

The Park District provides police protection services to the project area out of its Public Safety Headquarters at Lake Chabot Regional Park in Castro Valley. Park District police vehicles and helicopters patrol the project area daily.

The Park District provides fire prevention, suppression, and fire safety/rescue services to the project area in coordination with the San Ramon Valley Fire Protection District through a Mutual Response Agreement, which sets forth plans for coordinated responses to emergencies and services requests in defined areas of the District and the San Ramon Valley Fire Protection District, including the project area.

Operations and Maintenance

Staff from the Park District's Operations and Public Safety Departments provide for the safety and protection of park visitors and staff; the protection of natural resources and park facilities, and the protection of adjacent neighbors and their property. Park staff serve as the primary presence within the project area on a day-to-day basis.

Naturalist Ashley Adams interprets wildlife for park visitors. Photo courtesy of Jurek Zarzycki.

Public Safety staff reviewing the Podva property.

PROJECT CONSIDERATIONS

Site history, existing conditions and planning considerations that form the basis for the LUPA are summarized below.

Topography, Soils, and Hydrology

The dominant features of the project area are Las Trampas Ridge and Bollinger Canyon, which sits between Las Trampas Ridge to the east and Rocky Ridge to the west. Las Trampas Ridge is the dominant regional ridge and rises to an elevation of 1,451 feet above sea level (ASL). Bollinger Creek runs parallel to Bollinger Canyon Road and flows northward toward Walnut Creek. Due to the steep terrain of the project area, flooding occurrences in the winter and spring are frequent, intense, and of short duration. The upland drainages and significant amount of mobile sediment in the project area indicate evidence of erosion and blockage with debris jams in a number of locations. On the eastern flank of Las Trampas Ridge, stormwater from the Podva, Elworthy, and Peters Ranch properties flows in the direction of the natural topography and drains to storm drains under Midland Way, along San Ramon Valley Boulevard, and east of I-680. Drainage swales and ditches along Bollinger Canyon Road collect stormwater from the Chen and Faria properties.

Habitat and Special Status Species

The project area contains habitat for the following federal and State listed species: Alameda whipsnake (Federally Threatened, State Threatened) critical habitat, California red-legged frog (Federally Threatened), and California tiger salamander (Federally Threatened, State Threatened). Ongoing routine habitat management included as part of this LUPA includes strategies directed at protecting and supporting natural communities and habitat through conservation and enhancement of riparian corridors, wetlands, and wildlife linkages, including habitat for special status species.

Fire Hazards

As the project area is in a high fire hazard area, the LUPA includes a description of staffing and procedures currently in place to monitor public use, minimize potentially hazardous situations, respond to emergencies, and implement fuels management programs. In addition, the LUPA recommends trails that will provide Emergency Vehicle Maintenance Access (EVMA) as an emergency route from the proposed staging area along Bollinger Canyon Road up to Las Trampas Ridge, and from the walk-in entrance off of Wingfield Court. Livestock grazing is the primary tool for purposes of vegetation and fuel management in the project area.

Planning for Climate Change

The Park District's parks offer natural solutions for reducing extreme heat, buffering communities from sea level rise, and reducing reliance on vehicles through regional trail connections, among many other services. Trees, grasslands, and healthy soils provide valuable carbon sequestration that helps to offset greenhouse gas emissions from roadways, homes, buildings, and other sources. By preserving and enhancing these habitats within the project area, the Park District will continue to provide carbon sequestration as a means of combatting climate change.

The Chen property is currently in land bank status.

Public Access and Recreational Facilities

A large portion of the project area is currently in land bank status, with one 12-car parking lot, a half-mile trail connection to Calaveras Ridge Trail, and a segment of the Calaveras Ridge Trail currently open for public access. The LUPA identifies opportunities to close gaps along the Calaveras Ridge Trail and to make trail connections to existing trails within Las Trampas. Access to Las Trampas is limited on the east from Danville and San Ramon. Refer to *Figure 3: Access Points and Trails* for the locations of all public access into Las Trampas. Parking is also limited to the parking lot located at the end of Bollinger Canyon Road and the Elworthy Staging Area. Trails within the project area will include unpaved, multi-use trails for recreation as well as trails wide enough to allow park maintenance and public safety vehicles and serve as Emergency Vehicle Maintenance Access (EVMA) routes.

Traffic Safety

During the planning process, concerns were raised regarding vehicle speeds and higher traffic volume around the project area, specifically along Bollinger Canyon Road. Expanding the Las Trampas park boundary to the south, adding a staging area on the Chen property, providing public access off Wingfield Court to the Podva property, and public access from the Preserve GHAD area to the Peters Ranch property all present opportunities for the Park District to disperse use and reduce congestion that could result from a single point of entry. Wayfinding signs would also be installed to identify a clear path of arrival to the various entry points.

Interagency Coordination

The Park District will coordinate flood control improvements, public access and recreation facilities, including parking areas, trails, and resource protection and enhancement actions with the Town of Danville, City of San Ramon, East Bay Municipal Utility District, Contra Costa County Department of Conservation, and Contra Costa County Flood Control and Water Conservation District.

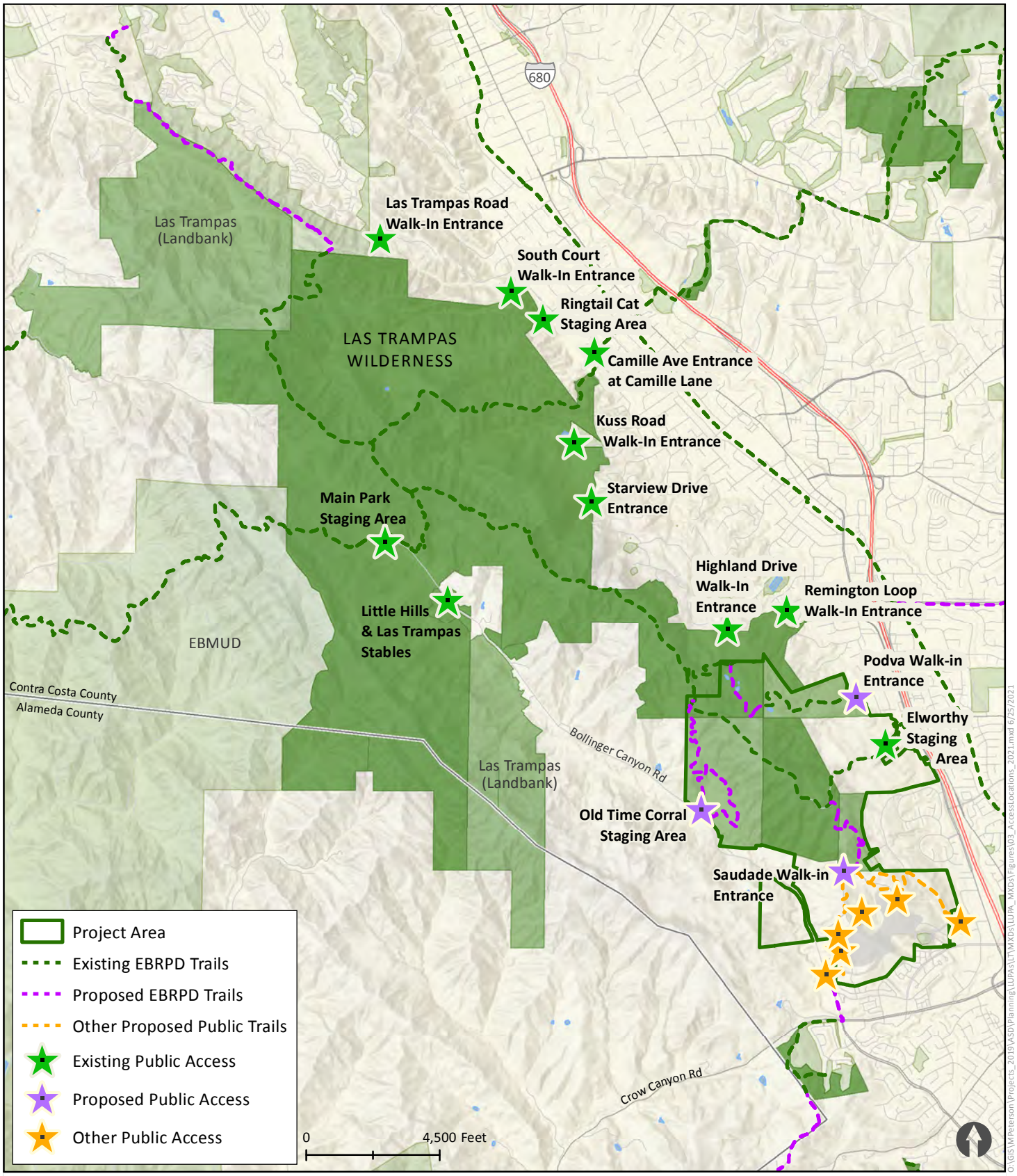


FIGURE 3: ACCESS POINTS AND TRAILS

1. INTRODUCTION

1.1 LAND USE PLAN AMENDMENT PURPOSE AND GOALS

The LUPA will serve as an update to the 1993 Land Use Development Plan (LUDP) and the 1991 Las Trampas Regional Wilderness Resource Analysis (Resource Analysis), with a primary goal of providing a framework for natural resource management for the 756-acre project area in the southern portion of Las Trampas.

The main purposes of the LUPA are to:

- Evaluate 756 acres of open space for natural resource protection, public use for passive recreation and interpretation.
- Evaluate and incorporate appropriate trail connections, including the alignments, appropriate trail use, access and parking, and routine maintenance requirements.
- Provide recommendations for one new staging area off Bollinger Canyon Road located on the Chen property that would meet Park District objectives for a staging area.
- Preserve the rich heritage of natural and cultural resource and provide open space, trails, and safe and healthful recreation and environmental education.

1.2 LAND USE PLAN AMENDMENT AREA

1.2.1 Regional Context

The Park District is composed of regional parklands located throughout Alameda and Contra Costa counties. The Park District system includes nearly 125,000 acres of land comprising 73 regional parks, recreation areas, shorelines, preserves, wilderness, and land bank areas. Refer to *Figure 1: Project Location*. These landholdings include 61 parks that are open and accessible to the public and 12 new parks not currently open to the public. Las Trampas is one of the 73 Park District parklands, and the project area is within the southern region of Las Trampas.

Oak tree on the Peters Ranch property

1.2.2 Project Area and Acquisition History

The project area consists of land that the Park District has acquired between 1983 and 2018 as well as land that is anticipated to be transferred to the Park District. Refer to *Figure 2: Project Overview* for project location. *Table 1-1: Acquisition History* shows the acquisition history of the land comprising the project area.

1983

The Park District acquired the 58.84-acre Peters Ranch property in 1983 as a condition of approval of the Danville Ranch Residential Development in the southern portion of the Town of Danville. Peters Ranch is referenced in the 1993 LUDP and 1991 Resource Analysis as the Southern Parcel; however, as it was non-contiguous with the rest of Las Trampas at the time of preparation of the LUDP, it has remained in land bank status.

2007

The Park District purchased the 227.8-acre Chen property in 2007. At that time, the Chen landowner was preparing to place the property on the market. Although the property was located outside the Contra Costa County's Urban Limit Line, its A-4 zoning with a minimum lot area of 20 acres would have made it a candidate for low-density residential subdivision and development.

The Park District purchased the property from the Chen landowner to preserve its significant natural resource and scenic values, as well as public access opportunities and trail connections to the Calaveras Ridge Trail, which runs north and south throughout the length of Las Trampas.

The Park District considered public access from the Chen property during its acquisition because it featured significant frontage and good access from Bollinger Canyon Road, it had a large, relatively flat area immediately adjacent to the road that provided an excellent opportunity for a future staging area, and it was three miles closer to population centers than the existing staging area at the end of the road. The Chen property has been in land bank status and closed to the public until it could be adequately developed for public access.

2015

In 2015, the 232-acre Elworthy property was dedicated to the Park District as a condition of approval of a residential development, along with an approximately one-mile segment of the Calaveras Ridge Trail on the parcel and a half-mile trail connector through a 182-acre Elworthy private property scenic easement. The developer constructed a twelve-car staging area at the western boundary of the Quail Ridge residential development to provide access to the Elworthy scenic easement prior to Park District acceptance of the Elworthy property and staging area. A decomposed granite shoulder parallels the access road to the staging area and is maintained by the residential development homeowner's association. The staging area and trail connection are currently open to the public.

In most cases, even after the adoption of a land use plan, land may remain closed to the public (land bank), potentially for several years or more, until it is made suitable (safe and accessible) for public access, consistent with Policy ACQ3 of the Park District's 2013 Master Plan. Throughout this document, ***parkland*** *refers to land that is open to the public, while* ***land bank*** *refers to park land that is closed to the public.*

Table 1-1: Acquisition History

Property	Date Acquired	APNs	Acreage	Conservation Easement Acreage	Additional Details
Peters Ranch	1983	208-580-013	58.8	N/A	N/A
Chen	2007	208-220-010	227.8	N/A	N/A
Elworthy	2015	208-230-046, 208-230-032, and 208-230-033	232	N/A	Acquisition included: • 12-car staging area • 0.5-mile EVMA trail through private property with a scenic easement • Portion of the Calaveras Ridge Trail
Podva	2018	208-016-014	96	30	Acquisition included a 0.9-mile trail and dedicated on-street parking
Faria	2023 (anticipated)	208-240-054	141	136	Acquisition is anticipated to include a 25-car staging area on the Chen property

2018

The Park District acquired the 96-acre Podva property in 2018 as a City of Danville condition of approval of a residential development. The property has been encumbered with a 30-acre conservation easement which will be managed according to the requirements of the conservation easement's long-term management plan (LTMP). The property includes an approximately 0.9-mile trail through the Podva property that would connect to existing trails within Las Trampas, as well as a trailhead with public, on-street parking.

2023 (anticipated)

The 141-acre Faria property is scheduled for transfer to the Park District in 2022 as a provision of the 2008 settlement agreement between the developer, the Park District, and the Sierra Club. Much of the property – 136 acres, will be under a conservation easement. See *Section 2.2.1 Conservation and Scenic Easements* for further discussion of the conservation easement. Conditions for approval of the Preserve residential development include recreational trailheads, trail alignments, and parking areas within the residential development property. Prior to the transfer of the Faria property, the developer is required to construct a 25-car staging area on the Park District's Chen property.

In total, the five-parcel project area comprises approximately 756 acres. The parcels that have come to and are scheduled to be transferred to the Park District as conditions of approval for residential developments have undergone their own environmental review process. This LUPA document will be incorporating and referencing those environmental documents. LTMPs associated with the conservation easements within the project area will also be incorporated and referenced in this LUPA document. Please refer to *Section 3.2.1 Resource Management Programs* for additional discussion.

1.3 PLANNING PROCESS AND PUBLIC ENGAGEMENT

1.3.1 Land Use Planning Process

The LUPA is consistent with the Park District's guiding policy document, the 2013 Master Plan, which provides for the preparation of land use plans to direct the long-term development and management of individual parks, identify major facility development, and establish appropriate land use designations in accordance with the vision of the Park District. Land use plans are developed to inventory park resources, identify key planning issues and offer recommendations for future development and land management; as needed, to accommodate growth and change, the Park District amends land use plans.

The Park District typically prepares land use plans or similar planning documents to provide a development template for new land or acquisitions to expand existing parklands that the agency implements over a period of years, as funding becomes available. Adoption of the LUPA does not constitute a commitment of funds for implementation by the Park District (EBRPD 2013). While LUPA documents typically include the larger parkland in the project area, this LUPA will only be covering the 756-acre southern portion of Las Trampas. Land Use Plan Amendment Checklists, which are used to open land for public use, that have been adopted for various parcels in Las Trampas are not discussed in this LUPA.

This LUPA will serve as a supplement to the LUDP adopted in November 1993, Resolution No. 1993-11-291, and the Resource Analysis adopted in August 1991, Resolution No. 1991-8-242. The Resource Analysis described and analyzed important natural and man-made resources in the parklands and identified resource and land planning issues for the LUDP. The LUDP provided policies and implementation measures for Las Trampas Regional Wilderness, Little Hills Regional Recreation Area, and the western end of the Las Trampas to Mount Diablo Regional Trail.

1.3.2 Public Engagement and Involvement

The Park District encourages public participation in all its planning processes. Preparation of this LUPA involved a planning process that engaged agencies, non-profit organizations, and the public in providing input on the LUPA. Policy KEP1 of the Park District's 2013 Master Plan states that "The Park District will notify the public about the publication of plans, including proposed design of major new facilities, and the scheduled times for public review and comment. The Board will schedule plan review sessions in the geographic locale of interested communities and will conduct other public outreach efforts as needed to fully communicate the goals of the plan and to accept review and comment from interested individuals."

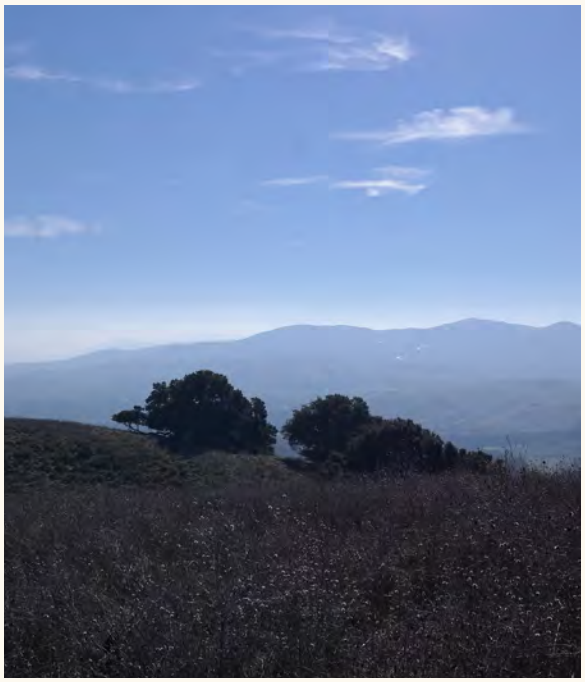
Goals of the public outreach and participation process associated with the LUPA include:

- Inform the public on the project and process;
- Educate the public and other interested parties on the project;
- Provide opportunities for input and feedback throughout the planning process to guide planning and development of the LUPA;
- Produce a well-designed LUPA that balances the protection and stewardship of natural and cultural resources with increased opportunities for public access, interpretation and education;
- Provide a public process that complies with the California Environmental Quality Act (CEQA);
- Develop a LUPA that is well-received and supported by the public, neighbors, community leaders, non-profit organizations, partner and outside agencies; and
- Produce a LUPA that is well-positioned to become eligible for grant funding.

The LUPA planning process engaged numerous participants in a dialogue about the future use and management of the project area including neighbors; community members; advocacy groups; partner and environmental organizations; local, state and federal agencies; and Park District staff and Board of Directors. Public outreach activities have included public meetings and workshops; developing a page on the Park District's website dedicated to the LUPA and environmental evaluation process; preparing and disseminating public meeting notes; focus group meetings; and public land tours of the project area led by Park District staff to allow members of the public to experience land bank property first-hand.

The Park District held a LUPA project public workshop adjacent to the project area on June 6, 2017 at the San Ramon Community Center. Please refer to *Appendix B - Community Meeting Summary.* The workshop was also the scoping meeting for the California Environmental Quality Act (CEQA) process for the project. Park District staff made numerous presentations to various stakeholders, including to the City of San Ramon Open Space Advisory Committee, Town of Danville Planning Commission, Town of Danville Parks, Recreation & Arts Commission (formerly the Parks and Leisure Services Commission), Mount Diablo Audubon Society, San Ramon Valley High School Mountain Biking Club, and the Contra Costa Watershed Forum. The Park District has also presented the LUPA project to the Park District's Park Advisory Committee, Board Executive Committee, and the Park District Board as part of a Board Tour. The Park District will also hold a public hearing meeting as part of the environmental review process under CEQA. Finally, the Park District's Board of Directors will consider approving the LUPA and certifying the associated Environmental Impact Report (EIR) at a public Board meeting.

Pursuant to the State law under AB 52 (codified at California Public Resources Code [PRC] § 21080.3.1), the Park District reached out to California Native American Tribes listed in the Native American Heritage Commission's (NAHC's) contact list. Letters directed specifically to the tribal representatives were sent requesting information



on any cultural resources that may be affected by the Project. In addition, these Native American representatives were included in the community mailing lists for the community meetings and CEQA notifications.

Meeting notifications included mailing, email notification, web site postings, press releases, and social media outreach. Public notices for community input for the Southern Las Trampas LUPA and associated EIR went out to 78 via email and over 1,300 people via regular mail, including notices to libraries and public agency departments in Danville, San Ramon, and Contra Costa County. Notices were posted on the Park District webpage: https://www.ebparks.org/parks/las_trampas/default.htm.

The collaborative nature of the planning process has resulted in a LUPA that balances the protection and stewardship of natural and cultural resources with increased opportunities for public access, interpretation and education. The land use planning process is also valuable because it considers surrounding properties and evaluated how decisions concerning the project area may affect adjacent lands. This comprehensive approach has resulted in a planning document that is flexible and forward-thinking in addressing future open space acquisitions and connections.

1.4 PARK FACILITY NAMING

The LUPA proposes giving names to proposed features, facilities, and trails. To simplify reading, the proposed names are used throughout the document. In keeping with the Park District's Naming Policy [Resolution No. 2004-04-73 (4/20/04)] the new trails, features, areas, and facilities are proposed to be named after natural features such as plant and animal life, geographic, topographic, or paleontological features, or for cultural features such as archaeological and historic artifacts, historic persons, families or events. Existing historically related names are respected.The new names are intended for the park brochure. *Table 1-2: New Name Proposals* provides an explanation for new proposed names. Culturally significant names related to Native Americans will be part of a larger Park District-wide discussion and may replace one or more of the proposed names.

Pears from a remnant orchard of the San Ramon Valley.

TABLE 1-2: NEW NAME PROPOSALS

PARK FEATURE	LOCATION	EXISTING NAME	PROPOSED NAME	NAMING EXPLANATION
Trail	From Elworthy Staging Area to Las Trampas Ridge	Fiddleneck Trail		Fiddleneck flowers found in this area.
Trail	From Bollinger Canyon Road to Las Trampas Ridge		Sabertooth Trail	This large predator used to roam San Ramon Valley over 2.6 million years ago during the Pliocene Epoch.
Trail	From Wingfield Court to Remington Trail		Heritage Pear Trail	Reference to historic pear orchards in the area.
Trail	On Chen property		Warbler Loop Trail	The bright, sweet song of warblers such as the Yellow Warbler, Wilson's Warbler, Townsend's Warbler, and Yellow-rumped Warbler are a familiar sound in streamside willows and woodland edges and have been observed in this area as part of their spring migration.
Walk-in Entrance	From Wingfield Court		Podva Walk-in Entrance	Pioneering Podva family farmed and ranched in San Ramon Valley.
Walk-in Entrance	From Faria Preserve GHAD open space		Saudade Walk-in Entrance	Portuguese for deep longing and nostalgia. Rose Peters Emery, wife of Joe Peters of Peters Ranch (born Jose Pires Azevedo) uses this word to describe nostalgia for her childhood family and land in San Ramon Valley. (Pronounced "sow-DOD-jay")
Staging Area	Along Bollinger Canyon Road on Chen property		Old Time Corral Staging Area	Acknowledgement of prior use as a cattle corral and operation for grazing and ranching.

2. EXISTING CONDITIONS

This chapter describes the existing conditions of the project area, including planning and historical context, natural and cultural resources, circulation, access, operational details and infrastructure. The information was derived from a review of existing documents and studies, interviews with Park District staff, site visits and field surveys conducted by the Planning, Stewardship, and Operations staff, and review of on-line natural resource inventories and previously prepared reports from various sources which are identified in specific sections.

2.1 PLANNING CONTEXT

This section discusses the background and setting of the project area, as well as the agencies, plans and/or documents that may inform or provide guidance for development of the LUPA, and provides a framework for evaluating the consistency with the project goals and objectives.

2.1.1 East Bay Regional Park District

The Park District is an independent special district under the State Public Resources Code. Under the California Public Resources Code (Article 3, 5500 series), the Park District has the power to "...acquire land...to plan...develop...and operate a system of public parks, playgrounds, golf courses, beaches, trails, natural areas, ecological and open space preserves, parkways, scenic drives, boulevards and other facilities for public recreation, for the use and enjoyment of all the inhabitants of the District... to conduct programs and classes in outdoor science education and conservation education...to employ a police force...prevent and suppress fires...and to do all other things necessary or convenient to carry out the purposes of the District." [2013 EBRPD Master Plan]. As such, Park District parklands, including the LUPA area, are consistent with local zoning, but are otherwise independently managed.

Las Trampas Regional Wilderness Resource Analysis (1991) and Land Use-Development Plan (1993)

The Park District prepared a Resource Analysis for Las Trampas, Little Hills Regional Recreation Area, and the western end of the Las Trampas to Mount Diablo Regional Trail in 1991 to describe and identify resources and land planning issues within Las Trampas (EBRPD 1991). In 1993, the Park District completed a Land Use-Development Plan and Environmental Impact Report (LUDP/EIR) to provide policies and implementation measures for the resources and land planning issues identified within the Resource Analysis, covering approximately 3,600 acres (EBRPD 1993).

East Bay Regional Park District Master Plan (2013)

The LUPA is consistent with the 2013 Master Plan, which establishes the agency's mission, vision and goals. The 2013 Master Plan includes the agency's mission statement: "The East Bay Regional Park District preserves a rich heritage of natural and cultural resources and provides open space, parks, trails, safe and healthful recreation and environmental education. An environmental ethic guides the District in all of its activities."

The vision statement of the Park District is: "The District envisions an extraordinary and well-managed system of open space parkland in Alameda and Contra Costa counties, which will forever provide the opportunity for a growing and diverse community to experience nature nearby" (Park District 2013).

The Park District Master Plan policies were reviewed to ensure that this LUPA is consistent with the stated and adopted vision, mission statements, and policies of the Park District. A summary of the Master Plan resource management-related policies relevant to this LUPA are listed below, with an analysis of how the proposed project meets the policy objectives.

Natural Resource Management

- NRM1: The Park District will maintain, manage, conserve, enhance, and restore park wildland resources to protect essential plant and animal habitat within viable, sustainable ecosystems.

Vegetation Management

- NRM8: The Park District will conserve, enhance and restore biological resources to promote naturally functioning ecosystems. Conservation efforts may involve using managed conservation grazing in accordance with the Park District's Wildland Management Policies and Guidelines, prescribed burning, mechanical treatments, Integrated Pest Management and/or habitat protection and restoration.

Riparian and Wetland Resources

- NRM12: The Park District will manage riparian and other wetland environments and their buffer zones to preserve and enhance the natural and beneficial values of these important resources and to prevent the destruction, loss, or degradation of habitat. The Park District will participate in the preservation, restoration and management of riparian and wetland areas of regional significance and will not initiate any action that could result in a net decrease in park wetlands. The Park District will encourage public access to the Bay/Delta shoreline, but will control access to riparian and wetland areas, when necessary, to protect natural resources.

Planning for Regional Parks and Trails

- RFA2: The Park District will provide a diverse system of non-motorized trails to accommodate a variety of recreational users including hikers, joggers, people with dogs, bicyclists and equestrians. Both wide and narrow trails will be designed and designated to accommodate either single or multiple users based on location, recreational intensity, environmental and safety considerations. The Park District will focus on appropriate trail planning and design, signage and trail user education to promote safety and minimize conflicts between users.

- RFA3: The Park District will continue to add narrow trails designated as both single-and multi-use for hikers, equestrians, people with dogs, and bike riders.

- RFA4: The Park District will expand its unpaved multi-use trail system as additional acreage and new parks are added.

Ordinance 38

Ordinance 38 establishes rules and regulations that apply to all Park District parklands. Violation of the Ordinance is punishable as a misdemeanor or an infraction. Recent amendments to the Ordinance include addition of a requirement that "No person shall bring into, or permit any dog, cat, or animal, to enter any Developed Area or be within 200 feet of any parking lot, trail head or staging area, as posted, unless such animal is securely leashed and under control of that person." Ordinance 38 was adopted by the Board of Directors pursuant to sections 5541, 5558, 5559, and 5560 of the California Public Resources Code.

2.1.2 Park Classification and Designations

Park District parks are classified by their geographical location and the designated level of resource protection and recreational use (EBRPD 2013). The 1993 LUDP classifies Las Trampas Wilderness as a Regional Preserve, and more specifically, a Wilderness Preserve, because of its size, character, nature and needs of its special features. Land subsequently incorporated into Las Trampas has maintained a consistent classification, as will this LUPA, and with minimal development proposed, as the Park District is committed to natural and cultural resource protection, interpretation and public access. The 2013 Master Plan states that developed areas cannot exceed five percent of a regional preserve's total land area, and one percent of a wilderness preserve's total land area.

Within the project area, the LUPA designates levels of resource protection and recreational intensity and identifies planned recreation/staging units and natural units.

A natural unit is a natural, open space or wildland area with lower intensity recreational facilities (primarily trails) and uses (such as hiking, horseback riding, bicycling, geocaching, plant and wildlife study, and interpretive and educational pursuits). The primary planning and management objective of a natural unit is to preserve and enhance natural habitat and vegetation diversity. Natural units may contain Special Protection Features and Special Management Features.

Special protection features (SPF) identify areas with unique or fragile natural, cultural, aesthetic or educational features, such as biologic, hydrologic, archaeological, historic, or geologic resources. This designation provides the greatest amount of protection for resources that require specialized types of management to preserve and enhance them. Special protection features may be closed seasonally or permanently to public access, if public access will endanger them.

Special management features (SMF) primarily identify constructed or modified features, such as wildland vegetation management areas, plantations of exotic trees, farm fields, and dams that require specialized types of management.

A recreation/staging unit is generally a flat area suited to the development of parking lots and more intensive public recreational use, such as restrooms, picnic facilities, turf meadows, group camping facilities, visitor centers and service yards. Recreation/staging units are generally clustered and located near access roads at the edges of parks. Within the project area, opportunities for active use areas are limited because of steep topography and sensitive habitat. While recreation/staging units provide parking within parkland, typically in areas previously disturbed and at the park perimeter, less developed access can include off-street parking and simple trailheads or entrances typically connecting a neighborhood with gates and signs.

Special Protection Feature example in the project area.

Recreation/staging unit example in the project area

2.1.3 Local Agencies

The project area is adjacent to the City of San Ramon, the Town of Danville, and unincorporated Contra Costa County that each have their own General Plans with open space goals and policies. The Town of Danville adjoins the project area to the north and east; the City of San Ramon lies to the south of the project area, and unincorporated Contra Costa County is immediately adjacent to the southwest and west. Regional trail connections between the project area and adjoining jurisdictions would involve coordination and cooperation with these local agencies to maintain consistency.

Contra Costa County General Plan

The Contra Costa County General Plan, adopted in 2005, contains broad goals and policies, and specific implementation measures, to guide decisions on future growth, development, and the conservation of resources through the year 2020 in the unincorporated areas of the County. The Conservation Element of the General Plan describes the 1990 Measure C which limits urban development to 35 percent of the County land within an urban limit line and preserves the remaining 65 percent of County land for agriculture, open space, wetlands, parks and other non-urban uses. The Conservation Element also includes goals and policies that address the preservation of open space resources, including historic, cultural, natural, and scenic resources. The General Plan also includes policies related to the development of park and recreational facilities, including trails. A comprehensive review and update to the General Plan, Envision Contra Costa 2040, is in the process.

Town of Danville 2030 General Plan

The Town of Danville adopted its General Plan in 2013 to achieve its vision and goals for balancing the desire to retain Danville's small-town character in light of continued growth and change occurring in the Bay Area and state of California. The General Plan includes goals and policies for parks, recreation, and open space, including cooperation with the Park District to improve additional parks and increase the range of recreational opportunities available to Danville residents, and to enhance Danville's trail system by closing gaps in the existing system and providing adequate access points. Goals and policies for environmental quality include protecting and enhancing Danville's natural features such as its hillsides, ridgelines, creeks, vegetation, and wildlife by way of intergovernmental coordination.

The Park District coordinated with the Town of Danville on the dedication of the 96-acre Podva property to the Park District. The dedication of the Elworthy and Peters Ranch properties, which also came as conditions of approval for residential development projects in the Town of Danville, also involved coordination between the Park District and the Town of Danville.

City of San Ramon General Plan 2035

Adopted in 2015, the City of San Ramon General Plan articulates a long-term vision for the City of San Ramon. Plan policies focus on what is achievable in the next 20 years and set forth actions to be undertaken by the City of San Ramon. The General Plan encompasses a voter-approved Urban Growth Boundary (UGB) and Open Space and Conservation policies aimed at expanding the ridgeline and hillside open space system in the City's Planning Area by joint efforts with East Bay Regional Park District, Contra Costa County, and nonprofit trustee agencies.

City of San Ramon Northwest Specific Plan

The City of San Ramon's Northwest Specific Plan guides the development of approximately 350 acres of land on the east and west sides of Bollinger Canyon Road within San Ramon. The Preserve (formerly the Faria Preserve) residential development and the Geological Hazard Abatement District (GHAD) open space that is within the Northwest Specific Plan are included in this LUPA project area for the purpose of discussing the extension of the Calaveras Ridge Trail that connects into Park District property; however, they are not

included in the active planning area of the project. Recommendations in this LUPA are consistent with the Northwest Specific Plan.

The Park District will be coordinating with the City of San Ramon on the dedication of the Faria property to the Park District as a provision of a 2008 settlement agreement between the developer for the Preserve residential development; the Park District; and the Sierra Club.

What is a GHAD?

A *Geological Hazard Abatement District (GHAD)* is a public entity that manages and funds the protection of properties from landslides, erosion, liquefaction, flooding, and other hazards.

2.2 AGREEMENTS

2.2.1 Conservation and Scenic Easements

Conservation Easements

The project area includes various easements that are on Park District land or are easements that the Park District holds on other lands. A conservation easement, or legal restriction placed on a property in perpetuity for conservation purposes, includes restrictive uses of the property, monitoring and reporting requirements especially if the conservation easement was required as mitigation. Lands encumbered by a conservation easement will have a conservation easement holder to provide oversight and monitoring of the land manager for compliance with the LTMP. The conservation easement holder for the Podva property is anticipated to be Wildlife Heritage Foundation (WHF). The conservation easement holder for the Faria property. is to be determined.

Please refer to *Section 4.4: Long Term Financial Assurances* for discussion on the long-term funding components of the Podva and Faria conservation easements.

Per a 2008 settlement agreement between the Preserve residential developer, the Park District, and the Sierra Club, potential trail alignments and two half-acre parking/staging areas – one on the east and west side of Bollinger Canyon Road, within the Faria property have been excluded from the conservation easement on the Faria property; however, this LUPA project will not be evaluating any recreation facilities for the Faria property. Any potential trail alignments or parking on the property will need to be included in a future planning process. Please refer to *Sections 3.4.1: Public Access and Staging* and *4.1: Project Phasing* for additional discussion on the 2008 settlement agreement.

Scenic Easement

A scenic easement is placed over the 182-acre private property adjacent to the Elworthy property that is owned by the Park District. The scenic easement was established to preserve the area for open space and limited recreational use. The Park District's 12-car Elworthy Staging Area is located between the Quail Ridge residential development and the Elworthy scenic easement. An EVMA/trail easement within the scenic easement provides public access from the staging area to the Elworthy property and Las Trampas. A decomposed granite shoulder along the staging area access road is maintained by the Quail Ridge Homeowner's Association (HOA).

Table 2-1: Easements and Access Agreements describes the various easements and legal agreements that have been or will be established in the project area pursuant to various environmental permit requirements. Locations of easements, leases, and other legal agreements are shown in *Figure 4: Easements*.

Table 2-1: Easements and Access Agreements

Location	Type	Key Terms
Easements and Agreements Held by the Park District		
Elworthy	EVMA/Trail Easement	A public trail easement and emergency vehicle maintenance access easement through the Elworthy private property including the Elworthy Staging Area is granted in perpetuity to the Park District by the Elworthy family.
Elworthy – Quail Ridge	EVMA/Trail Easement	A public trail easement and emergency vehicle maintenance access easement over Elworthy Ranch Road and Elworthy Ranch Circle is granted to the Park District by the Quail Ridge Development for public access from San Ramon Valley Boulevard to the Elworthy Staging Area.
Podva	EVMA/Trail Easement	A public trail easement and emergency vehicle maintenance access easement through the GHAD property is granted to the Park District in perpetuity. The Park District and the GHAD have a shared curb-to-curb maintenance responsibility for the access road between the vehicle pipe gate and the Podva property. The GHAD has full responsibility for the concrete V-ditch used to collect storm drainage.
Preserve Residential Development	EVMA/Trail Easement	A public trail easement and emergency vehicle maintenance access easement along the Calaveras Ridge Trail extension on the adjoining Preserve Residential Development Project is granted in perpetuity to the Park District by the Preserve Residential Development Project.
Easements and Agreements Held by Others		
Elworthy	Scenic Easement	A scenic easement over the 182-acre Elworthy private property restricts any future development on the property to preserve the scenic viewshed. Was required by the City of Danville as a conditional of approval for the Quail Ridge Development.
Podva	Conservation Easement	WHF is the conservation easement holder for the 30-acre conservation lands on the Podva property.
Podva	Access Agreement	WHF is granted an access agreement to conduct annual monitoring of the conservation easement over the Podva property.
Faria	Conservation Easement	The conservation easement holder for the 136-acre conservation lands on the Faria property is to be determined.
Faria	Access Agreement	An access easement will be granted to the conservation easement holder for the Faria property.
Faria	Access and Utility Easements	A 40-foot easement is anticipated to provide access and utility to the four parcels to the northwest of the Faria property.
Faria	Utility Access Easement	PG&E will be provided access to maintain their utilities on the Faria property.

2.2.2 Access Easements

EVMA/Trail Easements Held by the Park District

The Park District holds public trail easements and emergency vehicle maintenance access easements through various properties adjoining the project area to ensure access to the project area for public recreation, emergency, and maintenance.

Access Easements Held by Others

Other entities hold access easements over properties within the project area to access and manage for resources and utilities for which they are responsible.

2.2.3 Grazing Lease Agreements

Domestic livestock grazing, primarily using cattle and sheep, is a long-term existing condition of the project area. Livestock grazing is the primary tool for purposes of vegetation and fuel management in the project area. The Park District routinely leases the operation and management of grazing units to private operators and charges a fair market value lease fee. The project area has three grazing units that are each controlled by lease to grazing tenants. The Park District is committed to maintaining a strong working relationship with each tenant. The grazing lease agreements within the project area are shown in *Table 2-2: Grazing Lease Agreements*. The grazing units within the project area are shown in *Figure 5: Grazing Units/Leases*.

Table 2-2: Grazing Lease Agreements

Grazing Unit	Grazing Tenant	Properties Included	Terms & Type
1	Wood Livestock, LLC	Chen	Year-long / Rotational, Cattle
1	Wood Livestock, LLC	Podva	Seasonal / Cattle
4	Herb Elworthy	Elworthy and Peters Ranch	Year-long / Cattle
Future	*To be Determined*	Faria (East & West)	*To be Determined*

Cattle grazing in the project area.

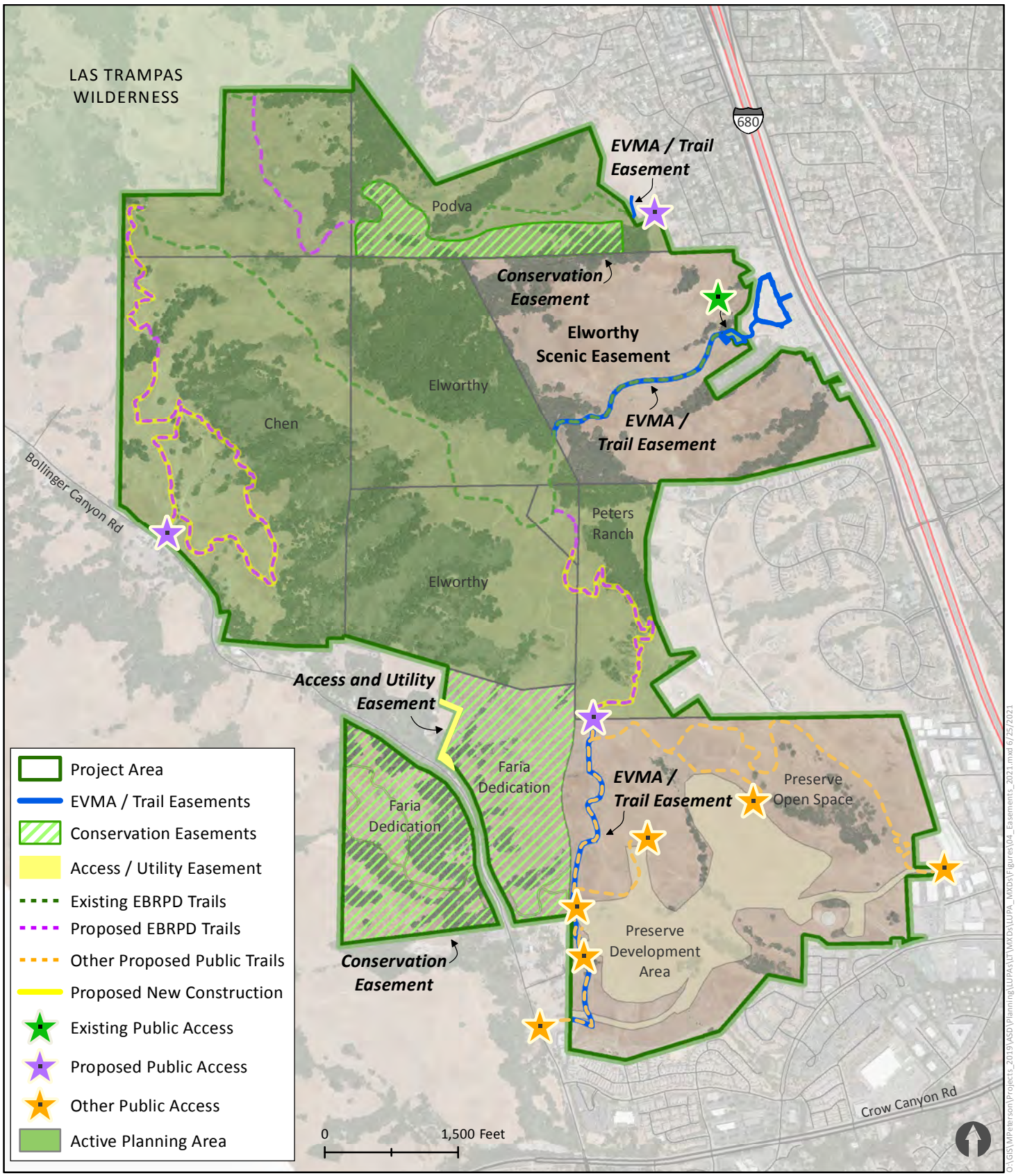


FIGURE 4: EASEMENTS

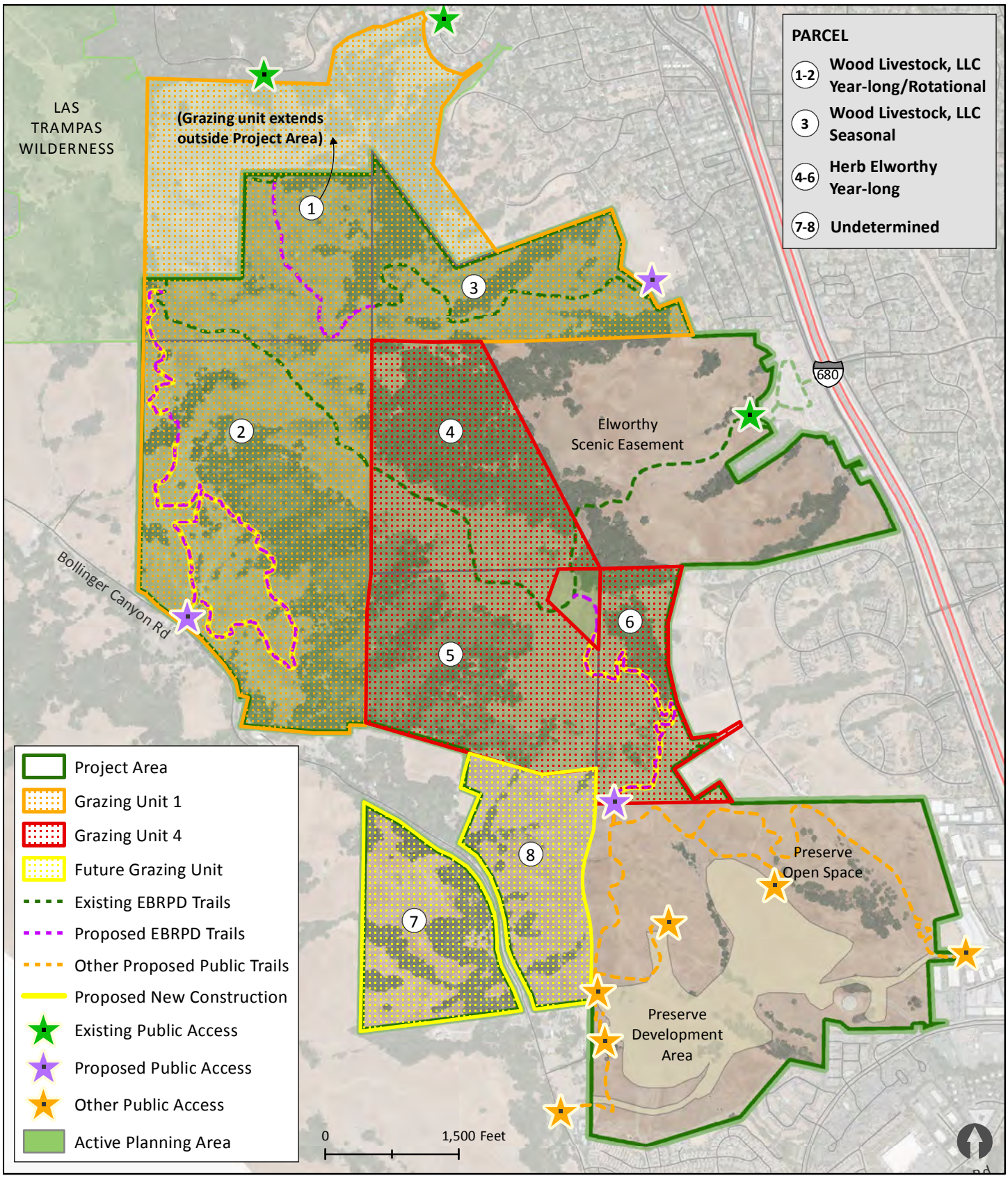


FIGURE 5: GRAZING UNITS/LEASES

2.3 HISTORICAL CONTEXT AND CULTURAL RESOURCES

This section provides the historical context and cultural resource information for the project area. For this LUPA, the Park District considered two cultural resource settings: pre-contact and historic. Each setting provides the basis for understanding the types and historical significance of cultural resources that are potentially located within the project area and how they may relate to broader patterns of resource use, adaptations to changing environmental conditions, and settlement of the region.

2.3.1 First People - Pre-contact Setting

The pre-contact archaeological period is associated with human occupation of the land prior to Euro-American contact. In West-Central California, the pre-contact period began over 14,000 years ago, with archaeological evidence from the San Ramon Valley indicating that Native American settlement began by ca. 2500 B.C. (Fredrickson 1966). This period extended through the eighteenth century until 1770, when the first permanent European settlement was established at the place now known as Monterey (Milliken et al. 2009).

The project area is situated within a territory that was occupied by the Bay Miwok. The Bay Miwok were comprised of tribelets with lineages named for specific locations within the area they permanently occupied (Levy 1978). The Tatcan tribelet, who appears to have controlled the project area, "held the San Ramon Creek in the central East Bay hills, just west of Mount Diablo. Their central village area may have been the present Town of Danville" (Milliken 1995:256). The Tatcan lived in the project area in addition to areas along Bollinger, Sycamore, and Green Valley Creeks, the western part of Mount Diablo and most of the Las Trampas Ridge.

The favorable environment of the project area, coupled with the abundance of natural resources, allowed the Bay Miwok to be successful hunter/gatherers and allowed village sites to establish themselves next to streams and creeks with seasonally occupied sites also located in the foothills of Mount Diablo. For the native people of east Contra Costa County, Mount Diablo, as well as the surrounding landscape was sacred. Groups from distant places, such as the Sierra Nevada, revered Mount Diablo as a place to pray and hold ceremonies, and the mountain figures prominently in several world creation myths. Given an abundant and continuous subsistence base, ceremony in Miwok life was extensive, and scholars have written much about it based on early ethnographic accounts (Bennyhoff 1977; Levy 1978).

2.3.2 Historic Period Setting

The historic period of the project area can be broken into three periods: the Spanish Period (1772-1821), the Mexican Period (1821-1846), and the American Period (1846-present).

Spanish Period (1772-1821)

The Spanish entered present day Contra Costa County as early as 1769 with the Portola expedition. Subsequent expeditions, including the Fages-Crespi expedition in 1772 and the Anza-Font expedition in 1776, traveled through present-day Danville and San Ramon (Cook 1957). These expeditions resulted in establishment of the Presidio of San Francisco and Mission San Francisco de Asis in 1776 in present-day San Francisco, Mission Santa Clara de Asis in 1777 in present-day Santa Clara, and the Mission San Jose de Guadalupe in 1797 in present-day San Jose. The San Ramon Valley that includes present-day Town of Danville and San Ramon was used by Mission San Jose to graze sheep and cattle. These expeditions significantly impacted the Bay Miwok when the Spanish began to colonize the region and convert the Native population to Catholicism. Spanish mission records indicate that local Native Americans from settlements throughout the San Francisco Bay Area were taken to Mission San

Francisco de Asis between 1795 and 1806 (Milliken 1995). The colonizers introduced new diseases for which the Natives had no immunity and sought to incorporate indigenous people into the Spanish colonial empire to further the Spanish goals of political, economic, and religious expansion in the Americas (Milliken 1995).

Mexican Period (1821-1846)

In 1821, Mexico won its independence from Spain with the signing of the Treaty of Córdoba and took possession of California, marking the end of the Spanish period and the beginning of the Mexican period in "Alta California". The Mexican colonial authorities permitted and encouraged foreigners to relocate and settle in Alta California. The missions were "de-secularized" beginning in 1833, and the Mission land and property was either sold or given to politically prominent Mexican citizens and military leaders.

The San Ramon Valley was broken up into two large land grants, both called Rancho San Ramon. Land grants covering the project area and vicinity are depicted in *Figure 6: Land Grant Boundaries*. The northern portion of Rancho San Ramon, where the project area is located, was granted by the Governor to Mariano Castro and his uncle Bartolo Pacheco who came to California in 1775 as part of the Anza-Font expedition (Lane 1994). As with almost all ranchos in California, cattle hide and tallow provided the economic basis for the two San Ramon ranchos. According to the "The Complete Yesteryear in the San Ramon Valley" by Beverly Lane (2000),

"Early writers recorded seeing numbers of wild cattle and grizzly bears. The settlers grazed animals and began to plant crops for sale, particularly wheat. Jose Maria Amador and Roberto Livermore had cultivated a substantial wheat crop in 1837, but such large plantings were rare for Mexican rancheros who grew grains and vegetables strictly for domestic use."

The name "Las Trampas" appears on the land grant map (diseño) of the Laguna de los Palos Colorados rancho that was a Mexican era rancho bordering the northern Rancho San Ramon on the west. The map refers to the area as "Cuchilla de las Trampas," which translates to ridge of traps. According to the testimony of Jose Martinez in 1862, traps were set in the chaparral of the hills to catch elk, and so the ridge became known as Las Trampas Ridge (Bright and Gudde 2010:205).

American Period (1846-present)

The end of the Mexican-American War in 1848 marked the beginning of the American Period in California. The California Gold Rush and the promise of excellent soil and abundant water drew numerous American settlers to the area from all over, and soon squatters began to take over land held by former Mexican citizens. To resolve land ownership disputes, the U.S. Congress created the U.S. Land Commission following admission of California into the Union in 1850 to validate the land titles of Spanish and Mexican land grants in California. Although the U.S. Land Commission eventually confirmed most land grants, the cost of litigation forced most Californios to lose their property, and more often than not, it was lost to newly arriving American settlers and the lawyers who were hired to defend land titles (Olmsted 1986). In court, the transfer of title for land involving Amador's Rancho San Ramon was well documented and not disputed; however, the land title to Castro and Pacheco's Rancho San Ramon was surrounded with controversy, and after years of legal battles, Horace Carpentier, an American lawyer, ended up owning the entire Castro-Pacheco portion of Rancho San Ramon. Carpentier then turned around and sold the land back to many of the squatters who had occupied the land during the dispute period.

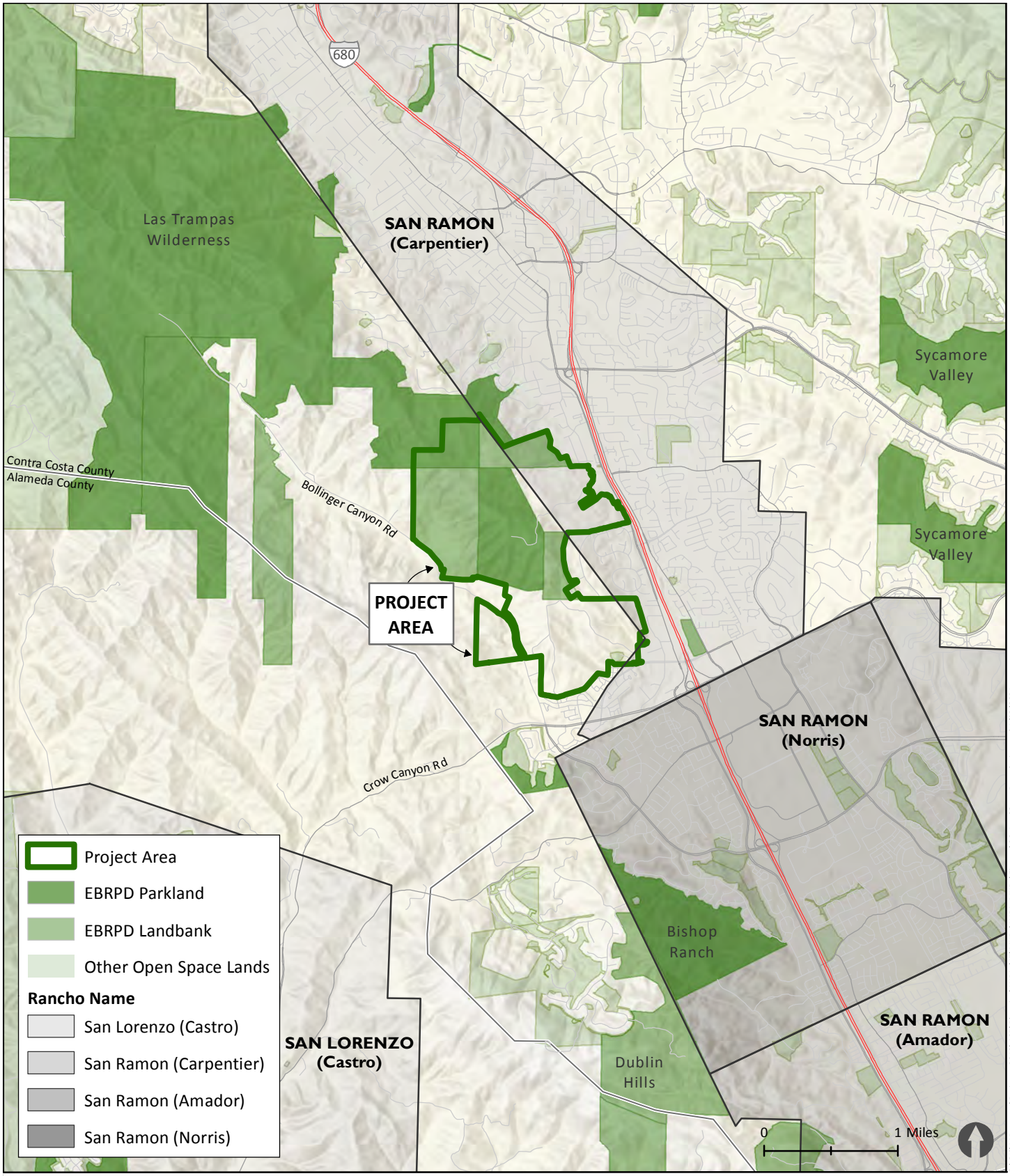


FIGURE 6: LAND GRANT BOUNDARIES

In 1957, Bollinger Canyon Road (named after Joshua Bollinger who was the first European to settle in Bollinger Canyon) was paved by the U.S. Army to facilitate construction of the San Francisco Defense Area Site SF-25, a Nike surface-to-air guided missile system that operated from 1955 to 1959. The site was later used by the U.S. Air Force and then the California Army National Guard as a radio relay site until 1966 (Sebby 2016).

Residential development was accelerated by the completion of Interstate 680 in 1965, and a severe drought that occurred in the 1970s, which put pressure on local ranchers and farmers as grass and water for cattle diminished. As a result, many of the Valley's ranches established in the nineteenth century were sold and developed into large subdivisions and business parks that encroached on the Valley's walnut and pear orchards. To facilitate the large subdivisions and business parks, new water and sewer systems were developed. As a result, the towns of Danville and San Ramon incorporated in 1982 and 1983, respectively, to control the pace of development and to establish necessary police, parks and other services, as well as new libraries, city halls, and hospitals within the two towns.

2.3.3 Evaluation for Historical Significance

Evans and de Shazo, Inc. (EDS) completed a field survey and assessment of the built environment resources within the Chen property on September 11, 2017. The circa 1950 barn, corrals, and associated features do not appear eligible for the California Register of Historical Resources (CRHR), nor do they retain "enough integrity to convey significance under any of the CRHR criteria" (de Shazo 2017).

Pear orchards of San Ramon Valley were developed into large subdivisions. Photo courtesy of the San Ramon Historical Society.

Oak woodland within the Peters Ranch property in the project area.

2.4 CURRENT LAND USES IN THE SURROUNDING AREA

Private residential developments define the eastern boundary of the project area west of San Ramon Valley Boulevard while open space parkland and privately owned, undeveloped land make up the northwestern, western, and southern boundaries of the project area. Agricultural uses and rural residential uses are the primary land use for the privately owned, undeveloped land.

The Town of Danville lies to the northeast and east of the project area, encompassing the Podva Residential Development, Quail Ridge Residential Development, and the Danville Ranch Residential Development. The City of San Ramon is located to the southeast and south of the project area and includes the Preserve Residential Development project. While the lands to the south and southwest of the project area along Bollinger Canyon Road are within unincorporated Contra Costa County, the lands are within the City of San Ramon's sphere of influence and are serviced by the public facilities of San Ramon, including schools, parks, libraries, police, and fire stations.

Refer to *Figure 7: Existing Public Facilities in Project Vicinity* for the location of major public facilities within the five-mile radius surrounding the project area.

San Ramon Valley depicting orchards in the 1930s. Photo Courtesy of the Pioneers Film Archive.

Present-day San Ramon Valley depicting residential development on either side of Highway 680 and San Ramon Valley Boulevard.

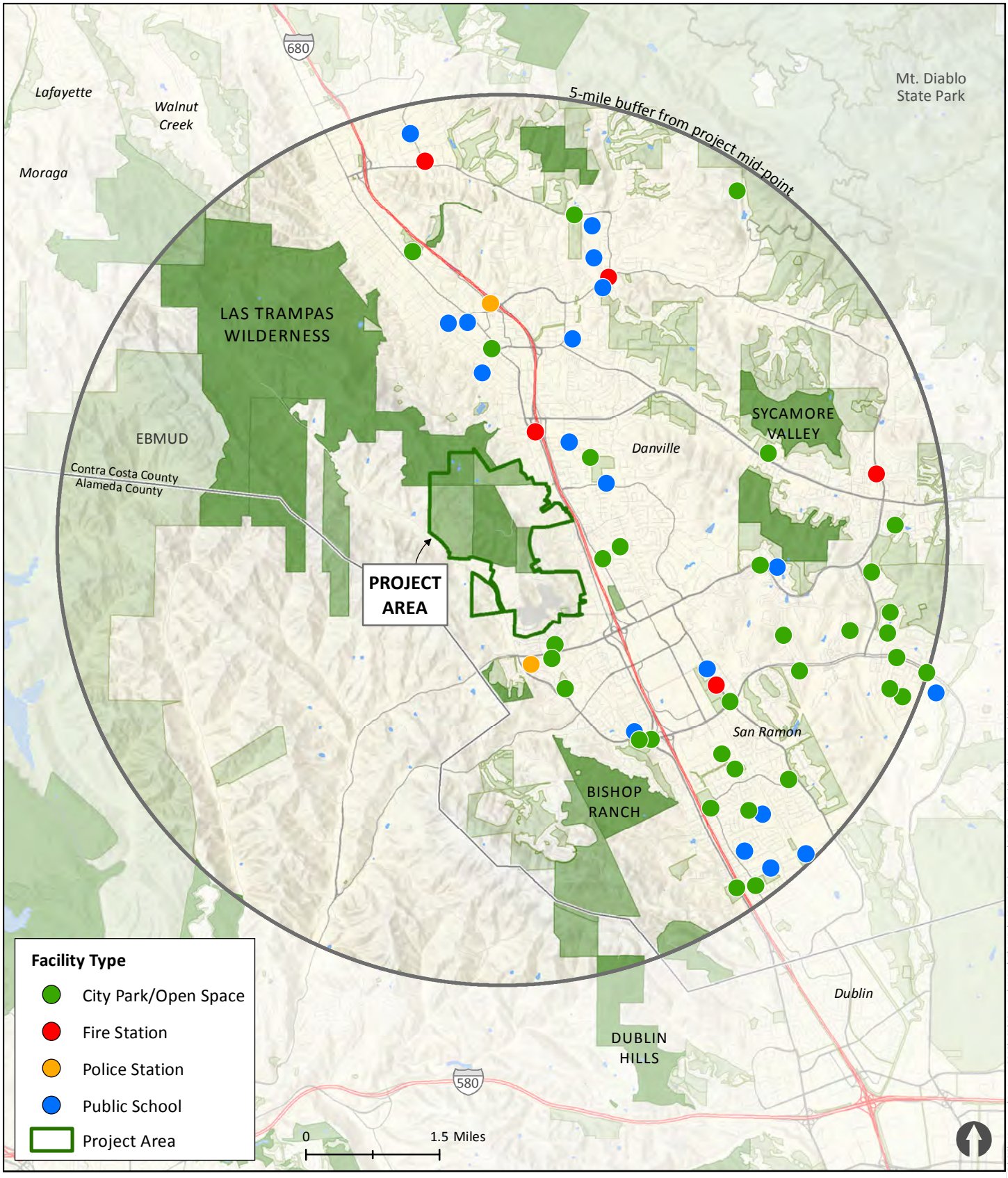


FIGURE 7: EXISTING PUBLIC FACILITIES IN PROJECT VICINITY

2.5 ENVIRONMENTAL SETTING

This section describes the following: topography, geology and soils; hydrology and water resources; climate and air quality; noise; vegetation and wildlife; visual quality; and livestock grazing. The information was derived from the site visits and field surveys conducted by the Planning, Stewardship, and Operations staff and consultants, and background information gained from resources listed in Chapter 5: Report Preparation and References.

2.5.1 Topography, Geology, and Soils

The project area is within California's Coast Ranges Geomorphic Province, a geologically young and seismically active region dominated by northwest-trending ridges and valleys that parallel the overall structural trend of the region and consists of incised drainages and steep sloping hillsides. The structural trend is primarily controlled by the active faulting and folding related to movement within the San Andreas fault system.

The dominant features of the project area are Las Trampas Ridge and Bollinger Canyon, which sits between Las Trampas Ridge to the east and Rocky Ridge to the west. Las Trampas Ridge is the dominant regional ridge and rises to an elevation of 1,432 feet above sea level (ASL), as indicated in the *Figure 8: USGS Topographic Maps*.

The geology of the project area and the larger Las Trampas is one of the park's unique interpretive features. The record of geologic events such as marine inundations, volcanic eruptions and fault movements are revealed throughout the park in rock outcrops, landslides, road cuts and springs.

Bedrock in the project area ranges from a complex sequence of Mesozoic- and Cenozoic-age sedimentary and volcanic rocks on the northern

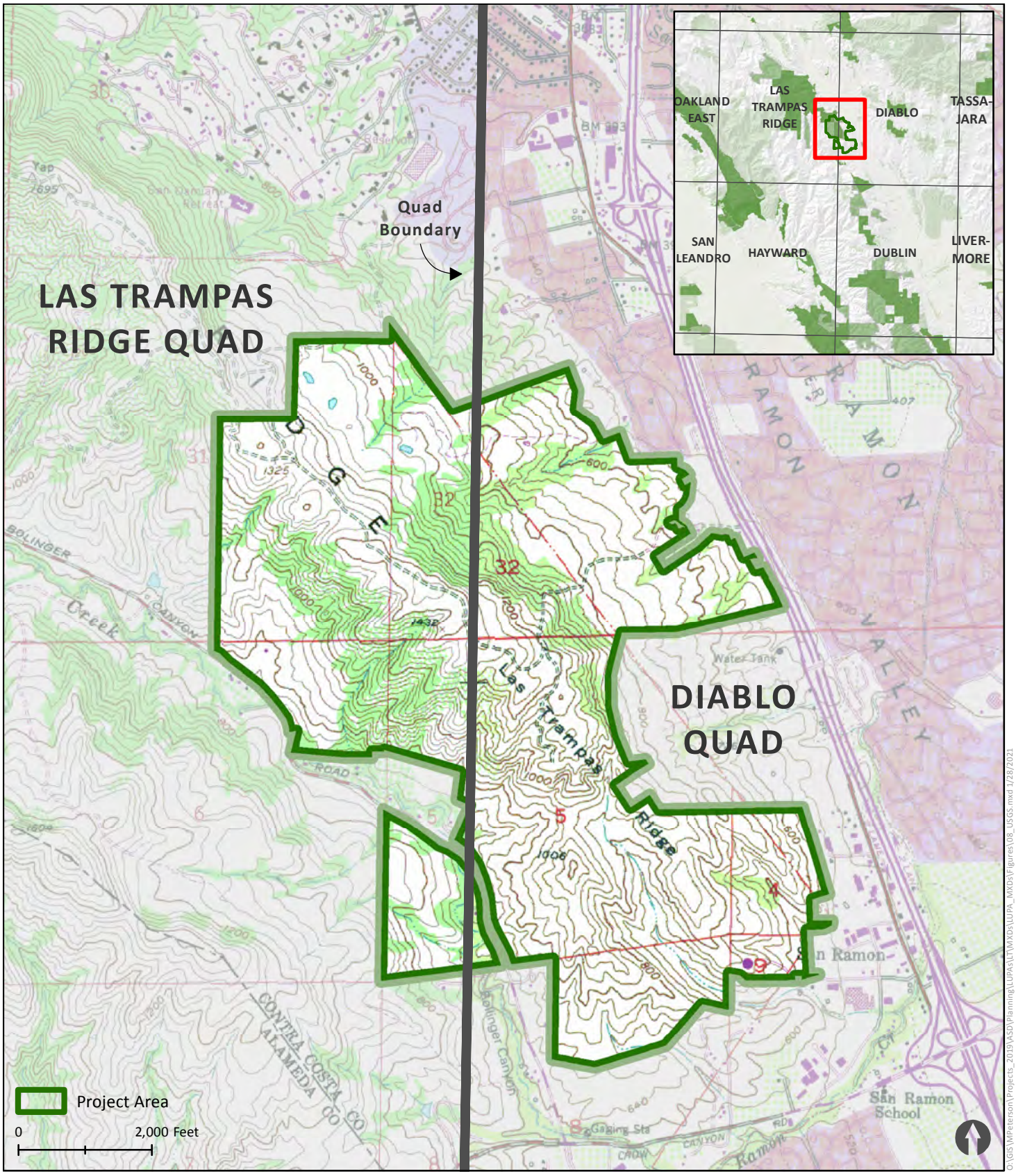


FIGURE 8: USGS QUADS. LAS TRAMPAS RIDGE (WEST), DIABLO (EAST).

portion within the Podva and Elworthy properties, to Pliocene- to Miocene-age sedimentary rocks on the southern portion within the Faria property (AECOM 2013, RBF Consulting 2007). The bedrock materials in the area are extensively folded and faulted as a result of regional forces, and their axes generally trend northwest. Principal bedrock materials are composed of upper Tertiary age San Pablo Group as well as the Monterey Group (AECOM 2013, RBF Consulting 2007).

The hills in the Elworthy property are composed of Miocene (25 – 5 million years old [ma]) marine San Pablo Group sandstone. The San Pablo Group is divided into three geologic units: the Briones Formation is stratigraphically lowest (oldest in age), followed by the Cierbo Formation, and the uppermost (youngest) Neroly Formation. Of these, the Briones Formation and the Neroly Formation are the San Pablo Group units reportedly within the Elworthy property. This San Pablo Group bedrock is unconformably overlain by much younger undivided recent (Holocene: 10 thousand years old [ka] – recent) alluvium and older (Late Pleistocene: 40 – 10 ka) deltaic alluvial deposits. (RBF Consulting 2007).

The San Francisco Bay area during the Pliocene epoch resembled the modern African savanna. The water body in the Bay Area at that time would have been the open Pacific Ocean, rather than San Francisco Bay as it exists today. This epoch also included active volcanoes in the rising Berkeley Hills. Examples of flora and fauna from the Pliocene epoch include elm and poplar trees, horses, camels, pronghorn, antelope, saber-toothed cats, and relatives of modern-day elephants (AECOM 2013).

As shown in *Figure 9: Soils*, two predominant soil series are found in the project area: Los Osos clay loam and Millsholm loam. Soils in the project area are generally undisturbed native soils characterized by moderately steep (30-50%) to very steep (50-70%), well-drained clay loams and loams that formed in material weathered from interbedded sedimentary rock on uplands.

Los Osos Soils

The Los Osos soils have a surface layer of gray clay loam and a subsoil of gray and grayish-brown clay. Los Osos clay loam is a soil type within the Los Osos series. Los Osos clay loam is comprised of well-drained soil formed in sandstone and shale parent material. Only 24-39 inches of soil is present above the paralithic bedrock restrictive layer in a typical Los Osos clay loam soil horizon. Los Osos Series soils generally have a medium runoff potential and represent a moderate erosion hazard. Included in the Los Osos clay loam LhF (30 to 50 percent slopes) and LhE (15 to 30 percent slopes) soil series, which dominate much of the project area, are Alo Clay, Diablo Clay Loam, and Millsholm Loam. This soil type is found on hillslopes and is not considered a hydric soil (USDA NRCS, 2017).

Millsholm Soils

The Millsholm soils have a surface and subsoil of grayish-brown loam that are underlain by fine-grained sandstone. Millsholm loam is a soil type within the Millsholm series. Millsholm loam is comprised of well-drained soil formed in sandstone and shale parent material. Only 10-20 inches of soil is present above the lithic bedrock restrictive layer in a typical Millsholm loam soil horizon. Millsholm series soils generally have a very high runoff potential. These soils are found on the steeper slopes and the series includes Los Osos Clay Loam, Felton loam and Gaviota sandy loam. This soil type is found on hillslopes with 20 to 60 percent slopes and is not considered a hydric soil (USDA NRCS, 2017).

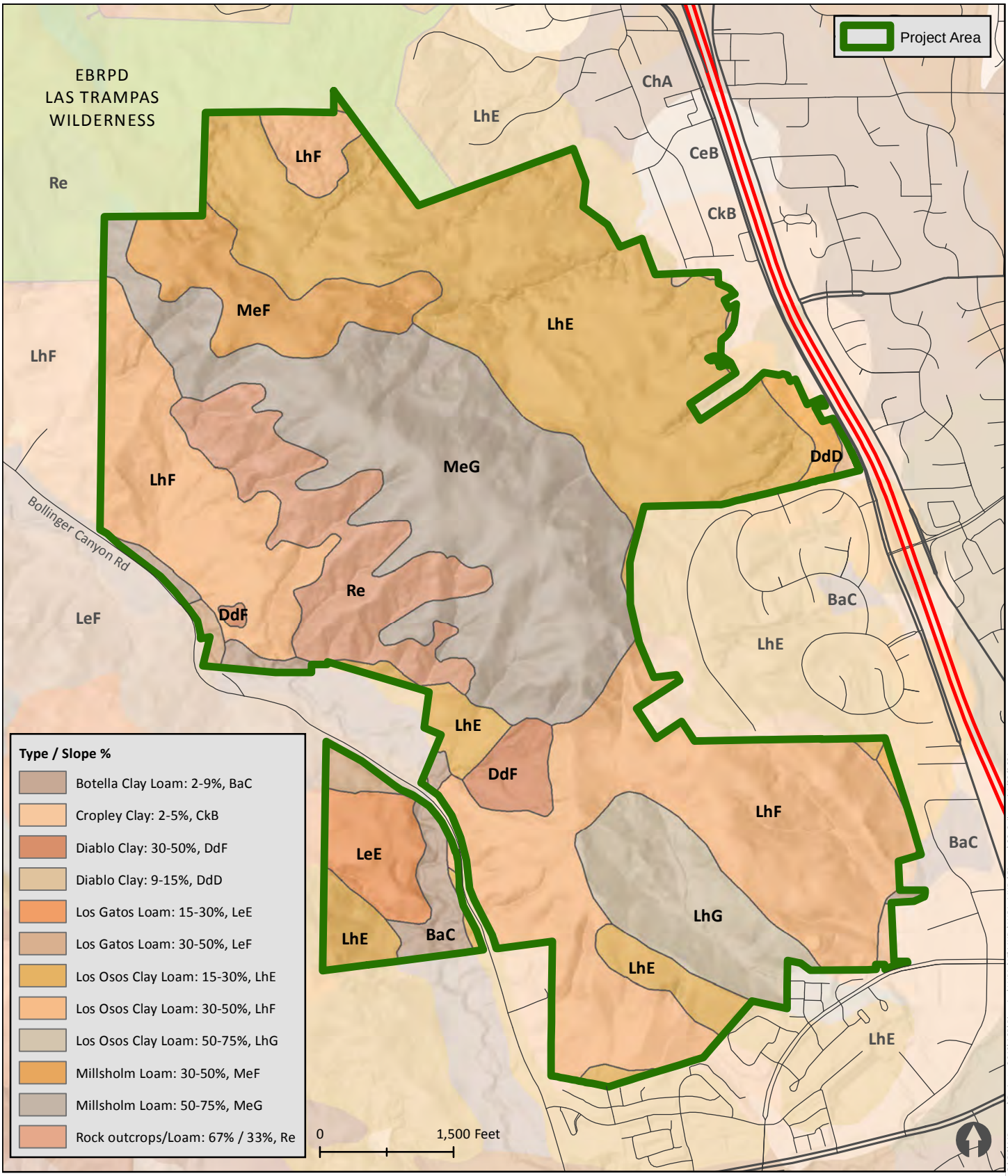


FIGURE 9: SOILS

2.5.2 Hydrology and Water Resources

Watershed

The project area lies within the Walnut Creek watershed, specifically the San Ramon Creek sub-watershed, with intermittent drainages flowing into Bollinger Canyon and San Ramon Creeks and their tributaries. Bollinger Canyon Creek runs parallel to Bollinger Canyon Road and is a large tributary of Walnut Creek, which flows northward and drains into Carquinez Strait and Suisun Bay. The San Ramon Creek sub-watershed size at the discharge point is roughly 22.5 square miles (RBF Consulting 2007). Refer to *Figure 10: Watersheds, Wetlands, and Drainages*.

Surface Water and Drainage Patterns

The major surface water sources consist of annual or ephemeral streams that flow during winter and spring months, scattered low production springs, and small, constructed stock ponds. As was true throughout the San Francisco region, the water table was higher during prehistoric and early historic times, and it is probable that the ephemeral named drainages once flowed year-round.

On the eastern flank of Las Trampas Ridge, stormwater from the Podva, Elworthy, and Peters Ranch properties flows in the direction of the natural topography and drains to storm drains under Midland Way, along San Ramon Valley Boulevard, and east of I-680 (RBF Consulting 2007; RBF Consulting 2013). Drainage swales and ditches immediately adjacent to the roadway along Bollinger Canyon Road collect stormwater from the Chen and Faria properties.

On the Faria property, rainfall generally runs off as sheetflow instead of infiltrating into the soil. Drainages collect sheetflow runoff into adjacent drainage features such as Bollinger Canyon Creek or San Ramon Creek.

Seeps, Springs, and Ponds

Seven ponds are located within the project area. The lower slopes of the Chen property also contain small seeps and an old stock pond with a deteriorating lining.

A productive developed spring adjacent to the Chen property was incorporated into a water distribution system for livestock grazing in 2018. Please refer to *Appendix A - Grazing Unit Management Plan* for further discussion of the water distribution system.

A mosaic of seasonal ponds is located within Las Trampas open parklands in the vicinity of the Podva property, referenced as ltpnd002, ltpnd003, ltpnd005, ltpnd009, and ltpnd010. These ponds will be designated as a Special Resource Protection Area as part of this LUPA. See *Figure 14: Special Protection Features*. The ponds are filled by rainfall and slowly evaporate during the spring and summer. Depending on the amount of winter rainfall, the ponds may contain water year-round or dry out during the late spring or summer months.

Two additional ponds, ltpnd007 and ltpnd008, are located on the Podva property and will be managed according to the Podva LTMP. Pond ltpnd007 is approximately located in the center of the Podva property, and pond ltpnd008 is in the southwest corner. In average rainfall years, both ponds hold water into the summer.

A series of existing and constructed wetlands are located on both the eastern and western portion of the Faria property. The approximately 3.29-acre created wetlands provide compensatory mitigation for impacts to wetlands, riparian, and species habitat resulting from the Faria Preserve Residential Housing Development Project. The created wetland and associated riparian complex establishes an intermittent drainage channel to capture surface runoff and direct it through created seasonal wetland basins.

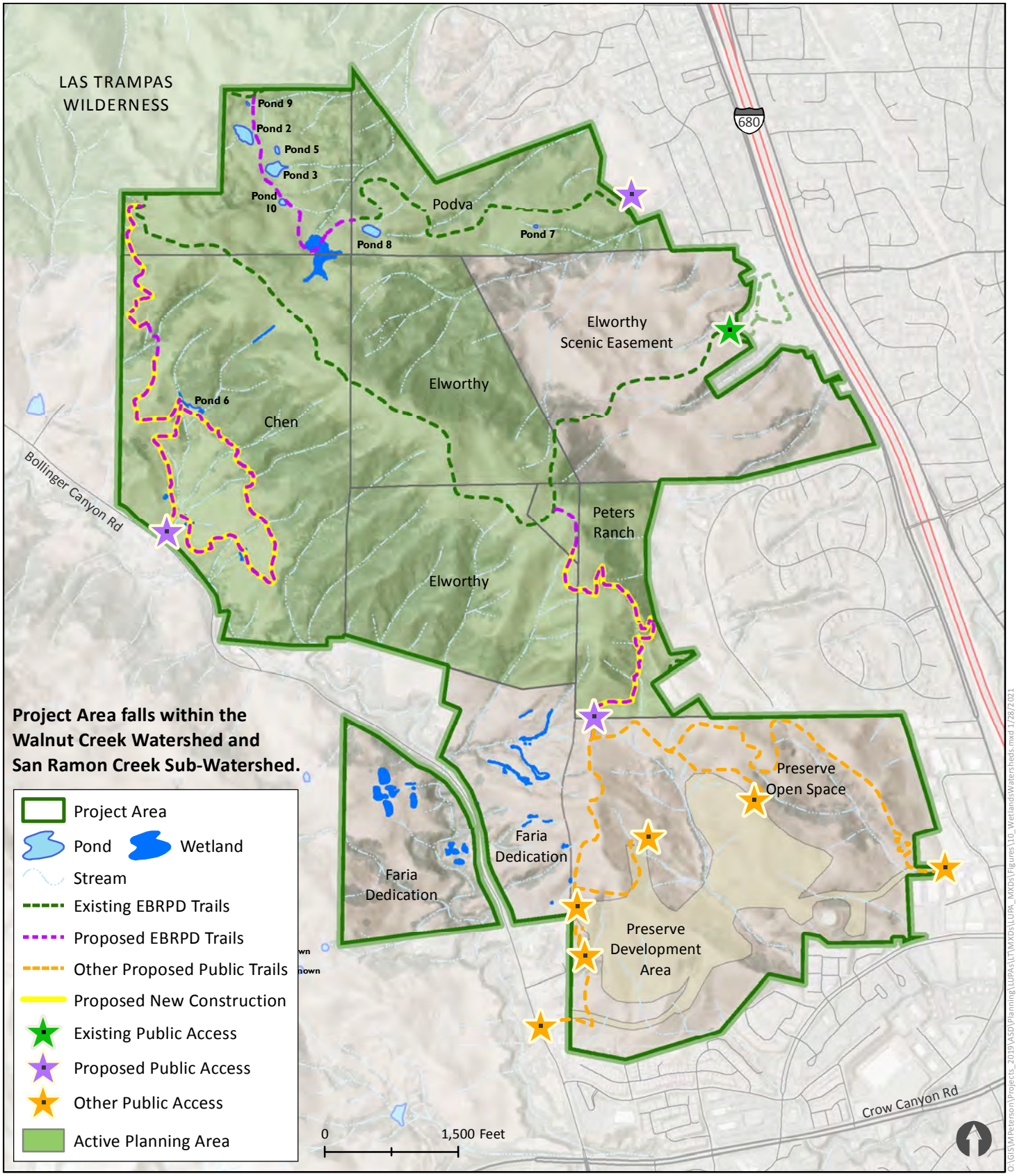


FIGURE 10: WATERSHEDS, WETLANDS, AND DRAINAGES

Flooding

Due to the steep terrain of the project area, flooding occurs frequently in the winter and spring and are intense and of short duration (AECOM 2013). The project area consists of upland drainages with a significant amount of mobile sediment and shows evidence of erosion and blockage with debris jams in a number of locations. The Federal Emergency Management Agency (FEMA) has mapped a 100-year flood hazard zone surrounding Bollinger Creek that parallels Bollinger Canyon Road. The 100-year flood hazard zone extends into the southwest corner of the Chen property (southeast of the proposed staging area) and covers a large area in the western portion of the Faria property (west of Bollinger Canyon Road).

Groundwater

The project site is located within the San Ramon Valley Groundwater Basin, a sub-basin of the San Francisco Bay Hydrologic Region. The sub-basin is located in southern Contra Costa County, approximately 30 miles east of San Francisco. It is bounded by Stone Valley on the north, Las Trampas on the west, the Mt. Diablo foothills on the east, and the Livermore Valley Groundwater Basin on the south. This groundwater basin is not used as a municipal drinking water source (City of San Ramon 2010).

2.5.3 Climate and Air Quality

The project area is within a generally Mediterranean climate, which is characteristic of the central coastal regions of California, with warm, dry summers and cool, wet winters. The rainy season generally occurs from the beginning of October through the end of April. Actual rainfall varies strongly because of regional and global weather patterns such as periods of drought and the El Niño-Southern Oscillation (ENSO) (RBF Consulting 2007).

Air quality is a function of both local climate and local sources of air pollution. Air quality is the balance of the natural dispersal capacity of the atmosphere and emissions of air pollutants from human uses of the environment. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen dramatically. Exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Ozone and fine particle pollution, or $PM_{2.5}$, are the major regional air pollutants of concern in the San Francisco Bay Area. Ozone is primarily a problem in the summer, and fine particle pollution in the winter. Ozone and $PM_{2.5}$ infrequently exceed health standards in the portion of Contra Costa County west of the East Bay hills. In eastern Contra Costa County, summer afternoon temperatures frequently approach triple digits, spurring ozone levels to exceed health standards. In winter, $PM_{2.5}$ can be transported westward through the Carquinez Strait from the Central Valley where it adds to wood smoke, causing health standards to be exceeded (LSA 2017).

Climate Change

Natural community values include micro-climate variations, air purification, water filtration, natural carbon sequestration, and carbon storage. Climate change can be expected to affect the health and biodiversity of the natural communities in the project area. According to the best available scientific studies, the San Francisco Bay Area will likely experience hazardous conditions as a result of climate change in the future (California Energy Commission 2020). Major threats facing the Park District include extreme heat, wildfire, sea level rise, flooding, and drought. While sea level rise is not anticipated to be an issue for inland areas like the project area, the other hazards are key considerations for Park District development and operations. The Master Plan identifies climate change as an institutional priority and states that the Park District has an important role to play in contributing to the sustainability of the region.

Major Hazards Facing the Park District

Extreme heat - Warmer temperatures caused by climate change are anticipated to increase the frequency and intensity of extremely hot days, which is defined by the State of California as a day when the high temperature is greater than 98 percent of the daily high temperatures for that location between April and October of 1961 to 1990. Extreme heat can cause significant human health impacts, damage ecosystems, and affect energy systems, which can be less efficient at high temperatures.

Wildfire - While fire can be important to maintain healthy ecosystems, extreme fire or fires that move out of wildland areas can cause significant damage to buildings, infrastructure, and people. The warm and dry conditions of the project area, as well as steep topography make ideal conditions for wildfire. The project area is located in a High Fire Severity Zone as measured by the California Department of Forestry and Fire Protection. The Park District is currently updating its 2012 "Fire Danger Operating Plan and Procedures" which will be applicable to the project area.

Flooding - Some studies suggest that Northern California will experience more intense storm events as a result of climate change, which could lead to more frequent and more intense floods (Polade et al. 2017). While much of the project area is located at higher elevations, the staging area will be located at lower elevations near Bollinger Creek. Additionally, runoff from the project area could potentially contribute to flooding lower in the watershed.

Drought - Climate change is anticipated to create more extreme cycles of drought and intense rainfall, resulting in longer and more extreme droughts in the future. Droughts can affect plants and animals that depend on regular winter precipitation for survival and can affect urban water supplies. Drought conditions can affect other hazardous conditions, including wildfire and flooding. For example, an increase in dead plant material as a result of drought can fuel fires; and harder and less pervious soils due to drought conditions can lead to increased runoff and greater susceptibility to landslides and erosion. As droughts are not site specific, the project area will share the burden of droughts with the surrounding region.

2.5.4 Noise

The proposed project area is in a relatively quiet area with noise levels falling within the normally acceptable exterior noise level for park land uses and the conditionally acceptable exterior noise level for the adjacent residential uses according to Contra Costa County, City of San Ramon, and Town of Danville noise compatibility guidelines, as there are no substantial noise generators in the area and existing pass-through traffic levels produce moderate levels of noise.

The dominant source of noise in the project vicinity is traffic on Bollinger Canyon Road. Long-term noise measurements indicate that noise in the Project vicinity measured at 65.9 dBA CNEL, which is below the normally acceptable exterior noise level for recreational uses under Contra Costa County noise standards of 70 dBA CNEL. Other sources of noise that can be heard from various vantage points in the project area include noise generated from parking lot activities such as engine sounds, car doors slamming, car alarms, and people conversing. Typical parking lot activities, such as people conversing or doors slamming, generates noise levels of approximately 60 dBA to 70 dBA Lmax at 50 feet.

The Park District's parkland activities are typically associated with passive recreation activities that would not typically exceed the recreational noise standard of $70L_{dn}$ and routine maintenance, which can include periodic, short term use of power equipment that could exceed the recreational noise standard. To minimize noise impacts, the Park District's ongoing policy is to require that parks operations involving equipment with high noise levels (e.g., vegetation management and grading activities) be limited to the hours between 7:00 a.m. and 5:00 p.m. and only occur on weekdays. In addition, the short-term nature of most of these maintenance activities means that these activities would only occur in one location for a short period, such as a few days or one week, before moving to a different location. Thus, park visitors and nearby residences are exposed to mechanical equipment noise associated with parkland operations for only a short period of time while specific routine maintenance activities occur.

2.5.5 Visual Quality

Las Trampas Wilderness Regional Preserve serves as a natural visual backdrop to the urbanized areas along the CA-24 and I-680 transportation corridors from Lafayette to San Ramon. The project area, in particular, is a major visual and aesthetic resource for the communities of Danville and San Ramon. Las Trampas Ridge dominates the western boundaries of these towns and offers soaring vistas of wooded hillsides, rolling grasslands and dramatic ridges. The project area includes Las Trampas Ridge, grasslands, oak forests and scrublands, and stretches from Danville and San Ramon to the east and south, and to the heart of Bollinger Canyon to the west and north.

The area has a high natural visual character, generally characterized by rolling grassy hills, steep ridges, rocky outcrops and canyons with intermittent creeks. On either side of the ridge, from Danville and San Ramon to the floor of Bollinger Canyon, the views are primarily of oak and bay woodland, grassy ranchlands with grazing cattle and steep ridges covered in coyote brush or grasslands. From Bollinger Canyon Road, views of cattle corrals and grazing cattle dominate the most visible aspects, with additional views of the ridges, grasslands and forests.

From the ridgeline and the various trails in the project area, sweeping views of Mount Diablo are prevalent to the east. Views to the east also include vistas of San Ramon Valley, the Sherburne Hills, the Dougherty Hills and the Black Hills, where Morgan Territory Regional Park is located. To the south, Rocky Ridge dominates the south side of Bollinger Canyon. Beyond Rocky Ridge, Wiedemann Hill, approximately 1,854 feet in elevation, and Harlan Hill, approximately 1,719 feet in elevation, are both visible and are respectively the tallest peaks in the San Ramon vicinity.

Refer to *Figure 11: Visual Setting Key* for the location of representative views of the project area.

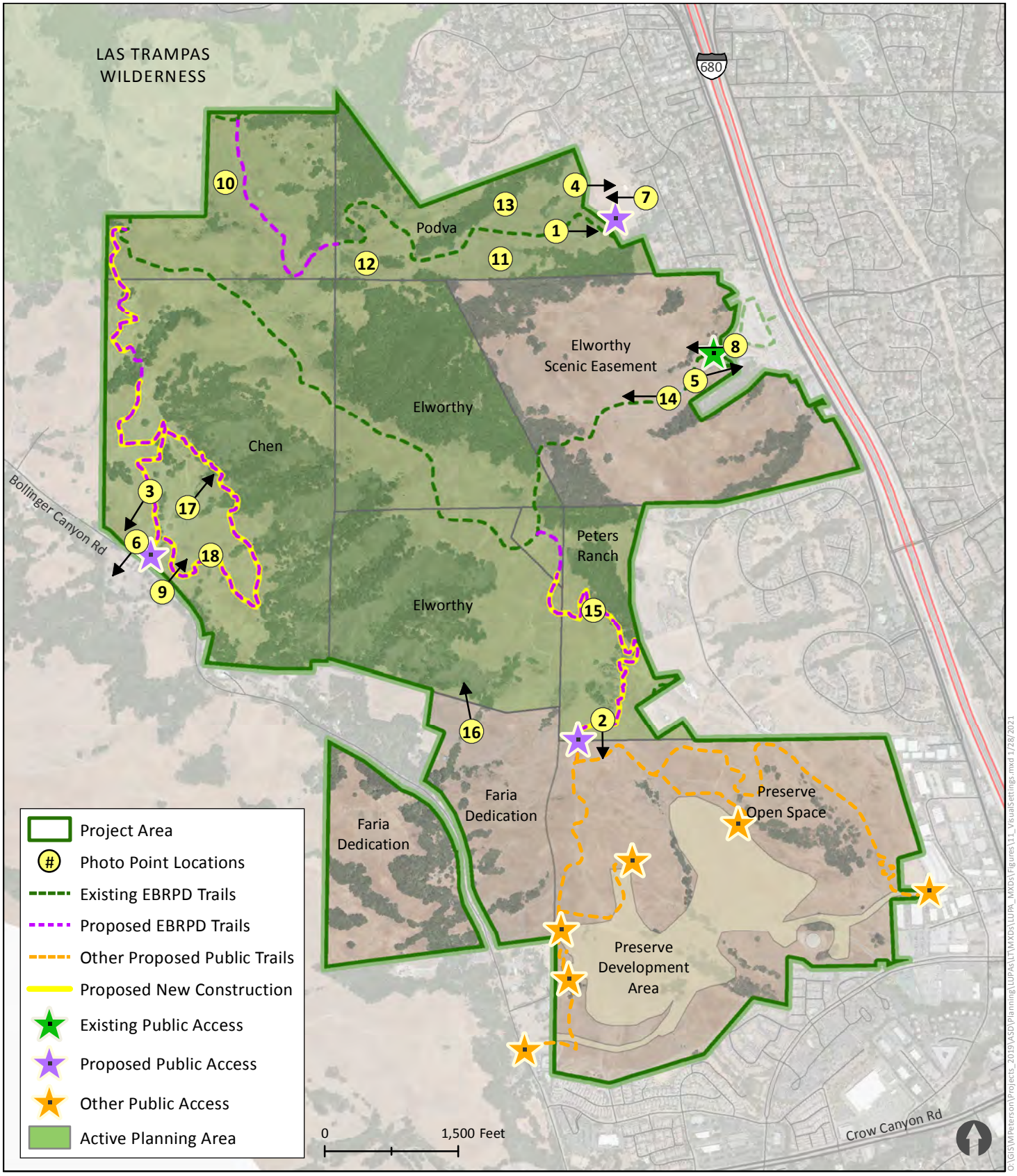


FIGURE 11: VISUAL SETTING KEY

Views from the Proposed Project Area into Surrounding Lands

1. View of San Ramon Valley and Mount Diablo looking east from Podva property

2. View of the Faria Preserve residential development project and Wiedemann Hill looking south from Peters Ranch property

3. View of surrounding residences to the southwest from Chen property

Views of Area Roadways from the Project Area

4. View of Wingfield Court from Podva property

5. View of Elworthy Ranch Circle from Elworthy Staging Area

6. View of Bollinger Canyon Road from the proposed staging area on Chen property

Views from Area Roadways into the Project Area

7. View of Podva property from Wingfield Court

8. View of Elworthy Staging Area from Elworthy Ranch Circle

9. View of Chen property from Bollinger Canyon Road

Views from within the Project Area

10. View of a seasonal pond within Las Trampas parkland

11. View of a seasonal pond within conservation easement area in Podva property

12. View of a pond within conservation easement area in Podva property

Views from within the Project Area

13.View of Podva property

14. Looking west along Fiddleneck Trail

15.View of an oak tree within Peters Ranch property

16.View of shrubland and woodland habitat on LasTrampas Ridge from Faria property

17.View within Chen property

18.View of drainage within Chen property

2.5.6 Plant Communities and Associated Wildlife

Natural communities, or habitat types, are assemblages of plants and animals found in environments that vary based on soils, hydrology, rainfall, humidity, soil and water salinities, wind exposure, and altitude. Natural communities form distinct habitats that are used by an associated suite of plant and animal species.

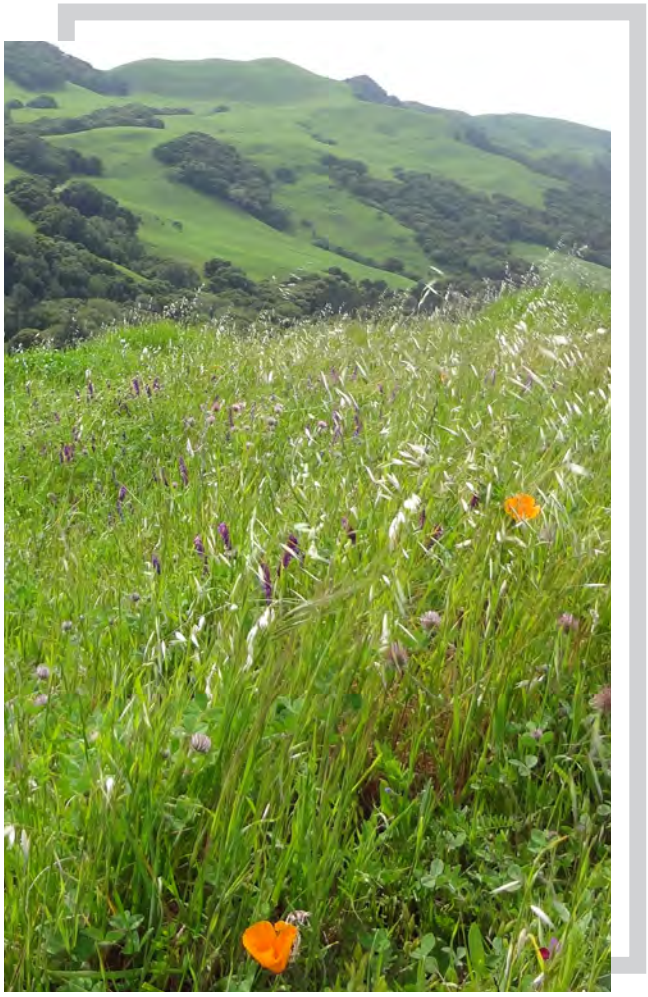
The project area supports two predominant plant communities that are characteristic of the East Bay foothills and provide important habitat to special-status and state and federally-listed species: grassland habitat and woodlands. Other plant communities occur in smaller areas: riparian and seasonal drainage, chaparral, coastal scrub, and wetlands. Non-native grasslands and woodlands constitute the most common vegetation types. These habitat types were determined through field surveys and aerial mapping conducted by the Park District in 2017, by Nomad Ecology on behalf of the Park District in 2018, and by LSA in 2019, and adapted from project documents incorporated by reference. Each of these habitat types is described below and illustrated in *Figure 12: Natural Communities/Habitat Types*. The habitat types for the Faria dedication property are also included in the description below based on project documents incorporated by reference.

California Grasslands

The California annual grassland community is typically dominated by introduced, non-native, naturalized annual grasses and forbs, with native perennial grasses persisting in relic stands, as well as native forbs. California annual grassland exhibits considerable spatial and temporal variation at many scales. Annual rainfall amount and timing, temperatures during the growing season, soil chemistry and texture, and topography, all of which exhibit significant variability, largely determine grassland species composition, biomass production, and dominance relationships (Eviner 2016).

Non-native, naturalized annual grasses common to this habitat include several annual bromes (*Bromus* ssp.), wild oats (*Avena* spp.), foxtail barley (*Hordeum murinum*), several annual *Festuca* grasses, filaree (*Erodium* spp.), and annual legumes (*e.g. Trifolium* spp., *Medicago polymorpha;* Bartolume et al. 2007). Common non-native forbs observed include common groundsel (*Senecio vulgaris*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), and milk thistle (*Silybum marianum*).

Native species observed include valley popcorn flower (*Plagiobothrys canescens*), sticky monkey flower (*Diplacus aurantiacus*), red maids (*Calandrinia*



Grassland community within the project area

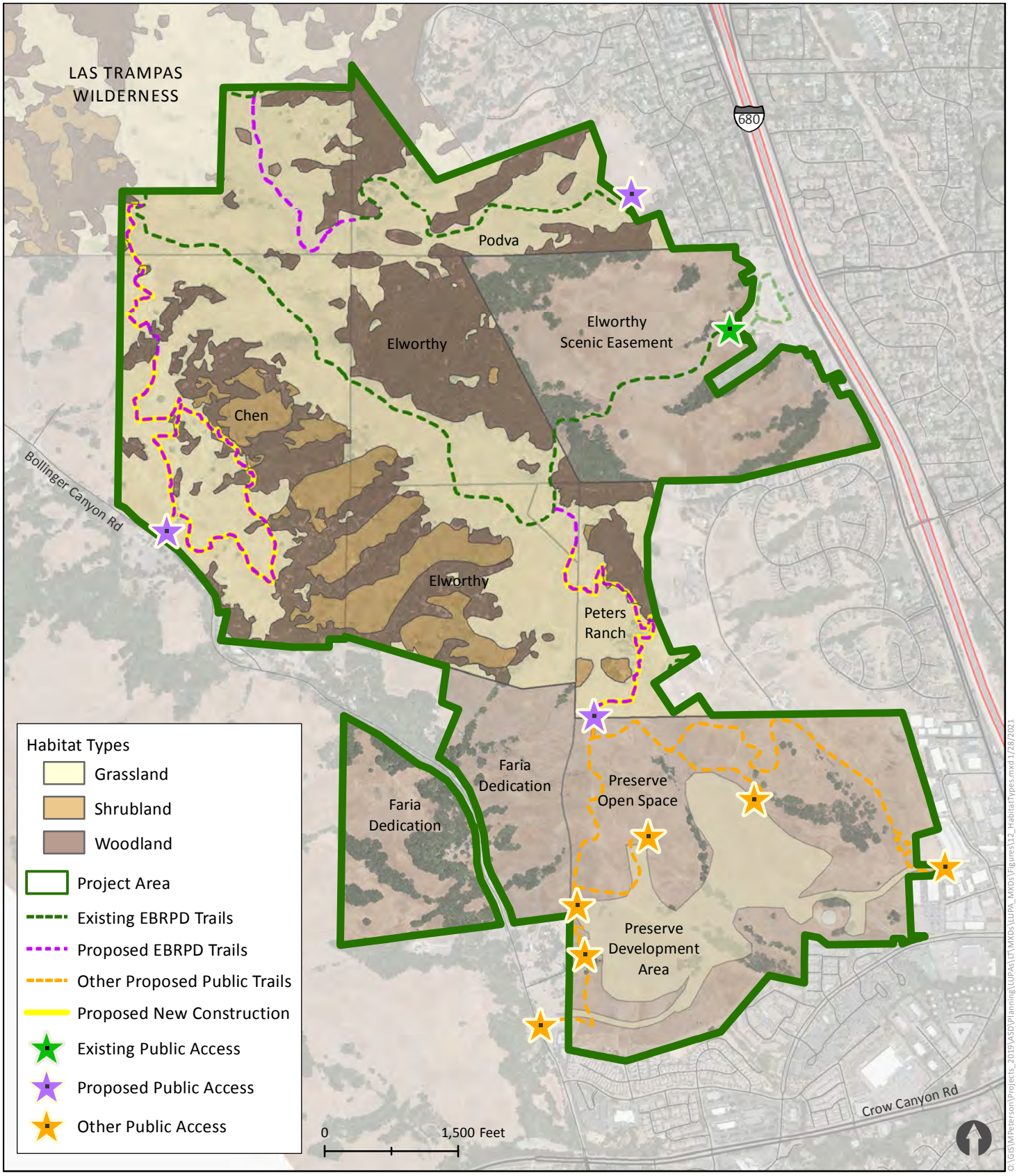


FIGURE 12: NATURAL COMMUNITIES / HABITAT TYPES

ciliata), canary grass (*Phalaris californica*), cocklebur (*Xanthium strumarium*), California goosefoot (*Chenopodium californicum*), Carolina geranium (*Geranium carolinianum*), blue-eyed grass (*Sisyrinchium bellum*), and vinegarweed (*Trichostema lanceolatum*). Coyote brush (*Baccharis pilularis*) is sparsely scattered through the grassland habitat.

This grassland community can provide cover, foraging, and nesting habitat for a variety of bird species, as well as reptiles and small mammals. Characteristic wildlife species present in the project area in grassland include mammals such as the California ground squirrel (*Otospermophilus beecheyi*), field mouse (*Peromyscus* sp.), California vole (*Microtus californicus*), striped skunk (*Mephitis mephitis*), and black-tailed deer (*Odocoileus hemionus*); reptiles such as the gopher snake (*Pituophis catenifer*), garter snake (*Thamnophis sirtalis*), and western fence lizard (*Sceloporus occidentalis*); amphibians such as the Sierran tree frog (*Pseudacris sierra*) and western toad (*Anaxyrus boreas*); and birds such as the western meadlowlark *(Sturnella neglecta)*, horned lark *(Eremophila alpestris actia*), northern harrier *(Circus cyaneus)*, and barn owl *(Tyto alba).*

Existing grassland communities are maintained and improved by protecting and promoting growth of native grassland species with the goal of improving species diversity, wildlife richness, and habitat quality. Vegetation management grazing regimes are directed toward: 1) reduction of invasive and naturalized weed species; 2) reduction of highly flammable fuel loads to reduce wildlife hazard; and 3) management for a heterogeneous landscape.

Management tools for grassland restoration efforts can incorporate grazing, fire, mechanical (mowing), chemical (application of herbicides), and biological methods. Grazing and recreational use may be deferred during restoration to promote plant establishment. Refer to *Appendix A - Grazing Unit Management Plan* for more details.

Valley popcorn flower

Sticky monkey flower

Red maids

Oak and Bay Woodland

Woodland environments are retained in their natural state, whenever possible, to maintain water quality, biotic diversity, aesthetic values, and recreational opportunities. Similar to the grassland community, this woodland community can provide cover, foraging, and nesting habitat for a variety of bird species, as well as reptiles and small mammals such as the San Francisco dusky-footed woodrat *(Neotoma fuscipes annectens)*, pallid bat *(Antrozous pallidus)*, oak titmouse *(Baeolophus inornatus)*, western skink *(Plestiodon skiltonianus)*, and the slender salamander *(Batrachoseps attenuatus)*.

Oak woodland in the project area consists primarily of dense, closed canopy groves within steep ravines on east-facing and northwest-facing ridges of the western slopes. This community is dominated by coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), valley oak (*Quercus lobata*), and California buckeye (*Aesculus californica*). Characteristic shrub species observed on the site include snowberry (*Symphoricarpus albus*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), coyote brush (*Baccharis pilularis*), and wood fern (*Dryopteris arguta*), among others. Characteristic herbaceous plants detected include such non-native species as brome grasses, wild oats, and Italian thistle, among others.

Woodland vegetation management actions to maintain native dominance and manage around infrastructure and recreational opportunities can include a variety of tools, as appropriate to the site conditions: prescribed fire, mechanical treatments, firebreaks, and active management to encourage oak regeneration.

Oak regeneration methods include: releasing seedlings from competing vegetation, or planting acorns and seedlings from local genetic stock.

A variety of hand tools and motorized, mechanical tools may be used for cutting, grubbing, and mowing dependent on vegetation type. Select herbicides may be used to control particularly difficult noxious and invasive weeds, under the supervision of the Integrated Pest Management Department. Volunteers may be used under the supervision of park staff to control invasive plants by hand pulling, grubbing and cutting.

Valley Oak woodland community within the project area

Riparian habitat within the project area

Riparian and Seasonal Drainage

Numerous intermittent and ephemeral drainage channels occur within the project area. Many of the drainage features are sparsely vegetated, dominated by grass and forb species such as rabbit's foot grass (*Polypogon monspeliensis*), loosestrife (*Lythrum hyssopifolia*), toad rush (*Juncus bufonius*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), curly dock (*Rumex crispus*), and bristly ox-tongue (*Helminthotheca echioides*). Riparian habitat observed along the drainage channels includes arroyo willow thicket, coast live oak, California bay, valley oak, California buckeye, snowberry, poison oak, blackberry, and coyote brush.

Riparian systems serve as dispersal corridors and islands of habitat for an estimated 83% of amphibians and 40% of reptiles in California (Brode and Bury 1984). The onsite drainages that convey water provide a seasonal source of drinking water for species occurring in the surrounding habitats and, when wet, also provide breeding habitat for Sierran treefrogs. Leaf litter and decaying logs provide a moist microclimate suitable for amphibians such as the Pacific treefrog. Reptiles that may utilize riparian systems include the western skink, California alligator lizard (*Elgaria multicarinata multicarinata*), gopher snake, and California kingsnake (*Lampropeltis californiae*). Characteristic small mammal species present include the California Myotis *(Myotis californicus)*, Yuma Myotis *(Myotis yumanensis)*, and Big Brown Bat *(Eptesicus fuscus)*.

Many resident and migratory bird species occur in riparian habitats. Birds observed in the riparian woodland include the Steller's jay (*Cyanocitta stelleri*) and dark-eyed junco (*Junco hyemalis*). Resident species that may be found in this habitat include the Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), Anna's hummingbird (*Calypte anna*), downy woodpecker (*Picoides pubescens*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), warbling vireo (*Vireo gilvus*), western scrub-jay, bushtit (*Psaltriparus minimus*), and song sparrow (*Melospiza melodia*). Winter migrants may include the sharp-shinned hawk (*Accipiter striatus*) and rubycrowned kinglet (*Regulus calendula*). Summer migrants may include the ash-throated flycatcher (*Myiarchus cinerascens*), Pacific-slope flycatcher (*Empidonax difficilis*), orange-crowned warbler (*Oreothlypis celata*), and Bullock's oriole (*Icterus bullockii*).

The structural and faunal diversity of riparian zones provide an abundant food source for and attract a variety of mammalian species. For example, the deer mouse (*Peromyscus sp.*) feeds on soil-dwelling larvae as well as a variety of seeds and leaves. Other constituent mammals of riparian woodlands in the region include the brush rabbit (*Sylvilagus bachmani*), introduced eastern fox squirrel (*Sciurus niger*), and raccoon (*Procyon lotor*).

Special-Status Plant Species

Special status plants include species that are designated rare, threatened, or endangered and candidate species for listing by the United States Fish and Wildlife Service (USFWS). Special status plants also include species considered rare or endangered under the conditions of Section 15380 of the CEQA Guidelines, such as those plant species identified with a California Rare Plant Rank (CRPR) of 1A, 1B, and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS). Special status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those with a CNPR 3 in the CNPS Inventory.

Based on a review of the California Natural Diversity Database (CNDDB), inventory of rare plants and animals, and limited field surveys conducted in April 2017 by Park District staff, in March 2018 by Nomad Ecology and in June and August 2019 by LSA biologists, 17 special-status plant species were evaluated as potentially occurring in the project area vicinity. Of these species, nine are not likely to occur in the project area due to the lack of suitable habitat. Seven plant species may occur or have a low potential to occur due to the presence of marginal habitat in riparian woodland and grassland: bent-flowered fiddleneck *(Amsinckia lunaris)*, round-leaved filaree *(California macrophylla)*, Mount Diablo fairy-lantern *(Calochortus pulchellus)*, Congdon's tarplant *(Centromadia parryi ssp. congdonii)*, fragrant fritillary *(Fritillaria liliacea)*, Diablo helianthela (*Helianthella castanea*), and common viburnum (*Viburnum ellipticum*).

The March 2018 survey conducted by Nomad Ecology focused on fragrant fritillary. This plant species was not observed during the survey.

Special-Status Wildlife Species

Special status wildlife species include animals listed by the USFWS or California Department of Fish and Wildlife (CDFW) as threatened or endangered, proposed for listing as threatened or endangered, or as a candidate for listing as threatened or endangered; species considered as "endangered, rare or threatened" as defined by Section 15380 of the *State CEQA Guidelines*; animal species designated as "Species of Special Concern" or "Fully Protected" by the CDFW; and birds designated by the USFWS as "Birds of Conservation Concern." Although these species have no legal status under Endangered Species Act (ESA), the USFWS recommends their protection as their populations are generally declining, and they could be listed as threatened or endangered (under ESA) in the future.

Park District staff conducted field surveys in October and November 2017, and LSA biologists conducted field surveys in July 2018 to assess current habitat conditions and evaluate the potential for the project area to support special-status wildlife species.

Special status species that were determined to have a potential to occur or had suitable habitat within or adjacent to the project area include: California red-legged frog, California tiger salamander, western pond turtle (*Emys marmorata),* burrowing owl *(Athene cunicularia),* long-eared owl *(Asio otus*), white-tailed kite *(Elanus leucurus)*, northern harrier *(Circus hudsonius),* grasshopper sparrow *(Ammodramus savannarum),* loggerhead shrike (*Lanius ludovicianus)*, and Alameda whipsnake (*Masticophis lateralis euryxanthus*). Refer to *Appendix D - List of Special Status Wildlife Species* for a list of species and occurrences.The Park District monitors these species and maps locations of sightings on a routine basis. As necessary, sensitive habitat areas may be closed on a seasonal basis during breeding, migration or forging periods to provide greater wildlife protection. Four species are discussed below due to their observed occurence in the project area or higher likelihood of occurring.

California Red-legged Frog

The California red-legged frog is federally listed as a threatened species throughout its range in California and is a CDFW Species of Special Concern (SSC). This frog historically occurred over much of the state from the Sierra Nevada foothills to the coast and from Mendocino County through Mexico. CRLF typically breed in ponds, slow-moving creeks, and streams with deep pools that are lined with dense emergent marsh or shrubby riparian vegetation. However, this species is capable of inhabiting a wide variety of perennial aquatic habitats, including coastal lagoons, marshes, springs, stock ponds and siltation ponds (USFWS 2005). In summer (non-breeding season), CRLF are likely to be found near a deep pool in a creek or a pond, where emergent vegetation, semi-submerged root masses and undercut banks provide protection from predators (USFWS 2005). CRLF use upland habitat such as open grasslands for foraging and dispersal. Prey items include invertebrates and small vertebrates. Suitable upland habitat includes moist seeps or springs, burrows or moist debris piles for dispersal and aestivation (Stebbins 2012).

Factors that have contributed to the decline of CRLF include destruction of riparian habitat from development, agriculture, flood control practices, or the introduction of exotic predators such as American bullfrog (*Lithobates catesbeiana*), crayfish, and a variety of non-native fish. CRLF have been observed in ponds within the project area in 2018.

California red-legged frog observed in the project area.

California Tiger Salamander

The California tiger salamander is state and federally listed as a threatened species throughout its range in California. The California tiger salamander is most commonly found in annual grassland habitat but also occurs in the grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats, and seasonal or vernal pools are crucial to breeding. The species occurs from Sonoma County east through the Central Valley to Yolo and Sacramento Counties and south to Tulare County; and from the vicinity of San Francisco Bay south to Santa Barbara County. Tiger salamanders breed and lay eggs primarily in vernal pools and other temporary rainwater ponds following relatively warm rains in November to February (CDFW 2005).

The positive aspects of ranching and grazing have been increasingly recognized in discussions of California red-legged frog and California tiger salamander recovery (Ford et al. 2013). One important factor is that livestock ponds have become crucial breeding habitats for both animals (Fellers 2005; Holland et al. 1990)

Adults spend most of the year in subterranean refugia, especially burrows of California ground squirrels (*Spermophilus beecheyi*) and occasionally man-made structures. During breeding migrations, individuals are sometimes found under surface objects such as rocks and logs. Aquatic larvae seek cover in turbid water, clumps of vegetation, and other submerged debris.

California tiger salamander observed in the project area.

The first rains of November usually initiate adult migration to breeding ponds (CDFW 2005). They usually stay at the ponds a few days, but some individuals may remain up to several weeks after breeding is completed. Larvae transform during late spring or early summer, usually by the first week of July. They disperse from the breeding sites after spending a few hours or days near the pond margin (CDFW 2005). An adult California tiger salamander was observed in a seasonal pond within the project area in 2018.

Alameda Whipsnake (*Masticophis lateralis euryxanthus*)

The Alameda whipsnake (AWS) is a federally and state-listed threatened species. Historically, AWS distribution likely included the coastal scrub and oak woodland communities in the East Bay in Contra Costa, Alameda, and parts of San Joaquin and Santa Clara counties (USFWS 2005). Currently, this species inhabits the inner coast range in Contra Costa and Alameda counties (Stebbins 2012). The current distribution of the subspecies has been reduced to five separate areas with little or no interchange due to habitat loss, alteration, and fragmentation; one of these areas is the Oakland-Las Trampas population, which occupies the Oakland Hills, Anthony Chabot area to Las Trampas Ridge, in Contra Costa County.

Exact locations of AWS occurrences are considered sensitive by CDFW. The preferred habitat for AWS is open coastal scrub or chaparral plant community, with a possible preference for south, southeast- and southwest-facing slopes (Stebbins 2012). However, telemetry data indicate that, while chaparral is central to their home ranges, which average 11.6 acres, AWS move up to 500 feet into adjacent grassland, oak savannah, and occasionally oak-bay woodland (Stebbins 2012). AWS sightings have been noted in grassland, oak savanna, and along the edge of riparian vegetation at distances greater than 300 meters (1,000 feet) from scrub habitats, usually in areas where rock outcrops are abundant (USFWS, 2003). Rock outcrops and small mammal burrows provide refuge for AWS (Stebbins 2012) and rock piles support the AWS' primary prey item, lizards, especially the western fence lizard (*Sceloporus occidentalis*) (USFWS 2005). Other prey items include skinks, frogs, snakes and birds. The primary threats to the Oakland-Las Trampas population is the decline in habitat quality as chaparral/scrub stands become decadent, a high potential for catastrophic wildfire, and the effects of habitat loss and fragmentation as a result of urban development (USFWS 2003). Numerous documented occurrences in the regional project vicinity (Oakland East USGS quadrangle) as recently as 2008 presumes this species is extant within their understood range where suitable habitat is present (CDFW 2016). The project area includes grassland, chaparral, and oak-bay woodland, habitats known to be used by AWS, within 500 feet of chaparral (USFWS 2003). Prey species could be present in riparian corridors and oak-bay woodland, and AWS may occur in the project area on a transient basis.

San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)

The San Francisco dusky-footed woodrat is a CDFW Special Species of Concern (SSC). Woodrats often occupy habitats with both woodland and scrub components that provide cover and food sources, such as coast live oak (*Quercus agrifolia*), coffeeberry (*Frangula* (=*Rhamnus) californica*), blackberry (*Rubus* spp.), gooseberry (*Ribes* spp.), poison oak (*Toxicodendron diversilobum*), and honeysuckle (*Lonicera spp.*) (Linsdale, 1951). Nests are typically over three feet in diameter and are constructed out of piled sticks, leaves and grasses. These are typically on the ground but may be built high in trees. Dusky-footed woodrat (*Neotoma fuscipes*) nests were observed during site surveys in 2017, on the ground or approximately 10 to 20 feet high in coast live oaks. It is not known which, if any, nests are in use by woodrats, or the San Francisco subspecies in particular.

Research Methodologies

Information about the project area's biological resources was obtained through field surveys, a review of published and unpublished literature, and consultation with persons knowledgeable about the biology of the area. The California Natural Diversity Database (CNDDB) was consulted for information related to federally- and state-listed endangered, threatened, proposed, candidate, and sensitive wildlife, plants, and habitat resources that potentially occur within the project vicinity.

Systematic and reconnaissance-level field surveys conducted in 2017 and 2018 included walking the entire proposed trail alignments and a 50-foot buffer on each side of the proposed trail alignments and a 10-foot buffer of the proposed staging area and trailhead. A wetland delineation was completed in 2018 to map potential jurisdictional waters of the U.S.

Field reconnaissance consisted of pedestrian surveys within the project area boundary, including proposed trail alignments and observations of the adjacent environments. The field surveys were focused on identifying habitat for special-status plant and animal species. General habitat conditions were noted and incidental species observations were recorded. The findings of the reconnaissance survey, the literature review, and the database queries were used to compile the list of special-status species that may occur at the project area, to define areas of vegetative communities and habitat types present, and to characterize the project setting. Lists identifying special-status plant and animal species that may occur in the project area are included in *Appendix D - List of Special Status Wildlife Species*.

Cattle grazing is part of the Park District's ongoing land management program.

2.6 ONGOING LAND-HABITAT MANAGEMENT PROGRAMS

The project area contains a wide range of natural communities, much of which has been substantially altered over time by human activities that have included road and trail construction, introduction of non-native species, and the suppression of wildfires.

Ongoing land management actions throughout the project area have been designed to benefit state and federally-listed species, natural communities, biological diversity, and ecosystem function, including preserving habitat and enhancing grassland to promote native biological diversity through continuation of ongoing grazing and integrated pest management programs.

2.6.1 Livestock Grazing

Domestic livestock grazing, primarily using cattle, is a long-term existing condition of the project area. Livestock grazing is the primary tool for purposes of vegetation and fuel management in the project area. The Park District routinely leases the operation and management of grazing units to private operators and charges a fair market value lease fee. The project area will have three grazing units controlled by lease to grazing tenants, as listed in *Table 2-2: Grazing Lease Agreements* and depicted in *Figure 5: Grazing Units/Leases*. The Park District is committed to maintaining a strong working relationship with each tenant.

Within the project area, the Chen, Elworthy, and portions of the Faria property have previously been grazed by various grazing tenants. Grazing occurred on the Podva property since the late 19th or early 20th century and was discontinued in the mid-2000s (Live Oak Associates 2016). The LTMP for the Podva property proposes to resume grazing operations, overseen by the Park District, and conducted as outlined in the Park District's Grazing License and the 2013 Master Plan. The LTMP includes grazing operation adaptive management strategies and requirements such as fencing and annual monitoring and reporting. Refer to *Section 3.2.1 Resource Management Programs* for a description of the LTMP requirements for grazing activities.

The LTMP for the Faria property includes a Grazing Management Plan that provides an adaptive management approach for grazing the Faria property. More detailed procedures and policies from the Park District's Grazing License and the 2013 Master Plan would supersede or replace the details from the Faria Grazing Management Plan. The Grazing License carries out the wildland vegetation goals and policies set forth in the Park District's 2013 Master Plan and guides the grazing management for the existing Park District properties, including the project area. According to the Grazing Management Plan, the Faria property has historically been grazed by livestock, which has resulted in various levels of forage condition, and as evident by the low RDM and thatch levels, noticeable terracing, and hoof sheer in the intermittent drainages. Refer to *Appendices F and G* for the LTMPs for Faria and Podva, respectively.

2.6.2 Integrated Pest Management (IPM) Program

The Park District's Integrated Pest Management (IPM) Program includes a process for assessing and determining strategies necessary to achieve control in situations where identified pest species present unacceptable safety, health, and economic problems, or cause functional damage. Treatment strategies for pests include management of human behavior, habitat modification, physical barriers, competitive native planting, biological, mechanical, cultural and chemical control. IPM is an adaptive process that incorporates evolving science technology and understanding of pests and their environment. It is an ecosystem-based pest management strategy that focuses on long-term prevention or suppression of pest problems through integrated techniques with minimum impact on human health, the environment, and non-target organisms.

The Park District has identified four main types of pests: agricultural pests (e.g., certain noxious weeds), ecological pests (that threaten diversity, rare plants and ecosystem function), public health and structural hazard pests (e.g., rats), and recreational (e.g., algae blooms, poison-oak, ticks, yellowjackets) (*East Bay Regional Park District Pest Management Policies and Practices Manual, 1987*).

The IPM program includes a range of integrated control measures to promote environmentally safe, cost effective, and sustainable pest management practices that ensure public and employee protection and benefit native plant communities. These measures include monitoring and tracking pests through surveys and employee observations.

Noxious Weed Controls

Invasive, non-native, noxious weeds have the potential to adversely impact native habitats by outcompeting and replacing native plant species, including listed species, derailing restoration efforts, decreasing ecological function and affecting visitor experiences and perceptions of the parkland. In some cases, even native species such as poison oak (*Toxicodendron diversilobum*) may adversely affect visitor experiences and must be controlled. Invasive, non-native, noxious weeds and native plants that may cause potential harm are managed using a range of techniques appropriate to the situation, taking into consideration plant species, site conditions and recreation uses in the affected area. Procedures can include hand or mechanical equipment removal, herbicide applications approved by the Park District IPM Department, revegetation treatments (e.g., mulch, seeding), plant selection as a component of restoration projects, or combinations thereof. Hand and mechanical equipment, as appropriate, may be employed to remove overhanging limbs, or diseased, or fallen trees where trees represent a hazard to park visitors or structures.

Non-Native Wildlife Controls

Non-native wildlife have the potential to adversely impact native species including listed species, derail restoration efforts, impair park infrastructure, cause disturbance, and in some cases, cause harm to the public. Where non-native wildlife is impending upon restoration efforts, park infrastructure, or public safety, a variety of tools may be employed. Procedures are selected by carefully considering the effects these management actions could have on beneficial species and desired recreation experiences. Measures that may be used to monitor and manage non-native wildlife and non-native amphibians and fish include trapping and coordination with Animal Control Officials to minimize the drop-off potential of nuisance wildlife (e.g., feral dogs and cats, skunks, raccoons).

Invasive feral animals found in the project area include red fox *(Vulpes vulpes)*, feral pigs *(Sus scrofa)* and bullfrogs *(Rana catesbeiana)*.

Red fox, originally brought to California for farming and sport hunting, have gone feral entering the San Francisco Bay Area in 1985. These non-native predators have the potential to severely impact ground nesting birds and compete with the native grey fox *(Urocyon cinereoargenteus)*.

Feral pigs, also brought into California for sport hunting, can have an adverse impact on ground dwelling vertebrates, as well as plants. The destructive rooting behavior of pigs can result in the introduction of noxious invasive weedy plants, contribute to erosion, especially in steep areas, and create an inhospitable environment for some native plant and animal species.

Some of the ponds within the project area contain exotic, invasive bullfrogs (*Rana catesbeiana*). These non-native aquatic species have had an adverse impact on native amphibians breeding in the ponds, especially the California red-legged frog.

Pathogen Controls

One of the pathogens of greatest concern to the native habitat in the project area is phytophthora, a soil-borne pathogen that infects trees and woody plants. Phytophthora is part of a larger group of organisms known as oomycetes (egg-fungi). Commonly called "water molds", phytophthora species are land-dwelling plant pathogens that thrive under wet environmental conditions. To minimize the spread of this pathogen, Park District best management work practices include arriving with clean equipment and leaving the work site with clean equipment. This includes cleaning soil from shoes, saws and other equipment at the work site. Cleaning methods include brushing and blowing soil and debris off shoes, tools and vehicles followed by water or a sanitizing solution, if necessary, taking care to ensure that no erosion occurs or waterways are contaminated.

A hoof pick or boot pick helps prevent introducing pathogen into the work site.

The hoof pick can be a handy tool for cleaning tools.

A stiff bristled broom can knock off mud clods as well as clean truck beds, wheel wells, and tires.

Field of poppies on the Podva property

2.7 PARK OPERATIONS AND MAINTENANCE

Park operations and maintenance refer to those currently existing in the larger Las Trampas parkland that will be extended to the project area. Staff from the Park District's Operations Department provide for the management of natural resources and maintenance of park facilities. Trails Program Unit and Roads and Trails Department staff offer programs directed at trail development and maintenance, respectively.

2.7.1 Park Operations and Maintenance

Park staff serve as the primary presence in the park on a day-to-day basis. On-site staffing for the project area is currently provided by one Park Supervisor and four full-time Park Ranger II staff. They are responsible for patrolling and maintaining the project area and the larger Las Trampas. Park District staff would also be responsible for Faria when the property is incorporated into Las Trampas. As the primary interface with park visitors, park staff provide information about the park and park regulations and ensure public safety through routine patrol and by acting as first responders for public safety emergencies and crime, vandalism, and fire incidents.

Basic Park District operational and maintenance services generally consist of: opening and closing staging and trailhead gates at opening and closing (park closure hours vary seasonally); litter pick-up; restroom facility maintenance; trail maintenance; installing and maintaining signs, benches, and other park infrastructure, including fences and gates; managing the parkland's natural features, and biological and cultural resources; and overseeing day-to-day activities associated with the parkland vegetation management programs, including integrated pest management programs, grazing, and fuel management.

Routine trail maintenance tasks are directed at keeping the system in a safe and operable condition, including minimizing soil erosion where sedimentation is threatening water quality of stream channels and adversely impacting aquatic habitat from road/trail-related erosion. Activities typically include: trail monitoring to identify substandard road and trail conditions; and repair through various means incorporating, as appropriate, grading and/or mowing the trail surface, replacement of existing culverts, installation of new drainage structures, trenching, backfilling and minor realignment resulting from erosion and/or slope instability. In addition, ancillary facilities along the trails are repaired or replaced as needed, including benches and picnic tables. This work is generally performed by the Park District's Operations park staff and supplemented by the Park District's Maintenance and Skilled Trades (MAST) staff and trails crews overseen by the Trails Development Group and Roads and Trails.

2.7.2 Volunteer Programs

Volunteer Trail Safety Patrol

The Volunteer Trail Safety Patrol (VTSP) supports the Park staff. VTSP members educate park visitors about Park District resources, programs, facilities, and rules. They operate in an observe-and-report role, working to foster positive relationships among user groups. Volunteers also assist with other related services within the parks. Volunteer patrol members participate in this program in the parkland areas that are open to the public.

Ivan Dickson Volunteer Trail Maintenance Program

The Ivan Dickson Volunteer Trail Maintenance Program, managed by the Park District's Trails Program Unit, offers trail maintenance and construction projects throughout its two-county jurisdiction. Volunteer projects are offered beginning in the spring and continuing into the late fall. Volunteers work under close supervision of Park District staff. Projects include pruning vegetation, removing invasive plant species, tread maintenance, trail reroutes, and the construction of rock walls and drainage structures.

Public Safety staff and Park Ambassadors lead a walk through Las Trampas.

2.8 RECREATION AND INTERPRETATION

Las Trampas is currently open to the public and offers a variety of passive recreation options including hiking, bicycling, equestrian use, and dog-walking. Interpretive and Recreation Services Department staff offer educational and interpretive programs to the public.

The Park District's Interpretive and Recreation Services Department seeks to connect visitors to the natural environment through stimulating experiences that instill an appreciation of the region's resources and motivate participants to conserve and protect them. In this effort, the Park District provides a variety of programs and services for school groups, families, and adult visitors. Naturalists offer regional interpretive programs based from ten Park District Visitor Centers, while Outdoor Recreation staff operates from the Tidewater Boating Center in Oakland. Interpretive services include natural and cultural historical walks, hikes, and talks, environmental restoration projects, as well as wayside interpretive panels and self-guiding brochures. Recreation staff lead camping, hiking, biking, and summer day camp programs.

Las Trampas is served by the Park District's Southeast Sector at Sunol Visitor Center in Sunol. The Park District offers a variety of naturalist hikes centered around topics including birding, newts, fungi, fossils of the pre-historic animals that used to roam Las Trampas, and the geology and ridges of Las Trampas. Since 2015, the Park District has partnered with the National Park Service to offer a joint program through Las Trampas to the Eugene O'Neill National Historic Site.

2.8.1 Demographics

The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) has prepared long-range population growth projections in the Plan Bay Area Projections 2040 Report that show the San Francisco Bay Area growing by 2.1 million new residents between 2010 and 2040. This population growth is anticipated to be led by Contra Costa County, which will gain about 533,000 new residents. With another 577,140 in the more built-out Alameda County, the Park District service area is expected to grow by almost 700,000 people by 2060.

The ethnic and cultural composition of California's population is expected to continue to shift and these statewide trends will be felt within the Park District as well between now and 2060. The ethnic segment of the population expected to grow most dramatically is Hispanic or Latino, adding over one-half million people to the Park District's service area population. The second fastest-growing population is expected to be people of Asian descent, adding over 175,000 new residents to the Park District service area.

Due to the size of the "baby boom" generation, the recent trend has been the increasing average age of the population, especially within slower-growing Alameda County. This is not anticipated to be a permanent condition, however, and in the 2025 – 2040 period there is likely to be a resurgence of growth in families, especially in faster-growing Contra Costa County.

In 2020 the estimated population of the City of San Ramon was 84,605. The median age was 39.1 years old, while 29 percent of the population was under 18 years old. Approximately 43 percent of the population is White, 45.8 percent is Asian, and 7.4 percent is Hispanic or Latino, with other ethnicities making up smaller percentages of the population. According to the 2020 Census data, the City of San Ramon experienced a 14.7% growth rate between 2010 and 2020.

For the Town of Danville, the estimated population in 2020 was 43,582. The median age was 45.6 years old, while 25.9 percent was under 18 years old. Approximately 81.2 percent of the population is White, 13.1 percent is Asian, and 6.3 percent is Hispanic or Latino, with other ethnicities making up smaller percentages of the population. According to the 2020 Census data, the Town of Danville had a growth rate of 3.5% between 2010 and 2020.

2.9 ACCESS AND STAGING/ PARKING

2.9.1 Regional Access

The project area is served by a combination of interstate highways, local arterial and collector roads, and neighborhood streets. Major highways that provide access to the park from the East Bay and the Central Valley are Interstate Highways 580 to the south and 680 to the east. Local exits from I-680 include Bollinger Canyon Road, Crow Canyon Road, Sycamore Valley Road, Camino Tassajara, El Cerro Boulevard and Stone Valley Road. Local exits from I-580 include Crow Canyon Road.

2.9.2 Access via Public Transit

San Ramon is served by the transit provider Central Contra Costa Transit Authority (County Connection). County Connection Route 35 has bus stops at the corner of Bollinger Canyon Road and Crow Canyon Road. Route 35 runs every hour from 6:00 a.m. to 9:00 p.m., Monday through Friday, and connects the San Ramon Transit Center to the Dublin/Pleasanton Bay Area Rapid Transit (BART) station. The area to the east of the project area is served by Routes 21 on weekdays and 321 on weekends, which connect to the Walnut Creek BART Station. The closest BART station is the West Dublin/ Pleasanton station in Dublin near the intersection of Dublin Boulevard and Golden Gate Drive, approximately 7 miles south of the project area via I-680. Refer to *Figure 13: Transit Access*.

2.9.3 Visitor Experiences

In 2018, approximately 127,400 people visited Las Trampas. On average, Las Trampas receives between 8,000 and 14,000 park visitors per month.

Trails offer visitors a range of experiences within the park. Exposed grasslands along the ridge offer panoramic views of Mount Diablo and the San Ramon Valley to the east, the East Bay Municipal Utility District watershed lands to the west and the Lafayette-Moraga area to the north, while intimate, shaded trails provide access to remote, deep-canyon drainages and creeks.

Park users can utilize the portion of the Calaveras Ridge Trail and Fiddleneck Trail currently open to the public within the project area. The local trail name for the portion of the Calaveras Ridge Trail running through Las Trampas is the Las Trampas Ridge Trail. The Park District dog policy allows dogs to be "off-leash under control" along trails. The policy permits up to three dogs without a commercial dog walking license and six dogs with a commercial license.

Ordinance 38, the Park District's regulations governing park uses, defines "*dogs off leash under control*" and requires that dog walkers have a leash in their possession at all times. Currently Ordinance 38 permits bicycles on paved roads and bike trails, and unpaved roads and service roads over eight feet wide, unless otherwise posted. Bicycles are not permitted on narrow hiking or horseback riding trails, except where specifically designated on trail signs and in park brochures.

Multi-use, service-road-width trails are also used for patrol, emergency response and for range management-related purposes. In limited cases, these service-road-width trails also provide access for individuals accessing private lands within the park boundaries (Refer to *Figure 4: Easements)*.

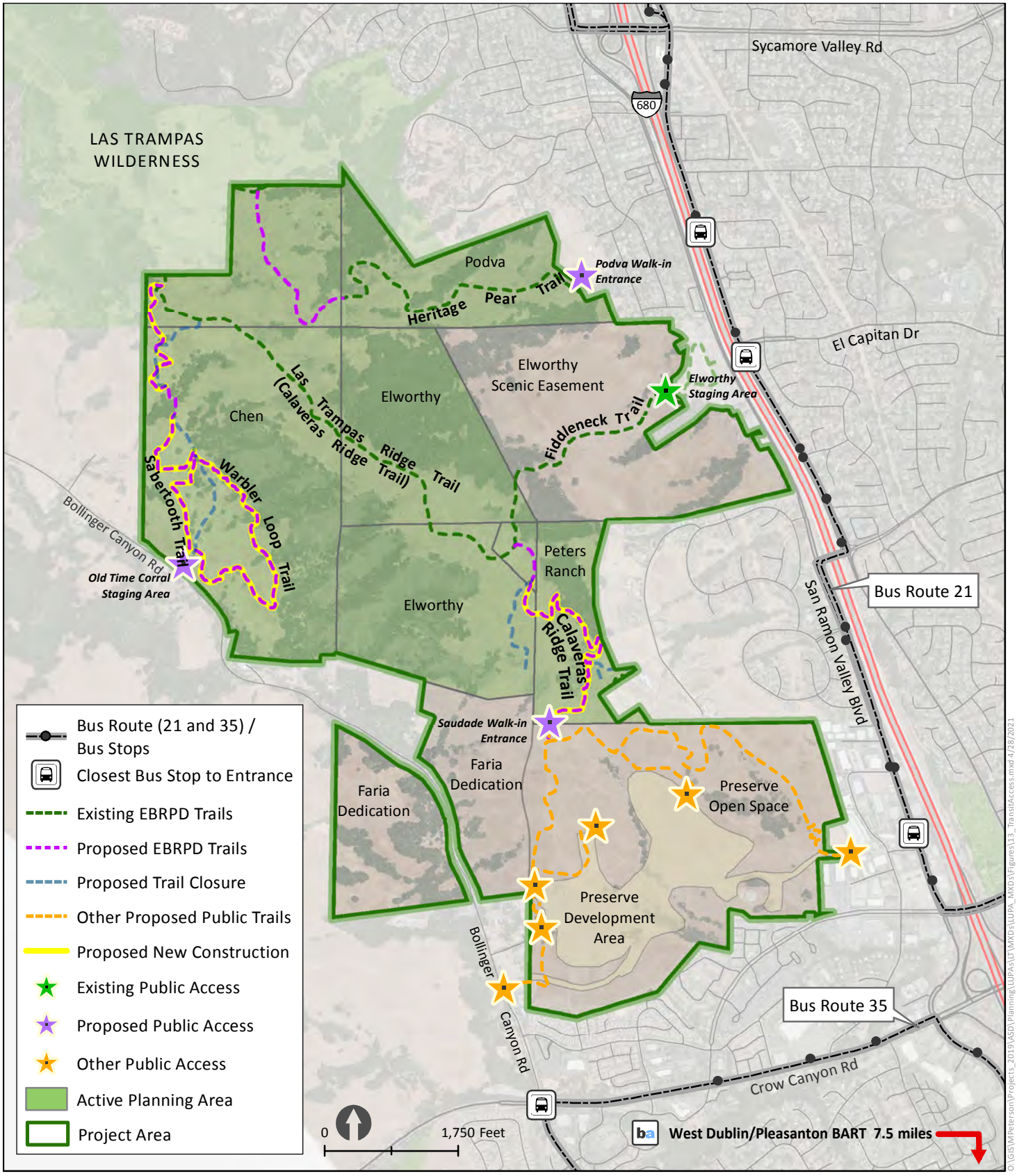


FIGURE 13: REGIONAL ACCESS AND TRANSIT CONNECTIONS

2.9.4 Trail System – Standards and Assumptions

Recreation Values

Recreation values take into consideration total numbers of constituents likely to be served, not solely small group or single user benefit values, and consider additional access points and connectivity to neighboring communities and city and county trail and bikeway systems to disperse use and encourage bike and pedestrian access over vehicle access as visitor use increases.

Environmental Values

Environmental values take into consideration wildlife and plant species impacts (e.g., trampling, disturbance to aquatic habitats, and wildlife breeding and foraging activities) in determining trail alignments and their future use and where system connectivity will be enhanced.

Operation Values

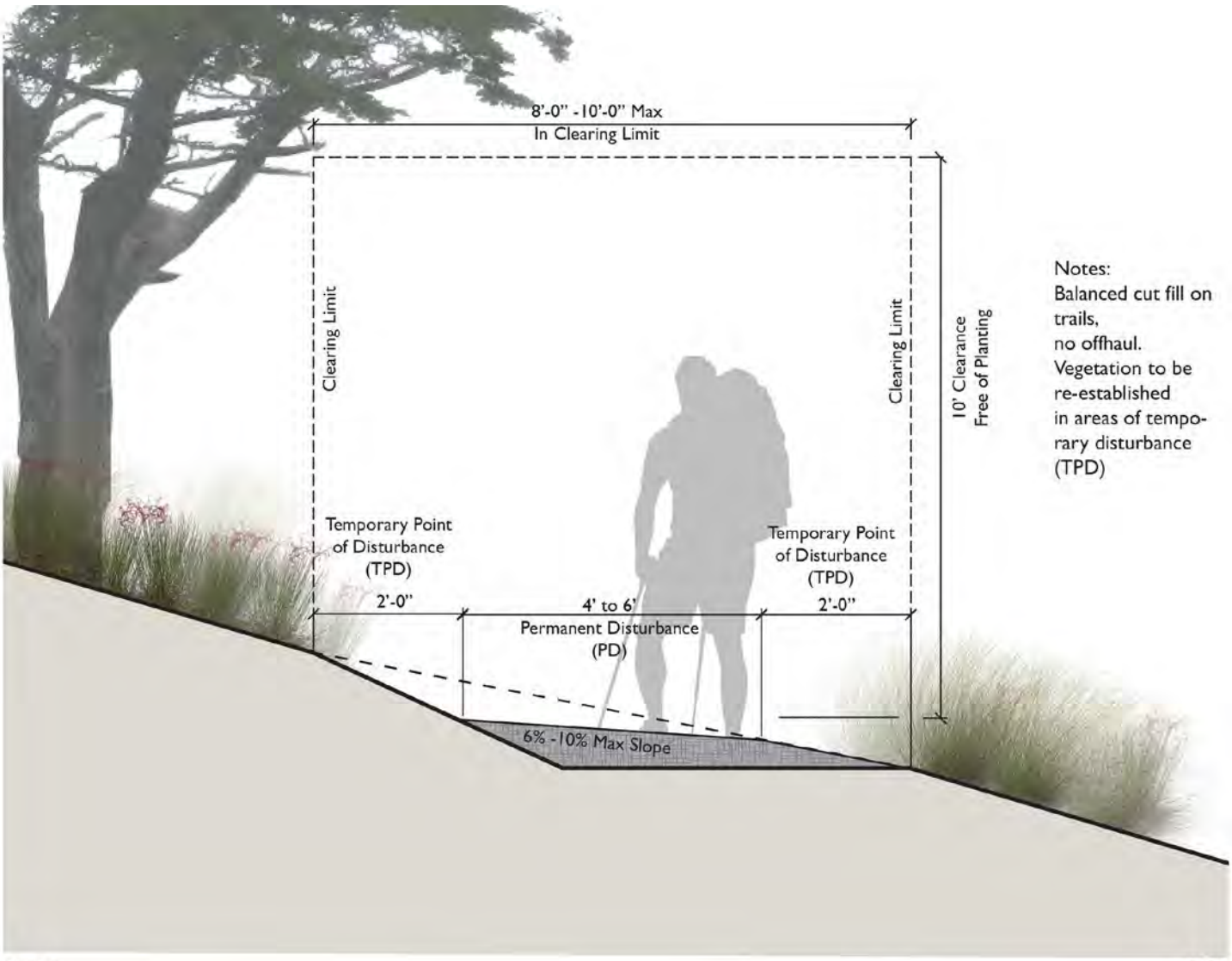
Operation values take into consideration park operations and management requirements, including routine patrol and maintenance activities, service and security requirements for recreation areas, habitat management of open space areas, and emergency ingress and egress.

Trail Types

Trails within the project area include two natural surface, unpaved trail categories: multi-use trails (generally four to six feet wide) and multi-use roads that allow emergency vehicles and maintenance access (greater than eight feet wide). This distinction allows for some variability in the trail width of these two trail types depending on methods of construction (e.g., manual, machine built) and the specific physical conditions (e.g., trees, rock outcropping, slope) of the trail alignment. Refer to *Figure 14: Typical Trail Cross Section* for an illustrative concept of a typical natural surface trail.

Trail Experience

For the trail system to function effectively, it should include convenient access points and connectivity throughout the park for various modes of travel, where appropriate. This approach helps to distribute use and provide opportunities for visitors from the local communities and the general population. The trail system should provide access through a variety of settings that the parklands may offer. These may include woodland and grassland areas, viewpoints, exposure to sun and shade, and other interesting features unique to the landscape.



Multi Use, Natural Surface Trail

FIGURE 14: TYPICAL TRAIL CROSS SECTION

2.9.5 Regional Trails and Parkland Connections

Regional trails connect parklands and communities, often forming the backbone for a network of trails within individual Park District parks, preserves and wilderness areas. The Park District has made great strides over the last 20 years making the Park District Master Plan regional trail system a reality. Since the 1970s, the Calaveras Ridge Regional Trail (Calaveras Ridge Trail) has been one of the originally designated regional trail corridors in the Park District Master Plan. This multi-use trail corridor travels along the I-680 corridor connecting six regional parks. It serves communities from Sunol Regional Wilderness, through Pleasanton Ridge to Dublin Hills into Contra Costa County where it continues through Las Trampas Regional Wilderness to the City of Lafayette through Briones Regional Park, with connections to Carquinez Strait. This trail offers spectacular views of San Francisco Bay area to the west and Mt. Diablo and the central valley to the east along rolling ridgetops. The Calaveras Ridge Trail as depicted on the Park District's 2013 Master Plan Parkland and Trails Map is proposed to traverse the length of the ridgeline of Las Trampas. Refer to *Figure 3: Access Points and Trails*.

Within Las Trampas Wilderness Regional Preserve, the Calaveras Ridge Trail overlays the route of the Las Trampas Ridge Trail throughout the currently-opened portions of the park.

Calaveras RIdge Regional Trail along Las Trampas RIdge

2.9.6 Infrastructure

The Las Trampas Wilderness trail system and the Regional Trail system offer connections to existing park infrastructure including picnic and rest areas, the Little Hills Picnic Ranch, Las Trampas Stable and an equestrian group camping site.

The 12-car staging area at the Elworthy property is currently open to the public and includes an informational panel, signs displaying Park District rules and regulations, and self-closing gates.

2.10 PUBLIC SAFETY

2.10.1 Protection and Emergency Response Services

The Park District maintains a full-time staff of police officers, dispatchers, and fire responders based out of its headquarters at Lake Chabot Regional Park in Castro Valley. The Park District Police Department operates a two-county radio communications network and a fleet of patrol vehicles, and protects public safety through crime prevention activities, patrols, emergency response, and criminal investigations. The Park District also maintains two helicopters at the Hayward Airport, staffed seven days a week, which are outfitted for law enforcement, medical, and fire response.

Initial response and reporting of incidents are generally provided by park rangers performing routine maintenance and safety patrols, though the public sometimes reports incidents directly to CALFIRE, or cities of San Ramon, Danville, and the San Ramon Valley Fire District. The presence of Park District staff helps to provide a deterrent to vandalism, motorcycle and 4-wheel drive usage, poaching and hunting within Las Trampas, and potential trespass onto adjoining private lands. An additional presence is provided through the grazing program with both the grazing tenant and Park District staff monitoring range management activities on a routine basis, and through the Park District Volunteer Trail Safety Patrol Program, as discussed in *Section 2.7.2 Volunteer Programs*.

2.10.2 Incidents

Between April 2017 and early 2020, Park District police and fire department personnel responded to 96 incidents in Las Trampas, with 14 medical or personal injury incidents. This could characterize medical response activity in the project area. *Table 2-3: April 2017-2020 Incident History* below provides a breakdown of the type of incidents reported.

Table 2-3: April 2017-2020 Incident History

Type of Incidents	Number of Incidents
Hazardous materials	0
Ordinance 38 violations	25
Related to animals	27
Auto burglaries, theft, and vandalism	15
Medical and personal injury	14
Lost and overdue hikers	10
Assault	1
Alcohol	1
Drug	1
Warrant	1

Public Safety staff respond to incidents in Las Trampas.

2.10.3 Public Safety Unit Response

Park District police officers regularly patrol Las Trampas Wilderness Regional Preserve and other parklands in the immediate area. These officers are deployed from the Park District's Public Safety Headquarters in Castro Valley. In addition, the park is patrolled by helicopter as part of the Park District's routine park management program.

Hazardous materials response will be the responsibility of the Park District. Park District records document that between April 2017 and early 2020, Las Trampas Regional Park has had no hazardous materials incidents. This is a Low level of occurrence when compared with other Park District parks. One could expect a similar level of occurrence in this new addition.

2.10.4 Fire Hazard & Fire Incident Response

Las Trampas Wilderness Regional Preserve is classified by the State as a "*High Fire Hazard Severity Zone*," meaning that it is likely that a wildland fire would be of high intensity and cause substantial damage to the natural resources and infrastructure improvements. San Ramon Boulevard and Bollinger Canyon Road carry the public along the eastern boundary and southern portion of the project area, respectively, and smaller roads from San Ramon Valley Boulevard provide access into the project area. This access increases fire risk and influences the potential for human-caused fires to occur.

The project area is classified as State Responsibility Area (SRA) for fire protection and is within the State's Direct Protection Area. Initial attack fire suppression resources would likely arrive first from CAL FIRE's Sunol and Sunshine Stations. CAL FIRE crews, dozers, air resources, supervisory overhead and additional engines would also be dispatched. Engines and a watertender as well as overhead personnel would respond from the Park District's Fire Station 1 (Tilden). Response time would be 30 to 45 minutes depending on the time of day. The Park District's helicopter, if staffed, would arrive within 15 minutes or less from the Hayward Air Unit. San Ramon Valley Fire Protection District would likely dispatch fire engines as mutual aid.

San Ramon Valley Fire Protection District has the jurisdictional responsibility for structure fires and emergency medical services for the project area. The California Department of Forestry and Fire Protection (CALFIRE) has primary responsibility for wildland fires. The Park District would respond as well. The primary roles of CAL FIRE and the Park District in the event of a structure fire would be to prevent fire from spreading to the surrounding wildlands and nearby improvements. The Park District will also be responsible for fire prevention/fuel management, and for responding to and disposal of any hazardous materials found on the property.

The Park District is entered into a Mutual Aid Agreement with the San Ramon Valley Fire Protection District. This agreement sets forth plans for coordinated responses to emergencies and service requests in defined areas of the Park District and the San Ramon Valley Fire Protection District, including those designated as Mutual Response Areas (MRAs).

Park District Fire staff conducting fuel management.

View of the Chen property in the spring.

3. LAND USE PLAN AMENDMENT RECOMMENDATIONS

The LUPA is necessary to incorporate additional lands currently in land bank status or anticipated to be dedicated to the Park District and to provide for: 1) the documentation, conservation, and enhancement of the project area's natural and cultural resources; and 2) the development of public trails and access points. To this end, this chapter presents the recommendations for the future of the project area. Recommendations were made following analysis of site resources, opportunities and constraints, and assessment of their compatibility with the purpose and goals of the LUPA.

3.1 PARKLAND DESIGNATIONS

According to *Policy PRPT3* of the 2013 Master Plan, "the primary objective of a Regional Preserve is to preserve and protect significant natural or cultural resources." To achieve this objective, the LUPA designates levels of resource protection and recreational intensity and identifies planned recreation/staging units and natural units. As discussed in *Section 2.1.2 Park Classification and Designation,* Las Trampas has the distinct Park District category of Wilderness Preserve in which the recreation/staging unit that provides for public access and services will comprise no more than one percent of the area. The project area totals approximately 756 acres, of which, approximately two acres could be developed for access, staging and facilities, which is less than three tenths of a percent (0.3 percent) of the project area's new acreage. At full build-out, approximately 45 total acres of all Las Trampas parkland, 6,022 acres, would be developed, well under one percent of the total land area.

3.1.1 Special Protection Features

Within the project area's natural unit are Special Protection Features. Designation of an area as a Special Protection Feature allows for the greatest level of protection for the resources. The Park District has identified the following Special Protection Features, as illustrated in *Figure 15: Special Protection Features*:

- The 30-acre conservation easement within the Podva property
- The 136-acre conservation easement within the Faria property
- The 35-acre Special Resource Protection Area (SRPA) within Las Trampas open parklands encompassing ponds ltpnd002, ltpnd003, ltpnd005, ltpnd009, and ltpnd0010.

The conservation easement areas within the Podva and Faria properties are maintained and monitored according to their respective LTMPs, as further described in *Section 3.2.1 Resource Management Programs*.

The 35-acre wetland complex SPRA is designated as a Special Protection Feature to provide protection specifically for the CRLF and CTS, which have both been documented in this area. Per Master Plan Policies *NRM10* and *NRM12* of the 2013 Master Plan, the Park District will "conserve, enhance and restore native fish and amphibian populations and their habitats" and "manage riparian and other wetland environments and their buffer zones to preserve and enhance the natural and beneficial values of these important resources and to prevent the destruction, loss, or degradation or habitat." Designation of the Special Protection Feature is also consistent with Master Plan *Policy PRPT22*: *"Areas with unique or fragile features will be designated as Special Protection Features to preserve and enhance them through specialized management."*

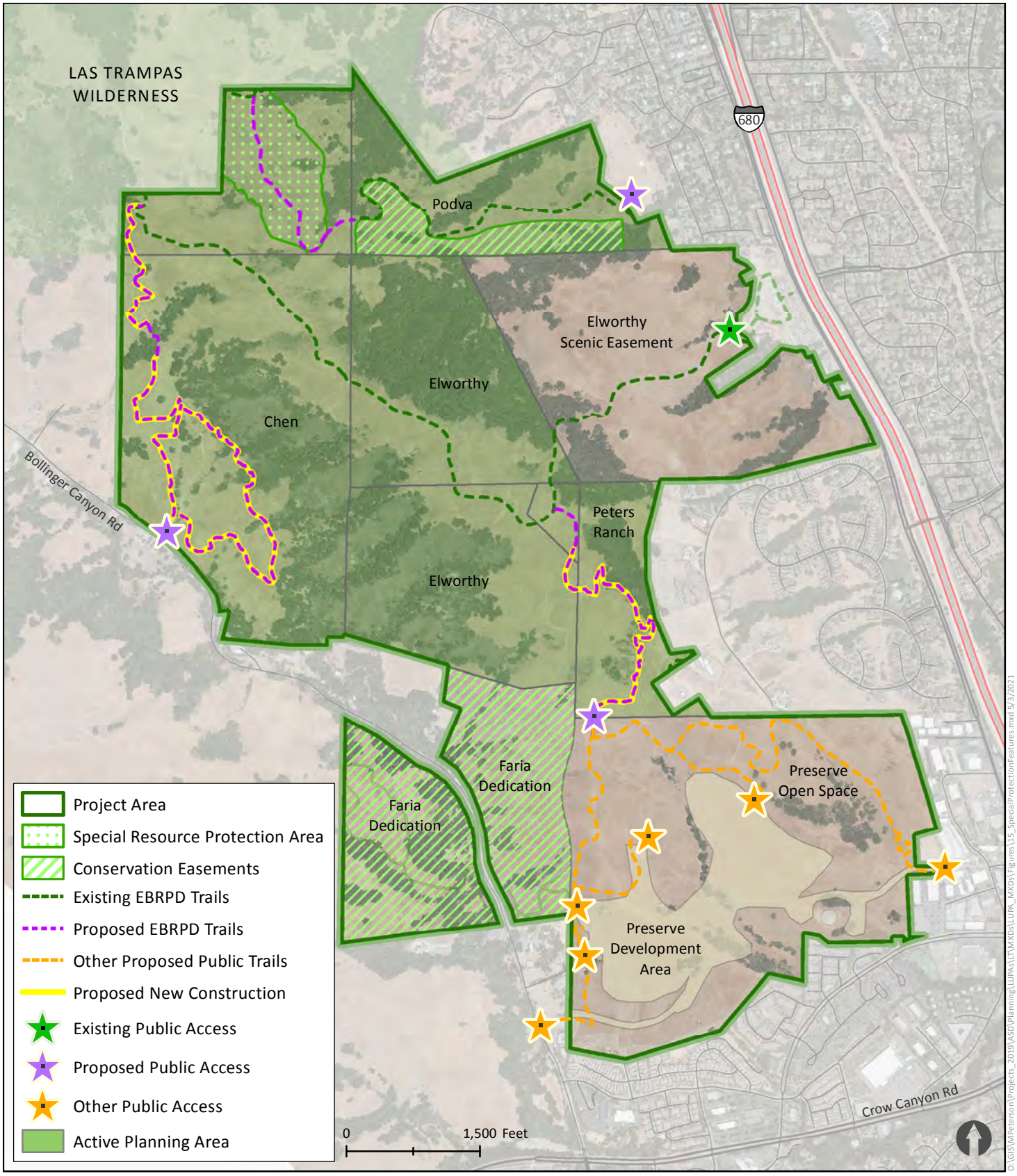


FIGURE 15: SPECIAL PROTECTION FEATURES

3.2 ONGOING PROGRAMS

Resource management programs and parkland operation activities and agreements currently in place that would continue with the adoption of the LUPA are considered as part of the baseline conditions. These include: routine maintenance and operation tasks, resource management programs, and current recreation uses and programs.

3.2.1 Resource Management Programs

To capture evolving circumstances and incorporate gains in scientific knowledge regarding the natural resources, an adaptive management plan is employed for managing parkland resources with biological resource management programs having been developed to benefit overall biodiversity of the project area. As described in *Section 2.5 Ongoing Land-Habitat Management Programs*, management tools include grazing, prescribed burns, integrated pest management programs, and site restoration work. The primary objectives of these programs are to 1) maintain and improve habitat conditions for resident plants and wildlife to promote biodiversity and protect listed species and 2) manage the fuel load of flammable vegetation to lessen wildfire hazard.

Conservation Easement Conditions

For mitigation purposes the resource agency permits require the area contained within the conservation easements on the Faria and Podva properties to be: 1) preserved in perpetuity; 2) dedicated to the Park District; 3) overseen by a separate Conservation Easement Holder; and 4) funded through a resource management endowment provided by the respective residential developers as described in *Section 2.2.1 Conservation and Scenic Easements*. While the entire open space properties will be managed for the conservation of regional species, the LTMPs explicitly focus on the management of the areas covered by the conservation easement, or conservation lands, for the state and federally-listed species. *Table 3-1: Long Term Management and Monitoring Requirements for Podva* and *Table 3-2: Long Term Management and Monitoring Requirements for Faria* provide a brief summary of the management and monitoring requirements for the Podva and Faria conservation land properties. For a more detailed breakdown of the long-term requirements, please refer to the *Redhawk Tract (Podva Property) Conservation Lands Long-Term Management Plan* prepared by Live Oak Associates, Inc. in 2016 and the *Long Term Resource Management Plan for the Faria Onsite Preserve* prepared by Olberding Environmental, Inc. in 2015.

TABLE 3-1: LONG TERM MANAGEMENT AND MONITORING REQUIRENTS FOR PODVA

MONITORING REQUIREMENTS	REPORTING FREQUENCY
Biological Assessment	Years 1 and 5, every 5 years thereafter
Grazing Assessment	Annually
Aquatic Habitat Assessment	Annually
Trash, Fire Hazards, and Infrastructure	Annually
Invasive Species Assessment	Annually
CRLF and AWS Monitoring	Annually for the first 5 yeras, every 5 years thereafter
Five-year Summary	Every 5 years

Table 3-2: Long Term Management and Monitoring Requirents for Faria

Requirements	Frequency
Biological Monitoring	
• Conduct monitoring of vegetation and presence/absence of CRLF and AWS	Every 5 years
• GPS/GIS download and database	Every 5 years
• Data analysis and recommendations	Every 5 years
Vegetation Management	
• Map non-native invasive plant species	Annually
• Monitor non-native invasive plant species	Annually
• Non-native invasive species/herbicide event	Every 2 years
• Explore vegetation management options	Annually
• Implement annual grazing program	Annually
• Inspect for sedimentation, erosion, discharge	Annually
• Corrective measures - erosion	Every 10 years
• Fire hazard inspection	Annually
• Fire hazard mitigation activities	Every 5 years
Site Security	
• Record locations of trash and trespass	Annually
• Collect and remove trash	Annually
• Public access monitoring/management	Annually
• Inspect for mosquito habitat	Annually
• Mosquito abatement	Annually as needed
• Monitor fences, gates, locks, signs	Annually
• Repair fences, gates, locks, signs	Annually as needed
• Replace fences and gates	Every 20 years
• Replace locks and signs	Every 5 years
• Monitor access roads	Annually
• Repair/maintain access roads	Annually
Reporting and Administration	
• Annual report	Annually by Jan. 31st
• Biological section of annual report	Every 5 years
• Management recommendations	Annually

The long-term conservation management plans for the conservation easements on the Podva and Faria properties are designed to conserve and protect lands in perpetuity for the CRLF and AWS. Requirements are set forth for biological assessments, vegetation management, including grazing and fire hazard reduction, and site security.

Park District staff measuring Residual Dry Matter on the Podva property.

Creek through the Faria Open Space Dedication Property

3.2.2 Parkland Operations

Maintenance and operations actions are directed at providing for visitor safety, creating a safe work environment for staff, and protecting/enhancing cultural and natural resources. Recommendations take into account existing knowledge and practices at the park as described in *Section 2.6 Park Operations & Maintenance* and *Section 2.10 Public Safety*.

3.2.3 Interpretive & Recreation Programs

Interpretive and recreation programs, exhibits, and brochures will be developed in concert with other facility and program elements. Recommendations will take into account past and ongoing programs for Las Trampas (Refer to *Section 2.8 Recreation and Interpretation Programs*) and expand upon those programs.

Implementation of some interpretive and recreation components will be contingent on building the infrastructure (e.g., trails and staging areas) to accommodate the program recommendations.

3.4 PUBLIC ACCESS, USE AND CIRCULATION

3.4.1 Public Access and Staging

Old Time Corral Staging Area

Per the terms of a 2008 settlement agreement between the Park District, the Sierra Club, and the developer of the Preserve (formerly Faria Preserve) residential project, and amendments made in 2016 to the settlement agreement, the developer would build a staging area along Bollinger Canyon Road on the Park District's Chen property. The approximately 0.62-acre staging area would have a capacity of approximately 25 vehicles and be designed and constructed to Park District standards, which include having standard park curfew hours, gates, and park signage. Park District standard practices for construction of trails and staging areas also include requirements that construction be limited to regular business hours, that signage be posted to inform neighbors of construction, and that the construction area would be closed off during off-hours.

The approximately 0.25-acre graded portion of the staging area would be located at an existing cattle corral that is a previously disturbed site. Improvements include a two-stall vault toilet, two ADA parking stalls on the graded portion of the staging area, gates and fencing, park benches, and an informational bulletin board panel. The existing cattle corral would be relocated within the building footprint of the staging area. Refer to *Figure 16: Old Time Corral Staging Area Site Plan*.

A staging area along Bollinger Canyon Road on the Chen property meets one of the acquisition goals for the Park District's acquisition of the Chen property in 2007 to provide public access on the property as a southern gateway into Las Trampas. The Park District selected the previously disturbed cattle corral area along the frontage of Bollinger Canyon Road as the location of the staging area based on considerations such as impacts to habitat and streams, road sightlines, operations and public safety objectives for maintaining and patrolling a staging area, and amount of required grading.

Wayfinding signage, including a new entrance sign, denoting the presence of a staging area driveway or access point would be placed at a distance that affords approaching vehicles time to slow or stop safely to the north and south of the area on Bollinger Canyon Road to provide adequate notice for vehicles traveling at the prevailing speeds (45 miles per hour).

Podva Walk-in Entrance

A walk-in entrance from Wingfield Court with dedicated on-street parking for public park users is recommended to be opened to the public. The walk-in entrance will provide public access into Las Trampas through the Heritage Pear Trail for recreation. This park entrance has been analyzed under CEQA in the *2013 Podva Property Residential Development EIR* and was constructed by the Podva Redhawk Residential developer. The Park District will own and maintain the walk-in entrance.

Podva Walk-in Entrance

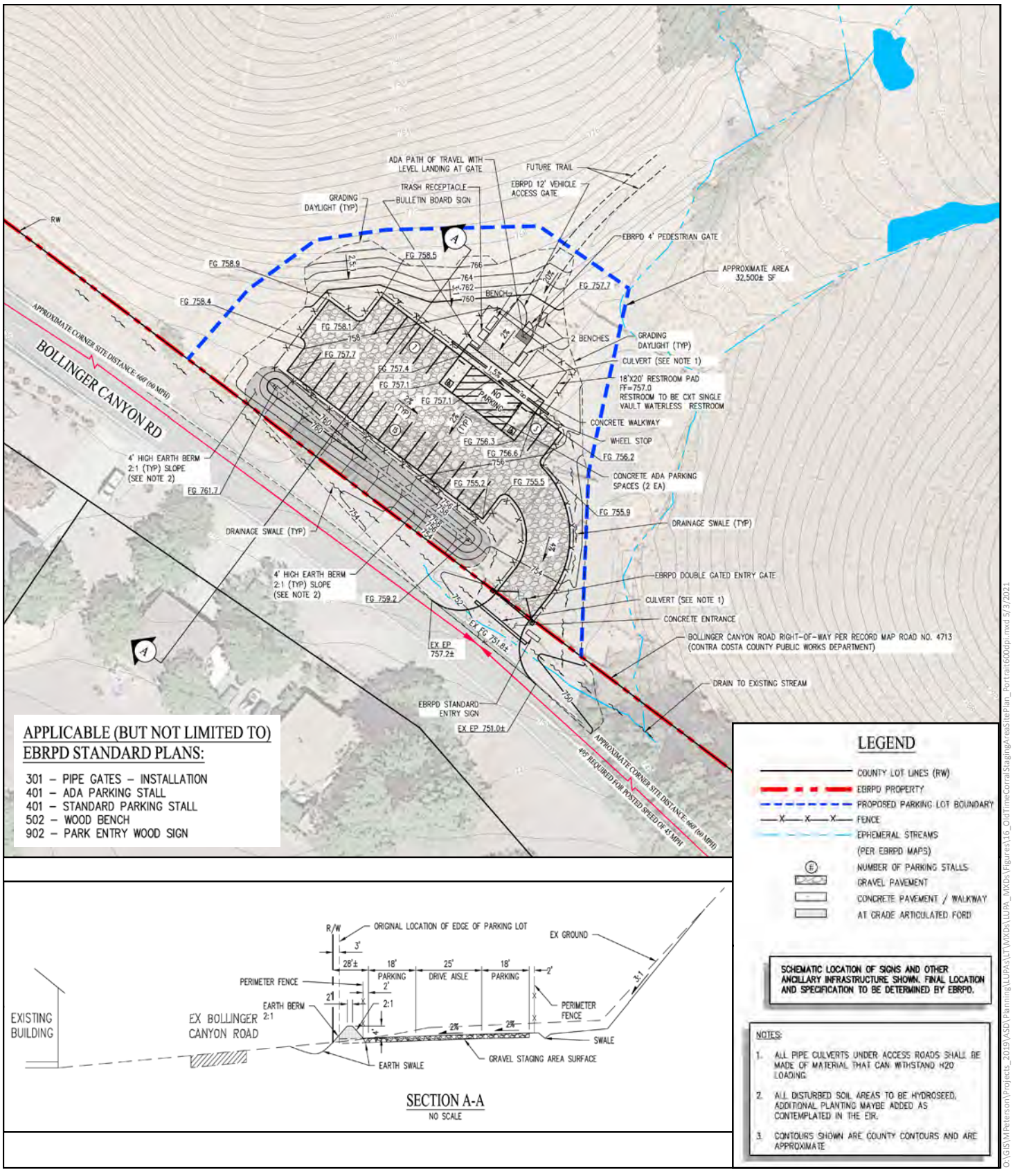


FIGURE 16: OLD TIME CORRAL STAGING AREA SITE PLAN

Saudade Walk-in Entrance

A walk-in entrance will provide public access from the Preserve Homeowner Association (HOA) area through the Preserve Geological Hazard Abatement District (GHAD) open space area, and to the southern portion of the Peters Ranch property. The walk-in entrance is recommended to be opened once the Calaveras Ridge Trail extension on the Peters Ranch property is completed and the Preserve residential developer has completed the construction of the Calaveras Ridge Trail extension within the HOA area. The entrance will allow for visitors to continue on the Calaveras Ridge Trail that extends from Las Trampas into the Preserve HOA area. The public access is covered under CEQA in the *2013 Faria Preserve Community Project Initial Study/Mitigated Negative Declaration.*

The Saudade Walk-in Entrance from the Faria Preserve HOA area will connect trail users to the Calaveras Ridge Trail (seen under construction in the photo above).

3.4.2 Trail Connections

The LUPA recommends a total of 4.2 miles of trails to be opened to the public. 2.5 miles of this trail system will be multi-use for recreation and provide emergency vehicle and maintenance access (EVMA), while 1.7 miles will be multi-use trails to allow recreation.

Multi-use is assumed to include hiking, bicycling, and equestrian; however, the trails will not necessarily be designated as such. Designation of trail use will be determined by variability of the trail widths depending on the methods of construction (e.g., manual, machine built) and the specific physical conditions (e.g., trees, rock outcropping, slope) of the trail alignments.

As further discussed below, the 4.2 miles include existing trail connections not yet open to the public that are covered under CEQA through separate environmental documents. The project also includes an additional 1.9 miles of trails that are currently open to the public.

The Park District is currently undergoing a district-wide discussion on the construction of new trails. As previously discussed in *Section 2.8.3 Visitor Experiences*, Ordinance 38 is the Park District's regulations governing park uses and currently permits bicycle use on trails that are over 8 feet wide unless otherwise posted. Master Plan *Policy RFA2* states that the Park District will "provide a diverse system of non-motorized trails to accommodate a variety of recreational users including hikers, joggers, people with dogs, bicyclists and equestrians," and Master Plan *Policy RFA3* states that the Park District will "continue to add narrow trails designated as both single and multi-use for hikers, equestrians, people with dogs and bike riders throughout the system of regional parklands." Considering these existing regulations and policies, outcomes from these discussions and from public engagement efforts may yield changes to Park District policies and regulations that affect the trails proposed within this LUPA.

Table 3-3: Summary of Project Trails below includes a summary of the trails that are included as part of the project. *Table 3-4: Summary of Trail Justification* provides a summary of the justification for the proposal of the recommended trails.

The trails would be constructed with a combination of mechanized equipment and hand tools. Mechanized equipment may include, but is not limited to small excavators, small trail dozers, D4 bulldozers, water trucks, backhoe, and graders. Hand tools could include pick mattocks, McLeods, Pulaskis, shovels etc. Cut and fill would likely be balanced on site; there would be no off-site hauling. Please refer to *Appendix C - Trail Construction and Trail Modifications Best Management Practices* for more information.

Table 3-3: Summary of Project Trails

Trail	Use	Width (ft)	Length (mi)
Open			
Calaveras Ridge Trail through Chen and Elworthy properties	• Recreation • EVMA	12	1.3
Fiddleneck Trail	• Recreation • EVMA	12	0.6
Proposed			
Sabertooth Trail	• Recreation • EVMA	12	1.1
Extension of the Calaveras Ridge Trail	• Recreation • EVMA	4-6	0.9
Heritage Pear Trail (to be opened to the public)	• Recreation • Dogs must be on leash • EVMA	12	1.4
Warbler Loop Trail	• Recreation	4-6	0.8

Table 3-4: Summary of Trail Justification

Proposed Trail	Trail Proposal Justification
Sabertooth Trail	• Provides emergency vehicle and maintenance access from Bollinger Canyon Road up to the ridgeline. • Provides public connection from the staging area to the Calaveras Ridge Trail.
Heritage Pear Trail	• Provides emergency vehicle and maintenance access into Las Trampas from Wingfield Court. • Provides public connection from the Podva walk-in entrance into Las Trampas. • Dogs are required to be on-leash of 6 feet or less due to proximity to the conservation easement.
Extension of Calaveras Ridge Trail	• Closes an important gap along the Calaveras Ridge Trail. • Uses are consistent with the existing uses along the Calaveras Ridge Trail.
Warbler Loop Trail	• Provides park users with a short loop trail alternative.

Park District staff along the Heritage Pear Trail on the Podva property.

Sabertooth Trail

A 1.1-mile EVMA trail will connect the staging area on the Chen property to the Calaveras Ridge Trail along Las Trampas Ridge. The EVMA trail will be multi-use and open to recreation. The trail will have an approximate elevation gain of over 570 feet. While the trail will provide emergency vehicle and maintenance access, it will be constructed and graded as a natural surface trail, with armored ford crossings where applicable, to allow drainage crossings with erosion control and water quality protection.

A few segments of the proposed trail alignment will use the existing roadbed where feasible. The remainder of the existing roadbed will be closed and abandoned, which includes scarifying and installing check dams, erosion fabric and vegetation as needed using hand tools and small mechanized equipment and reseed trail area with native seed appropriate to the site.

Warbler Loop Trail

An approximately 0.8-mile loop trail from the proposed staging area on the Chen property is recommended to be a multi-use trail open to recreation. The trail would be constructed as a natural surface trail with armored ford crossings and bridge crossings where applicable, to allow drainage crossings with erosion and water quality protection.

The location for this proposed loop trail is within an area currently used as a cattle holding area as part of grazing operations. Implementation of this loop trail will need to be further refined and coordinated with grazing operations.

Extension of the Calaveras Ridge Trail

The project includes a 0.9-mile natural surface trail portion of the Calaveras Ridge Trail on the Peters Ranch property. This trail is also considered an extension of the Las Trampas Ridge Trail, which is the local trail name for the portion of the Calaveras Ridge Trail running through Las Trampas. The trail will be approximately four to six feet wide, with an approximate elevation gain of over 300 feet. The trail will be multi-use and open to recreation to remain consistent with the existing uses of the Calaveras Ridge Trail. The trail connects the currently-open trails on the Elworthy property to the north, with the City of San Ramon's public trails to the south, located on the Preserve's open space property. The Calaveras Ridge Trail and connector trail within the Preserve open space will be owned and maintained by the Geological Hazard Abatement District (GHAD).

A small segment of this trail alignment will use an existing roadbed where feasible. The remainder of the existing roadbed not on the proposed trail alignment will be closed and abandoned.

As access opportunities into the project area from Peters Ranch Road are limited, the Park District and the Town of Danville will need to continue to work together to secure acquisitions/easements that can provide public recreation access from Peters Ranch Road into Las Trampas as opportunities arise.

Heritage Pear Trail

The project includes the 1.4-mile Heritage Pear Trail, which is twelve feet in width and connects park users from the proposed Podva walk-in entrance off of Wingfield Court to existing trails within Las Trampas parkland. 0.9 miles of this trail is located on the Podva property and was constructed and permitted by the Podva residential developer to allow for recreational and EVMA use. The alignment was selected to be outside of the conservation easement area. The remaining 0.5 miles of the trail is an existing service road on open Las Trampas parkland that weaves through a mosaic of wetlands and ponds.

The trail is recommended to be open to the public for recreation and access for emergency and maintenance vehicles from Wingfield Court. Due to the proximity to the conservation easement, dogs will be restricted to being on leash that is 6 feet or less. The 0.9-mile portion of the trail that goes through the Podva property is covered under CEQA in the *2013 Podva Property Residential Development EIR*. No new construction is proposed for the existing 0.5-mile portion of the trail on open parklands.

The Heritage Pear Trail traverses through the proposed Special Resource Protection Area (SRPA). The federally threatened California red-legged frog has been documented in two ponds in this area and could occur in other nearby ponds. In a 2019 study conducted by Riensche et al. entitled "California Red-Legged Frog Response to Pond Restoration", improvements to the hydroperiod of a pond within the Garin Newt Pond Wildlife Area that included removal of excess sediment and emergent vegetation resulted in CRLF egg masses and tadpoles increasing by 99% and 97%, respectively.

The pond highlighted in the study is similar to the ponds in this project's proposed SPRA in that it provides breeding habitat for CRLF while being adjacent to trails that are open to recreation. The successful habitat enhancements for the Garin pond were unaffected by the proximity to the trails open to hikers, bicyclists, and equestrians, suggesting that the proposed trail uses for the Heritage Pear Trail will also not affect the ponds in the SRPA as habitat for CRLF.

An individual California tiger salamander, a state and federally threatened species, was documented in a pond in this area in 2018; this occurrence is noteworthy because the species was not previously known to occur in the Las Trampas Wilderness Regional Preserve, and the closest known extant population of the species was greater than 6 miles from the site. Additional surveys have been conducted in 2019, 2020, and 2021 to better understand the status of California tiger salamanders in the SRPA and other portions of the Las Trampas Regional Wilderness. As many as 28 California tiger salamander have been observed in the ponds in 2021.

The SRPA is currently grazed by cattle. The positive aspects of ranching and grazing have been increasingly recognized in discussions of California red-legged frog and California tiger salamander recovery (Ford et al. 2013). One important factor is that livestock ponds have become crucial breeding habitats for both animals (Fellers 2005; Holland et al. 1990). In addition, grazing significantly reduces the biomass of the exotic annual grasses that now dominate upland (terrestrial) habitat, lowering fire risk and preventing the degradation of habitat conditions that would occur if the grasses were left unmanaged (Ford et al. 2013). Therefore, cattle grazing will continue to be used as a tool to benefit California red-legged frog and California tiger salamander in the SRPA.

To protect the California red-legged frog, California

tiger salamander, and their associated habitat, signage will be posted year-round identifying the area as a Special Resource Protection Area and would: 1) prohibit off-trail use; 2) prohibit off-leash dogs; 3) prohibit human/canine entry into ponds; and 4) describe penalties for unauthorized activities.

While the above measures are expected to protect sensitive resources within the SRPA, the SRPA will be regularly monitored, and adaptive management actions will be implemented as required. Qualified staff will monitor the SRPA at least once annually for evidence of the following:

- Trespassing or human/canine disturbance to ponds and upland habitats
- Unauthorized social trails
- Removal of signage or damage to fencing
- New populations of invasive plants or notable spread of non-native plant species
- Appropriate grazing levels

Focused amphibian surveys will also be conducted on at least a biennial basis and include data collection on presence and/or breeding of native amphibian species and ground squirrels (which provide burrows for amphibian estivation).

The Park District will prepare an annual summary report for years 1-7 after the opening of the trail that includes the results of observations of use and resource conditions and response or remedial actions recommended to resolve observed issues. If there are no issues noted, the monitoring will continue every other year for years 8, 9, and 10. If impacts to sensitive resources are noted, the monitoring will continue annually until remedial management actions have been implemented to address the issues.

Potential remedial actions may include, but are not limited to:

- Removal of unplanned user-created trails
- Temporary and/or permanent closures of areas and/or trails
- Revegetation or supplemental plantings of areas
- Invasive plant or wildlife species control
- Repair or additional fencing and/or signage
- Adjustments to grazing regime, potentially including modify timing, duration, and intensity of grazing to benefit the California red-legged frog and California tiger salamander
- Increased patrols by rangers and/or law enforcement

If Park District staff is unable to remedy an identified issue, use of the SRPA may be further restricted, temporarily or permanently closed to the public and/or vehicles, and/or any other action deemed necessary to protect the affected resource or use condition.

3.4.3 Trail Signage

An expanded signage program is important to clarify name and use changes to the existing trail system and to highlight new routes. Trail system signage would include: wayfinding, interpretive and regulatory signs to encourage responsible trail use, and identify regional trail routes. Wayfinding signs placed at trail intersections/connections would aid in keeping trail visitors on the trails and away from sensitive resources, while regulatory signs at trailheads would inform visitors of allowable trail uses.

Signage would also provide trail users with information regarding property rights to minimize public/private use conflicts and trespassing. Where the parkland boundaries abut private lands, notices would be posted stating *"Private Property – No Trespassing"*. In areas where a trail is being relocated, the former trail area being decommissioned would be posted, *"Not a trail, Habitat Restoration Taking Place"*. Trail information would also incorporate interpretive features such as maps and exhibits.

In addition to trail signs, information would be disseminated through: 1) the Park District website; 2) park brochures distributed at access points in the project area; 3) Park District events; and 4) outreach with community groups, including homeowners' associations and schools.

Informational signage at the Elworthy Staging Area.

4. PLAN IMPLEMENTATION

This chapter is intended to act as an implementation guide for the key recommendations within this LUPA, including development of the public access and trail recommendations. Key components of this chapter include project phasing, construction considerations, financial considerations, long-term financial assurances, and agency coordination and partnerships. While many of the considerations presented in this this chapter are subject to change as the project develops, this chapter provides a broad road map to achieve the vision set forth in this LUPA.

4.1 PROJECT PHASING

The Southern Las Trampas LUPA will be implemented in phases. Key considerations to the implementation schedule and project phasing include the timing of adjacent projects including the Preserve Residential Development and the construction of associated open space and trail connections; the provisions of the 2008 settlement agreement between the Park District, the Preserve (formerly Faria Preserve) residential developer, and the Sierra Club; securing necessary permits; and the Park District's financial resources. *Table 4-1: Project Phasing* and *Figure 17: Phased Implementation Plan* summarize the implementation plan and considerations for each of the LUPA recommendations.

4.1.1 Phase 1

Land Dedication

The developer for the Preserve anticipates dedicating the 141-acre Faria property to the Park District in 2022.

- Park District staff will conduct an acquisition evaluation process for the property to ensure adequate safety and security measures and funding are considered.

- Once dedicated, the property will be included in the Park District's land bank and include restoration and management activities as dictated in the Faria Long Term Resource Management Plan (LTMP) to preserve and protect the site prior to the provision of public access.

- The Park District will assume responsibility for management of the conservation easement area, including, as authorized by the resource agency permits: wetlands and riparian sites; and livestock infrastructure, including water facilities, fencing and gates necessary to implement the requirements of the LTMP.

- The Park District will coordinate with the developer to install boundary signage indicating the land bank status to deter trespassing and to install initial gates and fencing for livestock grazing as part of the open space dedication process.

Park District staff noting trough condition.

The property can be taken off the Park District's land bank list and opened to the public once it is made safe and suitable for public access. This involves adequate trail connections to the existing Las Trampas trail network. While proposed trail alignments have previously been identified and are excluded from the conservation easement over the Faria property, any trail connections or recreation facilities on the Faria property will need to be part of a future planning process covered by CEQA.

Public Access

The public access points proposed in this LUPA are anticipated to be opened to the public within 5 years.

1. The Podva Walk-in Entrance can be opened immediately following the adoption of this LUPA, in coordination with the opening of the Heritage Pear Trail that connects into the existing trail system within Las Trampas.

    - The walk-in entrance was constructed to Park District standards and will be owned and maintained by the Park District.

    - Dedicated on-street parking is provided along Wingfield Court. Signage along Wingfield Court will indicate trailhead parking. Wingfield Court, Red Tail Court, and Midland Way are designated by the Town of Danville as public streets.

    - A vehicle pipe gate along Wingfield Court provides access up a road leading to a pedestrian and vehicle gate into the Podva property.

- Per the stipulations of the public trail and EVMA access easement with the GHAD, the Park District and the GHAD have a shared curb-to-curb maintenance responsibility for the access road between the vehicle pipe gate and the Podva property. The GHAD has full responsibility for the concrete V-ditch used to collect storm drainage.

2. The Saudade Walk-in Entrance will be opened in conjunction with the completed construction of the Calaveras Ridge Trail extension on the Peters Ranch property and in conjunction with the completed construction of the Calaveras Ridge Trail extension and a 5-car staging area within the Preserve Residential Development.

    - The Preserve developer is responsible for the construction and permitting of the trail extension and staging area on the Preserve development and access point to the trail from the staging area.
    - The Preserve developer will also provide trailhead signage, one bench, and trash receptable for the staging area and trail.

The trail extension on the Preserve Residential Development merges with the East Bay Municipal Utility District (EBMUD) access road serving the water tank facility within the Preserve Residential Development where necessary to address engineering, topographic, or aesthetic constraints, provided, however, that to the extent any shared segments are required to be paved due to EBMUD specifications, the Park District shall not be responsible for maintenance, upkeep, replacement of, or liability associated with such paving. The trail extension will have a public access, maintenance access and emergency vehicle access easement recorded over them, as described in *Table 2-1: Easements and Access Agreements*.

The trail extension and 5-car staging area will be owned and maintained by the GHAD. Park District coordination with the developer and the GHAD will be necessary to open the trail and public access point in a timeline manner.

The GHAD has full responsibility for the concrete v-ditch used to collect storm drainage.

3. The Old Time Corral Staging Area will be opened in conjunction with the completed construction of the Sabertooth Trail. The Preserve developer will be responsible for the design and construction of the staging area to Park District standards, per the 2008 settlement agreement. The Park District will be responsible for securing all necessary local and resource agency permits. The developer will also be providing a gate, park benches, a bulletin board sign (or informational panel), and a two-stall vault toilet. The Park District will coordinate with the developer on the design of the staging area to be consistent with the Park District's 2013 Master Plan *Policy PRPT24*:

"The Park District will seek to locate facilities in a manner that preserves open space whenever possible. The Park District will design proposed facilities so that their color, scale, style and materials will blend with the natural environment. Park improvements will be designed to avoid or minimize impacts on wildlife habitats, plant populations and other resources."

Provisions of the 2008 settlement agreement require that the developer shall complete construction of the staging area and related spurs within 180 days following the later of: (1) issuance of the certificate of occupancy for the 100th building permit in the Preserve residential development, and (2) issuance of all permits required for the construction of the staging area and related spurs.

Trail Implementation Phase 1

Phase 1 trail system improvements would incorporate existing trails into the system where these alignments would reduce the need for new trail construction to enhance trail connectivity. Incorporating existing alignments into the system would serve to minimize resource habitat disturbance and soil displacement associated with new construction. These would include:

Opening the existing Heritage Pear Trail to the public for recreation and EVMA use. Dogs would be required to be on leash from the Podva Walk-in Entrance, per the requirements of the Podva LTMP, and through the Special Resource Protection Area up to the Remington Trail.

Trail development in Phase 1 would include construction of the Sabertooth Trail and the Calaveras Ridge Trail extension and would occur concurrent with the construction of the Old Time Corral Staging Area following issuance of local and Resource Agency permits necessary for the siting and building of the staging area and trails.

Segments of the Sabertooth Trail would use existing roadbed where feasible. The remainder of the existing roadbed would be closed and abandoned, which includes scarifying and installing check dams, erosion fabric and vegetation as needed using hand tools and small mechanized equipment and reseed trail area with native seed appropriate to the site.

A segment of the Calaveras Ridge Trail extension to be developed on the Peters Ranch property and connect to public trails within the Preserve Residential Development Project would also use existing roadbed. The remainder of the existing roadbed would be closed and abandoned.

Habitat Management

Habitat management of seeps, ponds, and wetland areas within the project area are part of routine maintenance aimed at improving habitat for native amphibians. This could include the following implementation activities:

Creeks and Drainages

In areas where the creek bed has been graded, recontour the riparian channel and restore creek flows and revegetate the channel corridor to restore riparian ecological function.

Ponds

1. According to a 2019 study by Rienshe et al, "California Red-legged Frog Response to Pond Restoration", improving habitat conditions by removing excess sediment and emergent vegetation can improve habitat conditions for the California red-legged frogs and reverse their decline. If the hydroperiod of the pond is too short (less than 5 months), assess the pond and its embankment. Determine optimal depth to allow for up to a 9-month hydroperiod.

    - Repair embankment.
    - Dredge sediment.

2. If emergent vegetation exceeds 35% (Bobzien and Didonato 2007), remove or encourage grazing. In ponds with CRLF and/or CTS, vegetation removal by hand may be required.

3. If the pond is permanent and provides habitat for predatory game fish or bullfrogs, drain pond. Draining may need to occur every few years to disrupt the bullfrog breeding cycle (Ford et al. 2013). Consider alternate types of continuous bullfrog control.

4. Assess need for cattle water infrastructure. Plan for alternate water sources for the late summer and fall, if ponds are seasonal and/or need to be drained. The current permits allow for spring box maintenance but new ones need to be permitted.

5. A stock pond on the southern portion of the Chen property has a deteriorating lining and no longer retains water. Deepening the pond or repairing the embankment may be considered.

Prior to initiating work, and throughout the work period, a USFWS qualified Park District biologist will monitor for CRLF and CTS. If any CRLF or CTS are discovered, the biologist will either provide a safe harbor for the CRLF or CTS for reintroduction into the ponds at the end of the restoration work or relocate them to another suitable waterbody using USFWS protocol.

Construction activities would typically be restricted to August 1 to October 31. Hours of work would be during regular business times. Access to the construction sites would be from existing service roads within the park. Equipment and materials staging will occur along various sections of the service roads.

Table 4-1: Project Phasing

Project Phase	Implementation Plan
Phase 1 (0-5 years)	
Faria Property	The 141-acre Faria open space property is anticipated to be conveyed to the Park District by 2022. Once under Park District management and ownership, the Park District will make safety and security updates and manage the land according to the Faria LTMP. The Faria property will remain in land bank status and closed to the public. Public tours led by Park District staff can be arranged.
Podva Walk-in Entrance	Open the Podva Walk-in Entrance to recreation. Dogs will be restricted to a 6-foot or less leash to comply with the Podva LTMP.
Heritage Pear Trail	Open the Heritage Pear Trail to recreation. Dogs will be restricted to a 6-foot or less leash to comply with the Podva LTMP.
Special Resource Protection Area	Designate the wetland complex area adjacent to the Podva property as a Special Resource Protection Area by installing educational signage.
Habitat Management	Continue to manage ponds for California red-legged frog and California tiger salamander. Drain permanent ponds every few years to disrupt bullfrog breeding cycle. Assess need for cattle water infrastructure.
Old Time Corral Staging Area	The Park District will apply for permits for the Old Time Corral Staging Area. The Preserve residential developer will construct the staging area per Park District standards.
Sabertooth Trail	Permit and construct the Sabertooth Trail from the staging area up to Las Trampas Ridge. Close and abandon 0.6 miles of the existing over steep and eroded trail segment that will not be incorporated into the Sabertooth Trail.
Calaveras Ridge Trail extension	Permit and construct the 0.8-mile extension of the Calaveras Ridge Trail within the Peters Ranch property. Development of the trail would extend and connect to the public trail within the Preserve residential development project. Close and abandon 0.4 miles of the existing over steep and eroded trail segment that will not be incorporated into the trail extension.
Saudade Walk-in Entrance	Open the Saudade Walk-in Entrance to recreation.
Phase 2 (10+ years)	
Warbler Loop Trail	Permit and construct the Warbler Loop Trail as park user demand dictates.

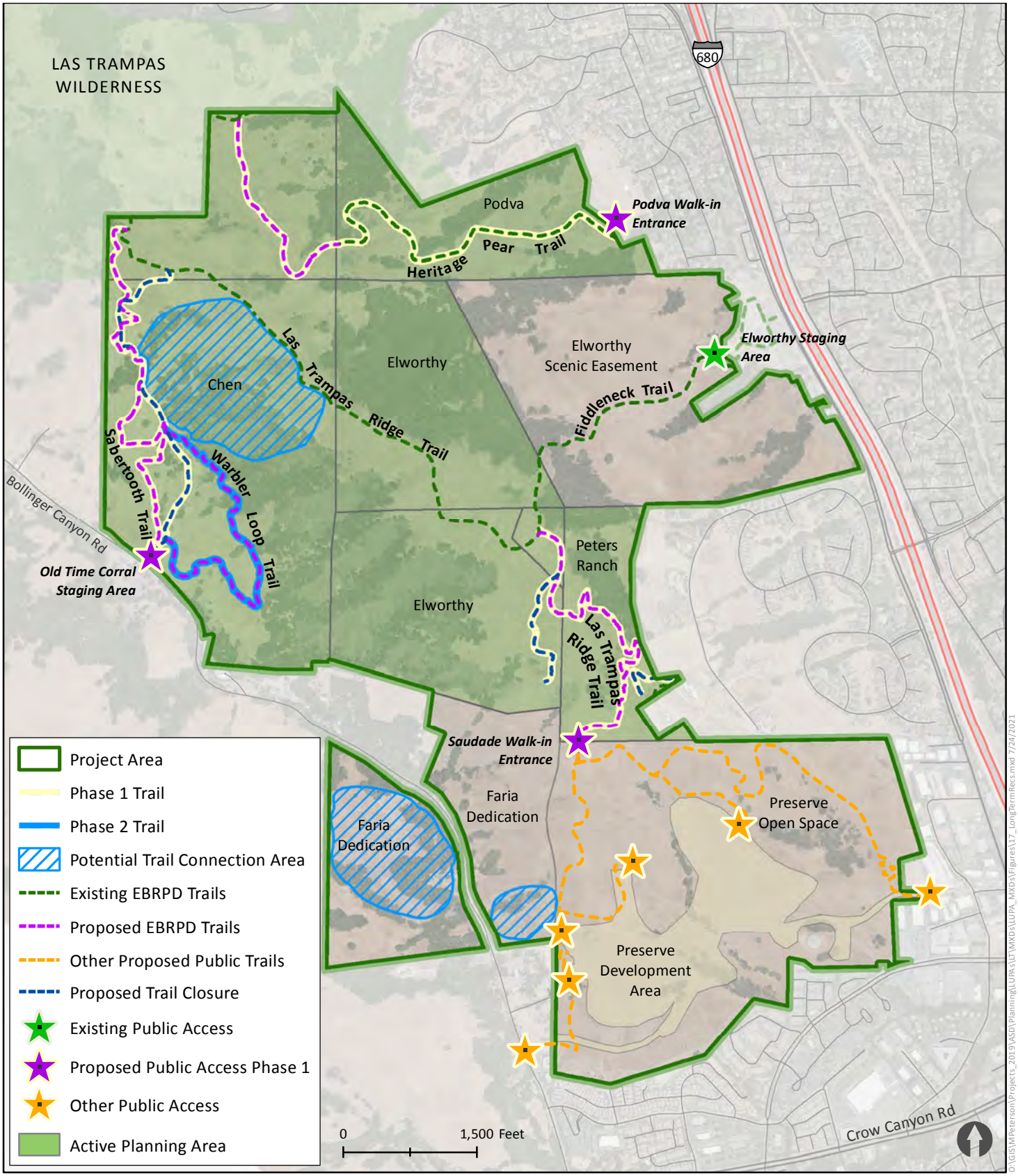


FIGURE 17: PHASED IMPLEMENTATION PLAN

4.1.2 Phase 2

Trail Implementation Phase 2

Phase 2 of the trail system improvements would include constructing an additional trail within the project area that is not critical for regional connectivity but would address the desire for different trail types. This includes construction of the Warbler Loop Trail, a shorter loop trail on the Chen property from the staging area that weaves through the edges of the oak woodlands. The exact location and alignment of the proposed trail would be refined during the planning and permitting process, prior to construction. Implementation of this Phase 2 trail would require additional biological surveys.

4.1.3 Construction Phasing, Timing, and Construction Workforce

Trail work may be phased over several seasons depending first on obtaining permitting and then on funding and staffing availability. In addition to factors dictating construction phasing, construction timing would likely be restricted due to the potential for sensitive species to occur in the project area. It is anticipated that the construction period would typically be restricted to August 1 to October 31, although there may be other restrictions associated with bird nesting. Specific requirements tied to species protection would be determined through the permitting process.

Construction Phasing and Timing

Trail system development would be prioritized and funded as part of the Park District Trails Program Unit work plan considering trail development priorities throughout the Park District. Actions concurrent with trail development would include: 1) updating Ordinance 38 to reflect LUPA trails and trail uses; 2) updating the trail brochure identifying sanctioned hiking, equestrian, and biking trails; 3) installing educational, wayfinding signage as described in *Section 3.4.3 Trail Signage* at the staging area, trailheads, and trail junctions to inform park visitors of parkland conditions and destinations; and 4) preparing an information guide informing park visitors of the wildlife and plant communities represented throughout the trail system alignments, along with measures that are being taken to preserve wildlife habitat and cultural resources.

Overall, the LUPA recommendations, if adopted through the Ordinance 38 process, would not change existing policies within Las Trampas. However, as the recommendations in this LUPA include an unpaved trail that allows bicycle use, the LUPA recommendations would require modification to Ordinance 38, Section 409.8 (d) to accommodate bicycles on the Warbler Loop Trail. Any changes to Ordinance 38 regarding bicycle use along unpaved trails would require Board consideration and amendment.

Construction Workforce

Construction of these project elements would likely be completed by Park District Maintenance and Skilled Trades (MAST) staff with support from Park District parks staff as dictated by their job classifications or outside contractors. Trail development work may be augmented by volunteer crews and work groups such as Americorps. Work crews generally range from two to twenty in a single work crew. Special volunteer activities may bring up to 60 volunteers for a one to three-day event.

Construction of the Old Time Corral staging area would be completed by the Preserve residential developer's contractors with oversight from Park District staff.

Additional Workforce Options

In the interest of efficiency, the Park District augments the work of staff by: 1) contracting with private consultants or contractors where specialized work or heavy equipment is required for a short-term project; or 2) when a workforce is required for a short (seasonal or less) duration, and when contracting would be more practical than using Park District staff. In some instances, the Park District contracts with other governmental agencies such as the California Department of Corrections and Rehabilitation or with non-profit organizations like CiviCorps Charter School, to perform various park construction and vegetation management and treatment activities. Determining the need for these types of services for implementing the proposed LUPA recommendations would be determined on a project by project basis.

Volunteers and Non-Profit Organizations

Volunteer programs directed at actively managing and maintaining the trail system can build ownership toward Las Trampas by the public and provide stewardship benefits. Community supported stewardship and education may be achieved through ongoing volunteer programs.

As described in *Section 2.7.2- Volunteer Programs*, in-house volunteer programs include the Volunteer Trail Safety Patrol (VTSP) and the Ivan Dickson Volunteer Trail Maintenance Program. The Ivan Dickson endowment provides about $20,000 per year for volunteer projects. These funds cover staff, equipment purchases, and materials. The Park District is often successful in obtaining sponsorships for Ivan Dickson projects that provide funding or in-kind contributions. Recent sponsors have included REI, Backpacker Magazine, and the Power Bar Company.

In addition, the Park District periodically uses supervised volunteers from conservation organizations (e.g., California Native Plant Society, Audubon Society, Sierra Club), local schools and colleges, and community groups in conjunction with Park District staff and professionals to implement hand maintenance and habitat restoration activities, as well as monitoring and data collection. Stakeholder participation can be encouraged as part of the ongoing volunteer programs established by the Park District (Refer to www.ebparks.org for a list of current volunteer programs).

The Park District can continue to realize both educational and operational benefits by encouraging local participation and partnership in park and resource stewardship, while also saving on certain capital and maintenance costs. In addition, further development and enhancement of existing partnerships between the Park District and non-profit organizations to carry out selected stewardship, monitoring, planting, and maintenance activities would facilitate more meaningful outreach and communications with the public in relation to the environmental values that the Park District is committed to protect and/or enhance. Moreover, persons conducting research at universities and colleges or for other agencies may be interested in data collection, research, and analysis related to certain mitigation monitoring programs, such as monitoring for Alameda whipsnake and California red-legged frog populations within the project area.

4.2 CONSTRUCTION CONSIDERATIONS

This section provides a description of construction activities for the recommendations identified in the LUPA.

4.2.1 Staging Area

Prior to construction activities, previous agricultural uses will be removed and reused as appropriate.

Development of the Old Time Corral Staging Area on the Chen property would involve minor grading for the parking area. Soil materials would largely be balanced on site. Installation of a vault toilet at this site would involve soil excavation to accommodate the toilet and preparation of the site for maintenance and ADA-compliant access. Onsite placement of the precast concrete vault toilet building would consist of burying a sealed vault to a 5-foot depth and installing a pre-fabricated building structure over the sealed vaults. Excavation for the vault toilet would require approximately 32 cubic yards of soil removal. Some of this material would likely need to be hauled off-site. The impervious area, including the 360 square-foot restroom and access pad surrounding the restroom facility would be approximately 1,159 square feet. Consistent with provisions of the 2008 settlement agreement, the Preserve developer will be responsible for these construction activities.

4.2.2 New Trails

Habitat Considerations

New trails would traverse a mix of California annual grassland, coyote brush scrub, coast live oak/bay laurel woodland, and seasonal seeps and wetlands. Potential impact areas for sensitive natural communities and special status plant species within each of these habitat types would be mapped over the annual seasonal cycle and the trail alignments would be finessed to minimize impacts within the zones previously surveyed and cleared for low cultural sensitivity prior to construction.

New trails would be constructed using a combination of small, mechanized equipment and hand tools. Some brushing of shrubland habitat and disruption of grassland habitat would be involved in the trail construction work. Trails through woodland or riparian habitat would be aligned to minimize tree removal or substantial pruning.

Vegetation in disturbed areas resulting from the development of the trail system would be reestablished, as appropriate, by either: 1) scarifying, seeding, and mulching using certified weed-free products; 2) planting native vegetation, transplanted from the vicinity, or seeded with native species found in the area; or 3) applying strippings accumulated from grading activities over areas temporarily disturbed by construction activities to encourage recovery of the natural habitat. Where the use of strippings is applicable, the strippings resulting from clearing and grubbing the construction site would be stockpiled at the start of construction and covered or controlled using best management practices (e.g. silt fence, wattles, fiber rolls – absent of plastic netting and certified as free of noxious weeds) for replacement at the end of construction, thereby minimizing the imprint on adjacent areas.

Drainage Crossings

Where trail construction involves crossing a perennial creek or seasonal or ephemeral drainage, and potential impacts cannot be avoided, armoring would be assessed as a potential solution to reduce impacts to sensitive habitat features, provide channel stability, and minimize channel bed erosion.

To minimize the mobilization of sediment to creeks and other water bodies, permanent erosion- and sediment-control measures would be incorporated where trails cross through riparian zones including:
Armoring the trail surface through the channel.
Providing settling areas along the trail where water could infiltrate and sediment could settle out.
Constructing creek crossings so that they do not greatly alter the cross-sectional shape of the channel.

Sloping the approach to a drainage crossing downward toward the drainage and then climbing upward when traveling away from the drainage bed, so that in the event of a blockage in the channel, the water would not be diverted to flow along the trail.

Natural Rock Crossings

Where armoring is used to stabilize low water crossings, the armoring would consist of natural rock. Cross drain structures (armored fords) would be constructed at natural low spots (swales) and areas that may flow or pond during wet periods unless outsloping and shaping of the trail prism would provide the needed drainage. These features would be constructed to intercept and channel water away from the trail bed and drain and return water to the natural drainage course. The ground surface would be leveled within an approximately four to six-foot wide band equivalent to the maximum width of the narrow, natural surface trail. The length of the crossing from bank to bank and the total area of each crossing would vary based on the width of the channel. Rock would be placed below, and sometimes above, the ford to provide energy dissipation. Leveling would require minor grading. Following grading of the underlying bank and beds, gravel would be placed to prevent downcutting and erosion. A natural channel would then be laid into the crossing bed. These materials would be placed or rearranged by hand or mechanical means to obtain a compact, low permeability mass to simulate a natural streambed.

Where feasible, natural rock crossings would be constructed of locally sourced rock. Installation of natural rock crossings would occur as follows: 1) minor excavation of the trail bed to approximately 12-inches to maintain an out-sloped surface, 2) grading backslopes on the banks, 3) hand-placing approximately 60-kilogram rocks at the downstream edge to create a rock dam with smaller rocks below the dam for flow dissipation, 4) installing stepping rocks along the upstream edge of the crossing (for trail users to cross on when the creek flows), and 5) filling the spaces between the rock dam and stepping rocks with gravel (or other small rocks less than 75 millimeters in diameter). Refer to *Figure 17: Typical Armored Swale and Causeway* for a plan and cross-section view of a typical causeway.

Rock Causeways

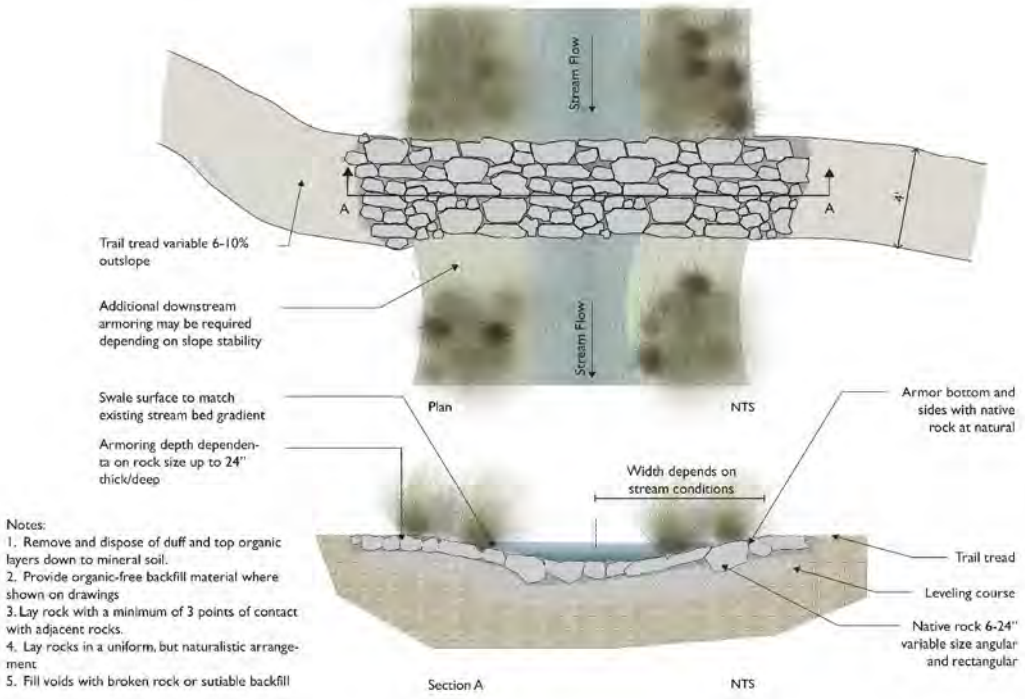
Whenever possible, trails would be located to avoid areas with seasonal or year-long water problems. Where wet areas are unavoidable, structural improvements would be incorporated into the trail bed to permanently harden the tread and maintain dry, stable conditions using a rock causeway. A rock causeway is an elevated section of trail contained by rock usually through permanent or seasonally wet areas that allows revegetation to take hold after the area has been rehabilitated.

The height of the causeway would be designed for a maximum flow event. The causeway would be built by first defining the width of the trail tread with parallel rows of rocks or logs. The defining rows would also serve to retain the fill. When in place, the filling process would begin with medium-sized stones that would allow water to pass under the causeway. A fill of small stones, gravel, soil, or a mixture of materials would be used to create the elevated causeway and ensure a level walking surface. The trail surface would be rounded approximately two inches above the elevation of the defining rocks to provide better drainage and to allow for settling. Refer to *Figure 18: Typical Armored Swale and Causeway* for a plan and cross-section view of a typical causeway.

Puncheon Structure

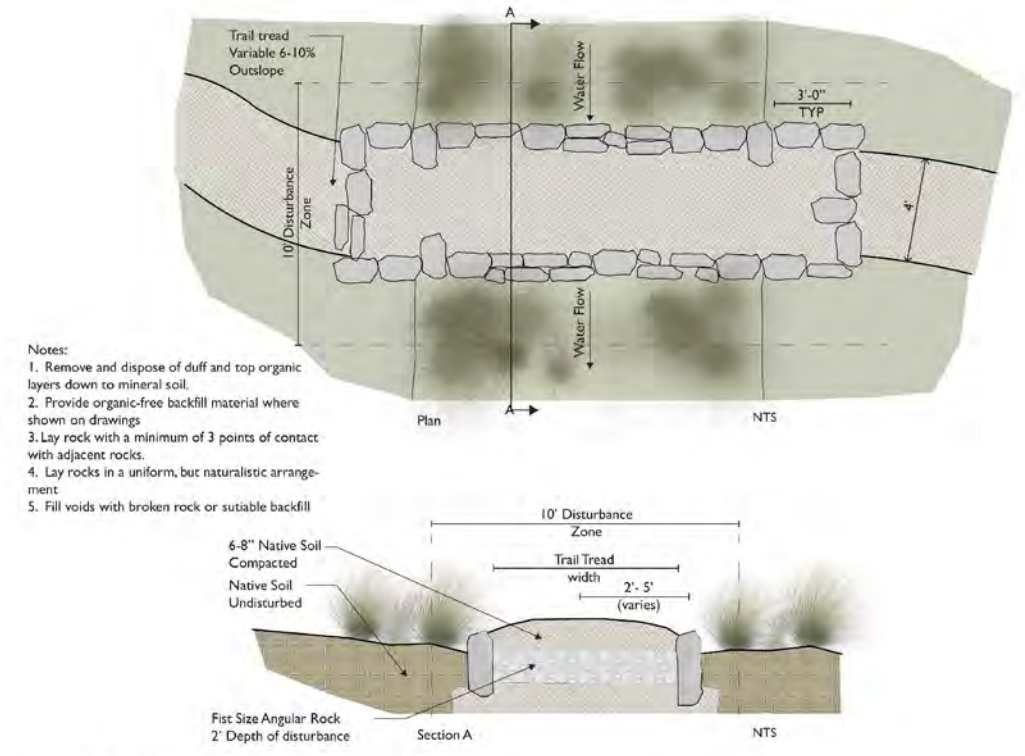
In saturated or chronically wet areas, puncheon structures are more suitable than rock causeways and can be less intrusive structures. A puncheon structure is a log or timber structure built close to the ground. It typically consists of mudsills, joists, soil dams, and wood decking. Puncheons typically use earthen foundations with wooden abutments and are low enough to the ground to not require handrails.

Puncheon structure constructed by the NE Chapter Back Country Horsemen of Washington



Notes:
1. Remove and dispose of duff and top organic layers down to mineral soil.
2. Provide organic-free backfill material where shown on drawings
3. Lay rock with a minimum of 3 points of contact with adjacent rocks.
4. Lay rocks in a uniform, but naturalistic arrangement
5. Fill voids with broken rock or sutiable backfill

Armored Swale - Seasonal, Intermittent, and Ephemeral



Notes:
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2. Provide organic-free backfill material where shown on drawings
3. Lay rock with a minimum of 3 points of contact with adjacent rocks.
4. Lay rocks in a uniform, but naturalistic arrangement
5. Fill voids with broken rock or sutiable backfill

Rock Causeway

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FIGURE 18: TYPICAL ARMORED SWALE AND CAUSEWAY

Decommissioning and Abandoning Trail Alignments

In areas where a trail is being relocated, the former trail would be decommissioned and abandoned to: 1) eliminate sources of erosion; 2) create a natural appearance; and 3) help eliminate short cutting. Trail decommissioning work would include the following: 1) correcting water flowing into and down trail and stabilizing the area by placing rocks or using erosion cloth, net or other biodegradable covering agents in areas of sheet erosion so that the speed of water runoff is impeded and gullying and riling inhibited; 2) eliminating ruts and gullies where erosion has occurred by filling in these channels with local soils and gravel and returning the surface to its original shape and contour by pulling the sidecast that was used as fill for outer edge of trail back into cut; 3) scarifying compacted soils to allow new vegetation to establish; 4) reestablishing vegetation through spreading native seeds, as well as transplanting of local flora into old trail bed; and 5) blocking the former alignment from continued use by placing rock, brush, and or fallen timber, depending on the terrain. Temporary fencing may also be installed to prevent use where use of a former alignment prevails.

Check Dams

In some situations, gullies and ruts in existing trails, including sections of the trail alignment that is proposed to be closed and abandoned, may be so severe and deep that filling them with native soils is impractical. Furthermore, these sites may be located where local borrow of fill material is unavailable and hauling distances prohibit the option of using imported materials. In these situations, check dams would be installed to slow the flow of water, halting further erosion and allow backfilling to occur through the trapping of sediments. Where required, check dams would be installed by placing rocks, logs or boards within the channel perpendicular to the flow. The spacing of these rock, log or board dams would generally follow these guidelines: place materials no more than 25 feet apart on slopes of up to 20 degrees, no more than 15 feet apart on slopes of 20 to 30 degrees, and no more than 10 feet apart on slopes exceeding 30 degrees. Once installed, check dams would be monitored to ensure they are functioning as intended. Once filled, check dams would be left in place and allowed to become part of the slope's natural contour. In some cases, revegetation of the filled channel would occur to further stabilize the site.

Example of using vegetation to block continued use of an abandoned trail.

4.3 PROJECT COSTS

This section provides an estimate of probable costs for the improvements proposed in the LUPA with the total estimate of probable costs equaling approximately $130,000, as shown in *Table 4-3: Estimate of Probable Costs*. Costs are based on a 2019 estimate of unit costs. Actual construction cost estimates of probable costs would be determined after the LUPA has been approved, construction documents have been developed and permitted, and resultant mitigation and monitoring requirements determined.

Because this is a LUPA rather than an engineering study, the proposed improvements have been scoped at a "planning level". Correspondingly, the estimated costs of the improvements are also at a planning level. Nevertheless, the estimate should provide a good sense of the probable cost of implementing the recommended improvements.

The cost of construction of the staging area on the Chen property will be covered by the Preserve developer as part of the 2008 settlement agreement.

4.3.1 Startup and Ongoing Annual Maintenance Costs

Startup costs include the hiring and training of staff (a Park Ranger to patrol and supervise activities in the project area) and the initial purchase of new vehicles and equipment to manage the project area. Initial startup costs to fully include the project area into the existing Las Trampas parkland, once capital improvements have been constructed are indicated to the right.

TABLE 4-2: ESTIMATE OF PROBABLE COSTS

PROPOSED PHASE I IMPROVEMENTS	ESTIMATED COST
1.8 miles of trails	$50,000
7 additional trail crossing and causeways	$49,000
Trail wayfinding and regulatory signs	$5,000
Soft costs, including design, contingency, funds, permitting, monitoring	$104,000 x .25 = $26,000
Total Costs	**$130,000**

STARTUP COSTS: ANNUAL (2021)	ESTIMATED COST
Park Ranger (fully burdened Full-time Employee)	$115,000
Small pick-up truck*	$36,500
Light weight four-wheel ORV	$14,500
Misc. supplies and equipment	$2,000
Subtotal	$168,000
15% Contingency	$25,200
Total	**$193,200**
Annual Maintenance Costs	
Roads/Trails; 4.2 miles at $5,000/mile	$21,000
Vegetation management; 756 acres at $100/acre	$75,600
Fencing, signage, site furnishings-repair/replacement	$15,000
Vehicle fuel and maintenance	$3,000
Misc. allowance	$5,000
Subtotal	$119,600
15% Contingency	$17,940
Total	**$137,540**

*Includes lumber rack, trailer hitch, side toolbox, 2-way radio

4.4 Long-Term Financial Assurances

Funding for the project components will require the leveraging of Park District funds with funds from government grant programs and other outside sources. Implementation of LUPA components would also need to consider placing some projects in the Park District "pipeline" of programs that would allow for funding improvements over a longer time through standing capitalization programs, as appropriate. The final financing strategy, based on a more refined estimate of the probable costs, would come to the Board of Directors for approval, along with approvals to move forward with construction.

There are several established long-term funding sources for managing the Podva and Faria properties that are associated with the conservation easements established for Podva and Faria and will partially fund some of the staffing and maintenance costs within the project area as well as some of the startup and ongoing maintenance costs previously described above. Each of these sources is described below.

4.4.1 Podva Conservation Easement Endowment

Two separate endowments have been established in trust to fund the perpetual management, maintenance, and monitoring of the 30-acre conservation easement within the Podva property: 1) the Podva Open Space Long-Term Management Endowment and 2) the Podva Open Space Oversight and Compliance Endowment, which is the mechanism for receiving money for oversight and enforcement of the easement.

A principal amount of approximately $197,378 is provided to the Park District as the management endowment holder and $201,250 to Wildlife Heritage Foundation (WHF) as the oversight and compliance endowment holder.

The endowment principal refers to the portion of the Endowment Fund that is to be maintained and managed in perpetuity to generate earnings and appreciation in value for use in funding perpetual management, maintenance, monitoring, and other activities. Distribution of the management funds from the Endowment Fund would be based on various management activities performed annually.

An Interim Endowment Fund, also known as a Wasting Fund, has been established to provide income to fund the first three years of management, maintenance, monitoring and other activities on the Podva property consistent with the LTMP. The purpose of the Interim Endowment Fund is to create a buffer of the long-term endowment so as not to erode the initial investment funds.

4.4.2 Faria Conservation Easement Endowment

An endowment of approximately $828,660 will be provided to the conservation easement holder (to be determined) as the endowment holder for the 136-acre conservation easement within the Faria property.

The Park District, as the land manager, will invoice the conservation easement grantee at the beginning of each calendar year for reimbursement of the management and monitoring activities it intends to take the following year, as required by the Faria conservation easement's LTMP.

A wasting fund will also be established for the Faria open space conservation easement.

4.4.3 Community Facilities District

Funding will also be provided through the mechanism of a Community Facilities District (CFD) for the maintenance, improvement, and servicing of parklands, trails, open space, and related parkland access improvements for non-conservation easement areas of the Podva and Faria properties.

In the project area, CFD No. C-1 Las Trampas was established for the 20-home Redhawk subdivision. CFD No. C-1 is anticipated to generate approximately $5,965 per year and would include

coverage for staff time, park and trail maintenance, equipment, fire abatement, and habitat mitigation.

CFD No. C-2 Las Trampas will be established for the approximately 560-unit Preserve (formerly Faria Preserve) subdivision, provide funding for management and maintenance activities of Park District recreation facilities associated with the Preserve project and is anticipated to generate approximately $73,096 per year. This amount would cover staff time and park maintenance related to the Old Time Corral Staging Area, parking within the subdivision for the Calaveras Ridge Trail and any future recreational trails on the Faria property.

4.5 OTHER FUNDING SOURCES

The Park District manages numerous parks and an extensive regional trail system in Alameda and Contra Costa counties. These resources are funded by several sources including property tax revenue, grants, service charges, and bond measures. Historically, inadequate funding existed for the operation and maintenance of these resources, and in 1993, the Park District formed the Alameda County/Contra Costa County Regional Trails Landscaping and Lighting Assessment District (Two County LLD) as a means to address the need for additional funding for maintenance and improvements, which provided recreational and open space benefits to specific new development areas. As required by Proposition 218, the Two County LLD was reapproved by voters in November 1996 as Measure KK, with 78.6% approval.

4.6 PERMITS AND APPROVALS

Implementation of the LUPA would involve review and permitting from environmental resource regulatory agencies and local agencies including, but not limited to, the entities described in this section.

4.6.1 Permits Required for New Construction

Environmental Regulatory Agencies

Environmental regulatory permits and consultation for the protection of listed species from the U.S. Fish and Wildlife Service are anticipated for actions recommended in this LUPA that require ground and habitat disturbance. These actions include the development of new trails and recreational facilities for the staging area on the Chen property.

For ongoing resource management programs within agricultural lands, the Park District's *Covered Exceptions – 4D Listing* covers the California red-legged frog and California tiger salamander for the U.S. Fish and Wildlife Service. Repair and enhancement of existing trails and roads would be covered under the Park District's *Regional General Permit.*

Environmental resource regulatory agencies that are anticipated to review and permit project recommendations include:

- California Department of Fish and Wildlife (CDFW)
- San Francisco Bay Regional Water Quality Control Board
- U.S. Army Corps of Engineers
- U.S. Department of the Interior Fish and Wildlife Service

Local Agencies

Local agencies that are anticipated to review and provide construction permits for project recommendations include:

- Central Contra Costa Sanitary District
- City of San Ramon
- Contra Costa County
- Town of Danville

4.6.2 Permits Previously Obtained

The Faria open space conservation easement was established as mitigation pursuant to the USFWS Biological Opinion for the Preserve residential development project. Species covered under the easement include California red-legged frog and Alameda whipsnake. Covered habitat includes Alameda whipsnake critical habitat, including seasonal wetlands, drainage channel, and riparian habitat.

The LTMP for the Faria Open Space, which can be found in *Appendix E*, will serve as the controlling management plan for the conservation easement. The LTMP was developed in concert with and approved by the resource regulatory agencies to address the long-term ownership, land management, and funding mechanisms. Under this plan, 136 acres of natural open space will be preserved in perpetuity, as mitigation for the Preserve development-related impacts to natural resources.

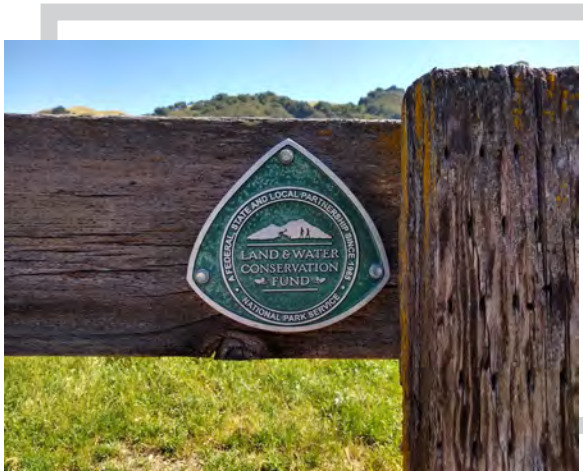
The Podva open space conservation easement was established as mitigation pursuant to the USFWS Biological Opinion, the US Department of the Army Nationwide Permit, and the CDFW Lake or Streambed Alteration Agreement. Species covered under the easement include California red-legged frog and Alameda whipsnake. Covered habitat includes Alameda whipsnake critical habitat, including annual grassland, riparian woodland and seasonal drainage; ponds and wetlands; oak woodland; and coyote brush scrub.

The LTMP for the Podva property, which can be found in *Appendix F*, will serve as the controlling management plan for the conservation easement. The LTMP was developed in concert with and approved by the resource regulatory agencies to address the long-term ownership, land management, and funding mechanisms. Under this plan, 30 acres of natural open space will be preserved in perpetuity as mitigation for the Podva property development-related impacts to natural resources.

4.7 AGENCY COORDINATION AND PARTNERSHIPS

Successful implementation of the plan will require the ongoing cooperating actions and partnership between the Park District and other agencies with adjacent land management responsibilities, including City of San Ramon, Town of Danville, and the San Ramon Valley Fire District, as these types of partnerships offer a means of sharing staff and technical resources and information.

In order to realize the vision for regional connectivity set forth in this LUPA, the Park District will also need to coordinate and explore partnerships with other agencies to pursue protection of adjacent open space and establishment of transit and regional trail connections. For example, the Park District can work with the Central Contra Costa County Transit Authority provide additional bus connections between the BART station and the project area. The Park District can also work with the City of San Ramon and Town of Danville to explore potential future public access points into Southern Las Trampas from the Peters Ranch property and the Faria open space property as future acquisitions allow.



Marker indicating a partnership for the Land & Water Conservation Fund.

5. REPORT PREPARATION AND REFERENCES

5.1 REPORT PREPARATION

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Evans & DeShazo, Inc., *Cultural and Paleontological Resource and Historic Resource Evaluation*

All maps and figures prepared by Meg Peterson, Park District GIS Programmer, unless otherwise noted.

All photos taken by Park District staff, unless otherwise noted.

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APPENDIX A - Grazing Unit Management Plan

Grazing Unit Management Plan
Southern Las Trampas Wilderness Regional Preserve
Grazing Units 1 and 4 and the Faria Property

Prepared by
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East Bay Regional Park District

July 8, 2021

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Abbreviations and Acronyms used in this plan

AUM: animal unit month

AWS: Alameda whipsnake (*Masticophis lateralis euryxanthus*)

Cal-IPC: California Invasive Plant Council

CEQA: California Environmental Quality Act

CNDDB: California Natural Diversity Database

CRLF: California red-legged frog (*Rana draytonii*)

EBMUD: East Bay Municipal Utility District

EBRPD: East Bay Regional Park District

EQIP: NRCS Environmental Quality Incentives Program

GMP: grazing management plan

LTMP: long-term management plan

LUPA: land use plan amendment

MMP: mitigation and monitoring plan

NRCS: USDA Natural Resources Conservation Service

NRM: natural resource management

Park District: East Bay Regional Park District

RCD: resource conservation district

RDM: residual dry matter

SRPA: Special Resource Protection Area

USDA: United States Department of Agriculture

USFWS: United States Fish and Wildlife Service

I. Introduction

A. Purpose for livestock grazing on Park District lands

Livestock grazing is a primary management tool used by land managers to achieve multiple conservation and resource management goals (Huntsinger et al. 2007; Bartolome et al. 2014). As described in its current Master Plan, the East Bay Regional Park District (Park District) manages its properties for multiple goals, including natural and cultural resource conservation, recreation, environmental education, and fire hazard reduction (EBRPD 2013). One of the Park District's fundamental natural resources management policies is to:

> *maintain, manage, conserve, enhance, and restore park wildland resources to protect essential plant and animal habitat within viable, sustainable ecosystems* (EBRPD 2013, policy NRM1, p. 38).

To achieve these goals, the Master Plan states that the Park District will:

> *conserve, enhance and restore biological resources to promote naturally functioning ecosystems. Conservation efforts may involve using managed conservation grazing in accordance with the District's Wildland Management Policies and Guidelines, prescribed burning, mechanical treatments, Integrated Pest Management and/or habitat protection and restoration* (EBRPD 2013, policy NRM8, p. 41).

Livestock grazing can help:

- enhance habitat values for wildlife species and native plant species;
- control invasive plants;
- maintain grassland-shrubland boundaries, preserving grassland habitat;
- maintain or enhance native biodiversity;
- minimize wildfire potential.

In addition to these conservation activities, the Park District employs livestock grazing as a vegetative fuels management tool. Livestock consume and trample vegetative fuels and also slow the encroachment of fuel-rich woody vegetation into grasslands (Russell and McBride 2003; Huntsinger et al. 2007).

B. District grazing program

The Park District licenses livestock operators to graze their livestock (cattle, sheep, or goats) on Park District grazing units, following management, conservation, and other regulations detailed in a grazing license. The grazing license itself derives from Park District goals and policies, including those in the 2013 Master Plan, the 2001 Wildland Management Policies and Guidelines (currently under revision), and the 2005 Wildland Vegetation Management Program Procedural Manual (EBRPD 2013, 2001, 2005). Park District grazing licenses vary in their terms, from month-to-month, to one year, two years, or five years, and Park District licenses may allow for a one-time option to renew the term. Grazing season may be seasonal (typically November–May) to year-round.

The Wildland Vegetation Manager and the Rangeland Specialist and their staff in the Stewardship Department manage the overall Park District grazing program; Operations staff

manage day-to-day interactions with the grazing tenants in their specific parks. Grazing tenants are expected to communicate frequently with Operations staff and the Rangeland Specialist regarding distribution of livestock, range conditions, infrastructure improvements, observations of non-native invasive plants, livestock predator concerns, public-livestock interactions, and other issues.

In close collaboration with Park Operations staff, the Rangeland Specialist:

- manages grazing tenant selection through the Request for Proposals process,
- oversees grazing license implementation and biannual grazing tenant billing;
- determines stocking rates and grazing seasons, based on annual weather conditions, range conditions, residual dry matter (RDM) targets, and other factors;
- manages the grazing infrastructure improvement program, often in partnership with the USDA Natural Resources Conservation Service (NRCS) and a county Resource Conservation District (RCD), and
- manages RDM monitoring and other grazing program-related monitoring.

C. Brief description of grazing units

This plan covers Grazing Unit 1 and Grazing Unit 4 in the southern portion of Las Trampas Wilderness Regional Preserve. Grazing Unit 1 comprises the Chen and Podva parcels and portions of pre-existing Las Trampas parkland (Figure 1-1; Table 1-1). Grazing Unit 4 comprises the Elworthy and Peters Ranch parcels (Figure 1-1; Table 1-2). In addition, the District anticipates that the Faria property, adjacent to the Elworthy and Peters Ranch parcels, will also be acquired and incorporated into the Southern Las Trampas Wilderness Regional Preserve (Figure 1-1; Table 1-3).

The Podva and Faria parcels have conservation easements covering part of their acreages that have specific land use restrictions and additional land management and monitoring requirements to protect covered species and their habitats (Figure 1-1). Both conservation easements have associated long-term management plans (LTMP; Live Oak Associates 2016a; Olberding Environmental 2015b). Faria's LTMP includes a grazing management plan (GMP) as an attachment (Olberding Environmental 2015a). Although these LTMPs are the governing documents for the lands under conservation easement, they defer to a certain degree to Park District management and monitoring practices: the Podva LTMP states that livestock grazing "will be managed by EBRPD in a manner that is consistent with their current grazing practices" (Live Oak Associates 2016a, p. 19). Similarly, the Faria GMP states that Park District procedures and policies "would supersede or replace the details of this grazing management plan" (Olberding Environmental 2015a, p. 1).

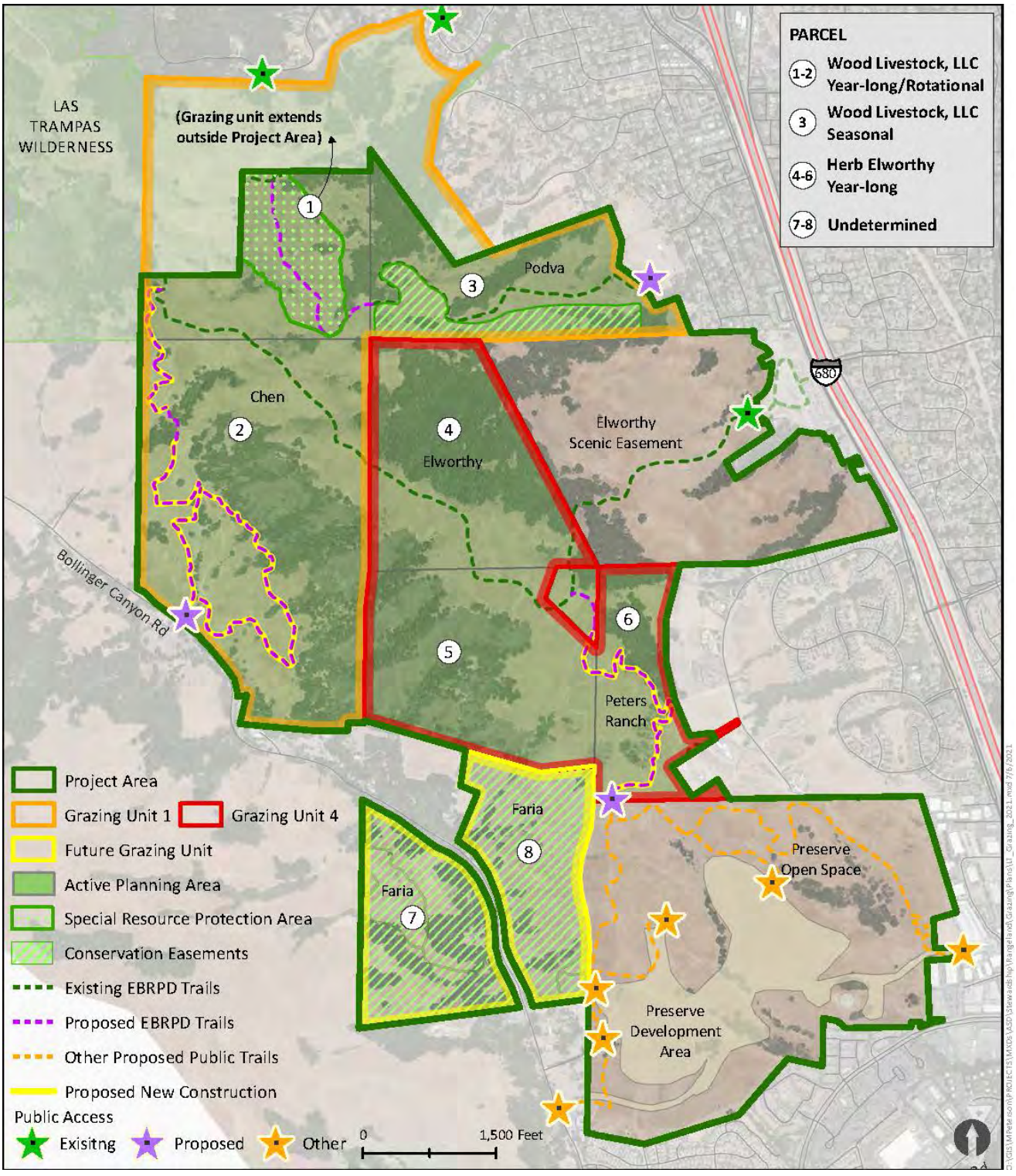
PARCEL
1-2 Wood Livestock, LLC Year-long/Rotational
3 Wood Livestock, LLC Seasonal
4-6 Herb Elworthy Year-long
7-8 Undetermined
LAS TRAMPAS WILDERNESS
(Grazing unit extends outside Project Area)
Podva
Chen
Elworthy
Elworthy Scenic Easement
Bollinger Canyon Rd
Peters Ranch
Faria
Preserve Open Space
Preserve Development Area
680
Project Area
Grazing Unit 1
Grazing Unit 4
Future Grazing Unit
Active Planning Area
Special Resource Protection Area
Conservation Easements
Existing EBRPD Trails
Proposed EBRPD Trails
Other Proposed Public Trails
Proposed New Construction
Public Access
Exisitng
Proposed
Other
0
1,500 Feet

Table 1-1: Acreage of Grazing Unit 1 of the Southern Las Trampas Wilderness Regional Preserve

Parcels	Total acreage	Acres under conservation easement
Chen	227.8	none
Podva	96	30
Pre-existing Las Trampas parkland	217.7	none
Total	541.5	30

Table 1-2: Acreage of Grazing Unit 4 of the Southern Las Trampas Wilderness Regional Preserve

Parcels	Total acreage	Acres under conservation easement
Elworthy	232	none
Peters Ranch	58.8	none
Total	290.8	none

Table 1-3: Acreage of Faria property to be incorporated into the Southern Las Trampas Wilderness Regional Preserve

Parcels	Total acreage	Acres under conservation easement
Faria	141	136

The Faria parcel is not yet owned by the Park District and, as of June 2021, has not yet been assigned to a grazing unit. Because the parcel is bisected by Bollinger Canyon Road, it may be assigned to two different grazing units.

II. Goals and objectives

A. General Park District grazing-related goals

The Park District's natural resource management policies are laid out in the current Park District Master Plan (EBRPD 2013). Specific policies relevant to livestock grazing and vegetation management are listed in Section I.A above and in the Southern Las Trampas Wilderness Regional Preserve Land Use Plan Amendment (LUPA; EBRPD 2020a), of which this grazing plan will be an appendix.

Noting that it is a "stewardship management tool and is entered into to further the Park District's goals and purposes related to land stewardship", the Park District grazing license lists the following objectives in relation to livestock grazing in its parklands (EBRPD 2020b):

1) minimize wildfire potential and brush encroachment,
2) maintain or enhance native grassland communities,
3) control and manage invasive weedy vegetation,
4) enhance wildlife habitat,
5) protect and enhance riparian and wetland habitat values, and
6) control and minimize erosion.

In addition to the Park District's general goals for its wildland vegetation program, the properties under conservation easements, Podva and Faria, have associated LTMPs with specific goals and outcomes related to protection of listed sensitive species and their habitats. Both LTMPs emphasize that livestock grazing is integral to the management of the lands under conservation easement (Live Oak Associates 2016a; Olberding Environmental 2015a,b).

B. Podva conservation easement grazing-related goals

The Podva property's 30 acres of conservation lands (of 96 total acres) are protected in perpetuity under a conservation easement to mitigate impacts to the federally listed species, California red-legged frog (*Rana draytonii;* CRLF) and Alameda whipsnake (*Masticophis lateralis euryxanthus*; AWS). Podva's LTMP lists the following conservation and management goals relevant to this grazing plan:

- Maintain habitat that can support viable, self-sustaining populations of CRLF and AWS within the identified conservation lands.
- Establish a conservation program for the project and conservation lands that is consistent with published recovery plans.
- Implement an effective adaptive management program.
- Ensure that the use of the conservation lands for grazing operations is compatible with the overall goal of maintaining habitat values for CRLF and AWS.
- Permit ongoing grazing operations, especially to reduce potential fire danger, and prohibit future development of these lands (Live Oak Associates 2016a).

C. Faria conservation easement grazing-related goals

Almost all of the Faria property is under conservation easement (136 of 141 acres), with the primary purposes of preserving wetlands and riparian habitat and potential habitat for Alameda whipsnake and for California red-legged frog (Olberding Environmental 2015b). The LTMP for the Faria conservation easement states that:

- The overall goal of long-term management is to ensure the long-term preservation of the habitats of the Preserve.

Additional goals in the Faria plan include:

- Maintain the existing competitive advantage of grassland species over exotic invasive annual plant species.
- Implement annual grazing on the Preserve to maximize habitat values.

- Prevent impacts to wetlands from sedimentation and erosion.
- Maintain the site as required for fire control while limiting impacts to biological values (Olberding Environmental 2015b).

The Faria GMP list some grazing-specific objectives (Olberding Environmental 2015a, pp. 1-2):

- Thatch reduction - Maintain grassland herbaceous cover that is conducive to the management of non-native species yet favorable to native grass species.
- Fuel management – Reduce the fire hazard associated with the mass of dry herbaceous vegetation in the grasslands during the summer and autumn seasons.
- Weed reduction – Avoid as much as possible the expansion of invasive non-native plant pests.
- Sustainability – Maintain quality forage and other conditions of the grassland ecosystem heath to sustain use by a healthy herd of livestock. Provide contractual and working conditions for the livestock operator to foster a cooperative and mutually economically beneficial environment for continued use of grazing in order to protect the conservation values of the proposed grazing areas.

An additional goal in the plan is that:

Grazing will be managed to maximize benefits to habitat and water quality which may mean that the maximum number of livestock according to forage production will not be allowed to be grazed on the site.

III. Existing conditions

A. Physical context

The regional climate is Mediterranean, characterized by warm, dry summers and cool, wet winters (see LUPA Chapter 2: Existing Conditions for details). The rainy season generally occurs from October through April; however, rainfall amount and timing vary significantly from year to year, with consequent fluctuations occurring in herbaceous production and species composition between years.

As detailed in the Park District LUPA for the project area in which the two grazing units occur, topography is generally steep, resulting in winter and spring flooding and the potential for movement of sediment (EBRPD 2020a). Two primary soil series are found in the project area (see LUPA map: Figure 9: Soils):

- Los Osos clay loam, with medium runoff potential and moderate erosion hazard, and
- Milsholm loam, with very high runoff potential and high to very high erosion hazard where soil is bare (Welch 1977).

Surface water occurs as ephemeral creeks, springs and seeps, and small stockponds (see LUPA map: Figure 10: Watersheds, Wetlands, and Drainages). Grazing Unit 1 contains 5 stockponds in its northern section (ltpnd002, ltpnd003, ltpnd005, ltpnd009, and ltpnd010) and 1 stockpond (ltpnd006) on the western slope of the Chen property; depending on annual rainfall, these

stockponds can hold water into the summer months. The LUPA recommends designating the 5 stockponds in northern Chen as a Special Resource Protection Area (Figure 1-1). The Podva property in Grazing Unit 1 contains two stockponds (ltpnd007 and ltpnd008), both fenced but currently open to livestock; in normal rainfall years, the stockponds hold water into the summer. Two seasonal tributary channels occur along Podva's northern and southern boundaries. In Podva's conservation easement area, two ephemeral stream channels were created and revegetated with native grasses and forbs, approximately between the two stockponds, to compensate for impacts in the development area (Live Oak Associates 2016b).

Neither Grazing Unit 4 nor the Faria property contains stockponds. The Faria property includes several ephemeral drainage channels (Olberding Environmental 2015b).

B. Biological resources and land use history

1. Vegetation communities and livestock effects

The primary vegetation types in the LUPA project area are California annual grassland and oak/bay woodland (see LUPA natural communities/habitat types map). Smaller patches of riparian and wetland vegetation, chaparral, and coastal scrub also occur.

California annual grassland is typically dominated by non-native, naturalized annual grasses and forbs, including several annual bromes (*Bromus* ssp.), wild oats (*Avena* spp.), foxtail barley (*Hordeum murinum*), several annual *Festuca* grasses, filaree (*Erodium* spp.), and annual legumes (e.g., *Trifolium* spp., *Medicago polymorpha*; Bartolome et al. 2007). Invasive or weedy thistles and mustards are also common in the California annual grassland, some of which may be partially controlled with livestock grazing (Huntsinger et al. 2007). In most areas, native plants now provide only a very small percentage of the total cover. Numerous native plant species remain, however, and can make up a substantial proportion of the grassland species richness (number of species), the majority of which are annual forbs (Schiffman 2007).

California annual grassland exhibits considerable spatial and temporal variation at many scales. Annual rainfall amount and timing, temperatures during the growing season, soil chemistry and texture, and topography, all of which exhibit significant variability, largely determine grassland species composition, biomass production, and dominance relationships (Eviner 2016). Livestock grazing and other management activities generally do not cause spatially or temporally consistent changes in grassland community composition at the landscape level (Jackson and Bartolome 2002), although in some specialized community types such as vernal pools, grazing does appear to maintain native diversity and abundance (Marty 2015). Livestock grazing is a useful tool for reducing herbaceous biomass, which can enhance habitat for native plants and animals (see, for example, Gennet et al. 2017) and reduce grassland fuels. As part of an integrated pest management process, livestock grazing can also control some invasive plants. Grazing also helps maintain open grassland by limiting shrub encroachment.

Oak/bay woodland in the project area consists primarily of dense, closed canopy groves within steep ravines on east-facing and northwest-facing ridges of the western slopes. Coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), valley oak (*Q. lobata*), and

California buckeye (*Aesculus californica*) are the overstory dominants. The understory contains some shrub species such as poison oak (*Toxicodendron diversilobum*) and California blackberry (*Rubus ursinus*); the herbaceous layer is limited and generally comprises familiar grassland species.

Coast live oak is fairly resistant to livestock grazing; valley oak may be more susceptible to livestock impacts (Allen-Diaz et al. 2007). The limited herbaceous biomass and steep slopes of the project area's oak woodland are unlikely to prove inviting to cattle.

Riparian habitat is a critical wildlife resource, especially for birds, and is used by a wide variety of species. The project area's riparian zones vary from herbaceous-dominated to wooded. On the Podva property, a wetland swale is associated with the lower pond, and a second wetland swale is in the grasslands along Podva's southern boundary (Live Oak Associates, Inc. 2016a). Podva contains a population of the native grass, creeping wildrye (*Elymus triticoides*), which covers as much as 50% of the parcel.

Because riparian zones offer green vegetation, water, and shade, they are typically focal points for cattle (Spiegal et al. 2016). Wetlands, indicated in the project area primarily by non-native herbaceous species, can also receive frequent use by cattle. In a study of East Bay spring-fed wetlands, Allen-Diaz et al. (2001) found no evidence that the presence of grazing affected overall community type, although vegetative structure of wetlands with willows differed when grazed.

Potential actions to reduce livestock impacts in riparian zones and wetlands include installing troughs and placing supplements far from these areas to draw livestock away from them. Excluding livestock with fencing is also an option, although an expensive one and with drawbacks of its own, including disturbing the riparian zone/wetland during fence installation, impeding wildlife access to drinking water and to the riparian zone/wetland in general, and potentially encouraging, in the absence of grazing, riparian weeds.

Chaparral and coastal scrub generally receive little cattle use, as they offer negligible forage, are often densely vegetated, and generally occur on steep slopes in the LUPA project area. Livestock impacts may include limited trail creation and trampling of vegetation.

2. Listed species and livestock effects

The LUPA project area contains habitat for two federal and state listed species:

1. California red-legged frog (Federally Threatened), and
2. Alameda whipsnake (Federally Threatened, State Threatened).

In addition, a review of the California Natural Diversity Database and limited field surveys indicates the vegetation communities provide potential habitat for special status plant species and the California tiger salamander (*Ambystoma californiense*). No special status plant species were observed during two spring field surveys in 2017 and 2018 (EBRPD 2020a).

In 2011, a California red-legged frog breeding population was observed in Podva's upper pond (Live Oak Associates, Inc. 2016a). The Podva LTMP states (Live Oak Associates, Inc. 2016a):

> The covered species would benefit from a program that manages the grazing cycle specific to their needs. Grazing intensity, season of livestock use, type and class of livestock, and frequency of use are important grazing parameters for managing for the covered species. Moderate to heavy stocking rates have been found to benefit the covered species (Barry 2011; Germano et al. 2011).

The Faria LTMP states that Alameda whipsnake and California red-legged frog have the potential to occur in the area under conservation easement; the area also falls within critical habitat for the Alameda whipsnake (Olberding Environmental 2015b).

a) Alameda whipsnake

The US Fish and Wildlife Service's (USFWS) 2011 five-year status review of Alameda whipsnake states that the original 1997 USFWS listing, "indicated that livestock grazing, if appropriately managed, could benefit the Alameda whipsnake". The 2011 five-year review concluded that, "through appropriate timing and stocking levels, grazing can be used to target and control some non-native invasive plant species" (USFWS 2011, p. 22), potentially improving habitat for the Alameda whipsnake.

The USFWS 2020 five-year status review made no mention of livestock effects on Alameda whipsnake (USFWS 2020).

b) California red-legged frog

The USFWS recognizes that livestock use is "important . . . for maintaining and enhancing habitat for California red-legged frog" (USFWS 2010, p. 12827). For breeding habitat, emergent vegetation is a key characteristic that is affected by grazing. The frog needs some aquatic vegetation for cover and for anchoring egg masses, but too much emergent vegetation can shade the pond, reducing water temperature below suitable for breeding and for tadpoles (Ford et al. 2013). Park District staff reported that California red-legged frog was most commonly found in Park District ponds with less than 40% cover of emergent vegetation (Bobzien and DiDonato 2007). While excessive grazing can reduce emergent vegetation to undesirable levels, ponds excluded from grazing provide lower quality habitat (Ford et al. 2013). Ford et al. (2013) describe strategies for maintaining appropriate levels of cover. Additional potential livestock impacts include (Ford et al. 2013):

- Livestock could crush California red-legged frog eggs or individuals, although such an event is probably rare.
- Nutrient loading of ponds from livestock manure and urine could have negative impacts, although Bobzien and DiDonato (2007) found low or non-detectible nitrate levels in their study on Park District ponds.

California red-legged frog also appears to benefit in some locations from shorter vegetation found in grazed annual grasslands, probably because migration between breeding and refuge

habitat is easier (Ford et al. 2013). Refuges can include ground squirrel burrows, which tend to be more abundant in grazed grasslands; patches of dense vegetation (e.g., ungrazed) can also serve as temporary refuges (Ford et al. 2013; Van Hoorn and Ford 2018).

To date, the USFWS has not issued any five-year reviews following its 2002 recovery plan (see https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=D02D).

3. Land use

Land-use history can have significant impacts on current vegetation composition, structure, and productivity. In particular, several California grassland researchers have noted that native perennial bunchgrasses and native annual forbs are rarely found in former crop fields (Bartolome et al. 2007). Per the LUPA, land use dating back to the start of the 1800s was primarily livestock grazing; crop agriculture occurred in suitable locations (EBRPD 2020a). The historic and current land use of both the Podva and Faria parcels has been livestock grazing, although grazing in the Podva parcel was discontinued for several years in the mid-2000s (Live Oak Associates, Inc. 2016a; Olberding Environmental 2015b).

C. Grazing infrastructure

Grazing infrastructure in the two grazing units comprises boundary fencing, interior fencing, gates, and livestock water systems (Figure 3-1; Barry et al. 2016; Nader and Drake 2006). Under the terms of the Park District grazing license, the grazing tenant is responsible for maintaining infrastructure in good condition. New infrastructure construction or major infrastructure improvements are undertaken through the Park District's Resource Improvement Authorization process, or in partnership with the NRCS or county RCD.

Grazing infrastructure should meet Park District specifications, which are available from the Park District Rangeland Specialist. Placement of water troughs will minimize livestock impacts on rangeland resources to the extent possible by avoiding areas with erosion potential like steep slopes, riparian areas, along unpaved tracks, and on fragile soils. All livestock water troughs will have wildlife escape ramps. These ramps provide wildlife with access to water for drinking and bathing while minimizing drowning hazard, and can also improve livestock performance by reducing water contamination (NRCS 2015).

For Grazing Unit 1, a temporary corral structure will be placed elsewhere on the Chen property while the existing corral location on Bollinger Canyon Road is demolished and a park staging area constructed. A more permanent corral location will be selected at a later date.

In 2018, the grazing tenant for Grazing Unit 1 collaborated with the NRCS to improve the water distribution system on the Chen property to enhance grazing management. With funding from the federal Environmental Quality Incentives Program (EQIP), the grazing tenant was able to develop water infrastructure improvements from the open parkland in Las Trampas to the existing cattle corral on the Chen property (Figure 3-1).

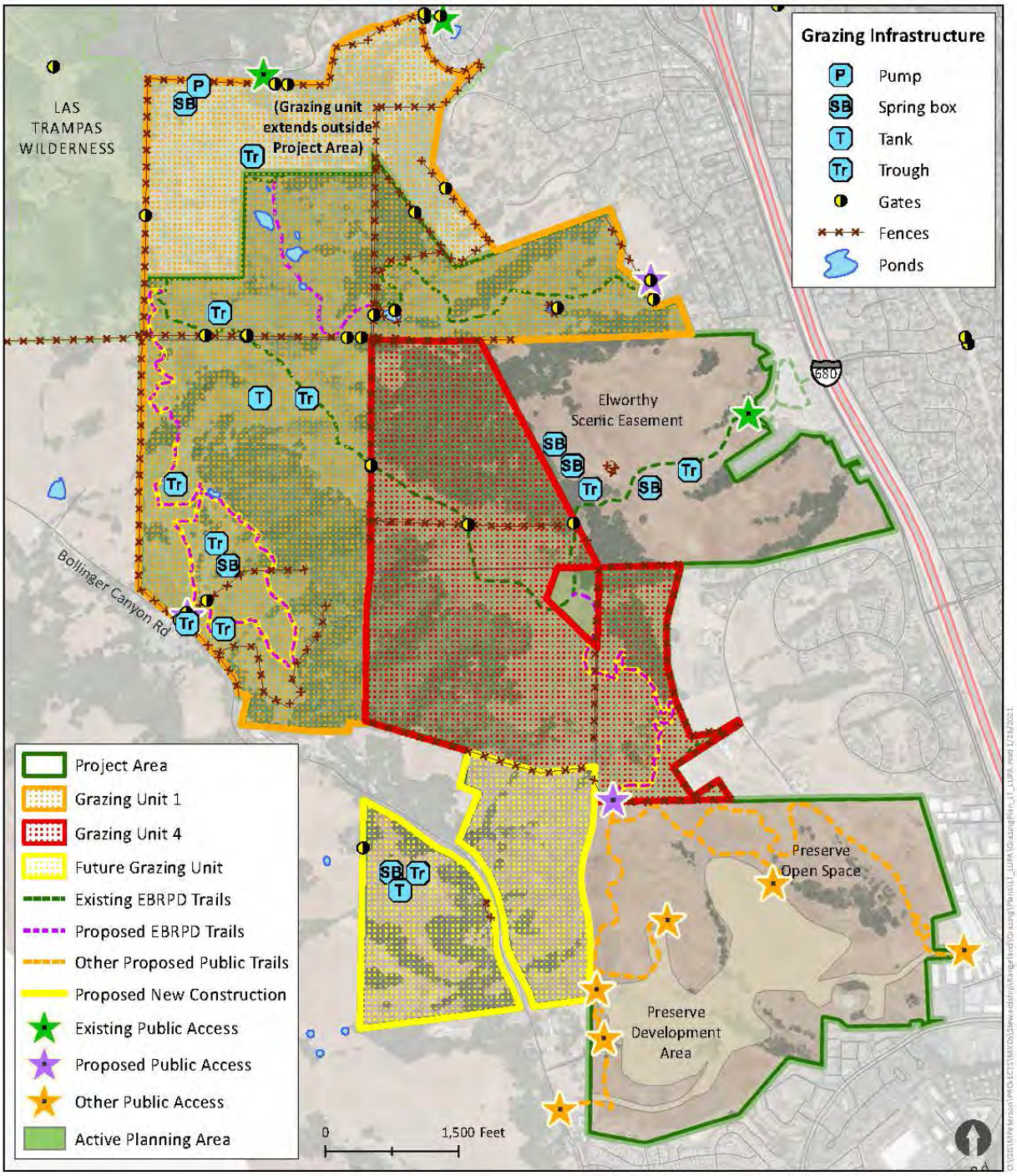

Figure 3-1: Southern Las Trampas Wilderness Regional Preserve Grazing Infrastructure

The improvements included a solar-powered pump, aboveground storage tanks, water troughs, and installed water pipelines to improve the water distribution throughout the property for livestock grazing (Figure 3-1). The water source for the project is a developed spring located within Las Trampas but outside the project area (see upper left corner of Figure 3-1; Figure 3-2) that previously flowed into existing troughs within the wetland footprint, adjacent to the spring. As part of this project, the troughs were decommissioned to discourage cattle from the spring area. The new system delivers the spring water to a 5,000-gallon aboveground storage tank about 350 feet away from the spring. An in-line solar pump (Figure 3-3) boosts water from this tank up the hill heading south to another 5,000-gallon aboveground storage tank and gravity-feeds to six livestock water troughs. Overflow from the watering system is directed back to the spring area to support wetland function.

Figure 3-2: Spring cased in rock and concrete house.

Figure 3-3 (right): Grazing tenant Ned Wood worked with NRCS to install a solar-powered pump for the water system.

As part of the dedication of the Podva property to the Park District, a shared water agreement between the Park District and Ponderosa Homes, the Redhawk residential developer, was made to assign an East Bay Municipal Utility District (EBMUD) water meter to the Park District. The agreement includes an initial 24 months of shared water use for Ponderosa Homes to meet its mitigation requirements on the Podva property, such as irrigating the mitigation planting area, and for the Park District to provide water for livestock grazing. It is expected that by April 2021, Ponderosa Homes will no longer need the shared water use and at that time will transfer all maintenance and management responsibilities to the Park District. To improve livestock water distribution within the Podva parcel, the Park District intends to install livestock water infrastructure to connect to the EBMUD water meter. The Podva LTMP prohibits “permanent structures, pads, roads, or other facilities” in the Podva conservation acreage (Live Oak

Associates, Inc. 2016a, p. 24); installing water infrastructure that meets this proscription may be a challenge. The two ponds on the Podva property are fenced "to control livestock access to these features" (Live Oak Associates 2016a, p. 19), but cattle are allowed to graze and drink from them.

The two grazing units of the Faria parcel are bisected by Bollinger Canyon Road, and each has undergone wetland creation for mitigation purposes. The unit west of Bollinger Canyon Road has an existing water trough and storage tank that is supplied by a developed spring (EBRPD site visit 2020); however, the tank and trough are within a newly created wetland area and will not be available for livestock use. There are no known developed water sources in the grazing unit east of Bollinger Canyon Road. The eastern unit does have a barn-like structure that can be utilized by the future grazing tenant. According to Attachment 1, Figure 2 in the Faria GMP, riparian exclusion fencing is proposed along the drainage located in the eastern unit to promote plant establishment. If fencing is installed and only after plants have established, will the fenced riparian area be periodically flash grazed with livestock (Olberding Environmental 2015a, pp. 5-6).

D. Current grazing operations (as of 2021)

As of June 2021, Grazing Unit 1 is licensed to Wood Livestock, LLC, which operates a rotational year-round cow-calf herd. The Podva property is very steep and had limited water and fair fencing conditions, making grazing a challenge. Because of these limitations, the Park District currently has a verbal agreement with Wood Livestock to graze Podva seasonally in the spring and fall (approximately February through May and September through December). Gates between Chen and Podva are left open during the seasonal grazing period to provide access to the trough on the Chen side.

Grazing Unit 4 is licensed to Herb Elworthy, who grazes a cow-calf herd year-round and stockers seasonally (approximately late fall through late spring). A single water trough located within the Elworthy Scenic Easement is the only developed water source for this grazing unit.

The Faria property is not currently owned by the Park District and so is not grazed under a Park District license.

IV. Grazing capacity

As defined in the Park District grazing license (EBRPD 2020b), livestock grazing capacity is the level of livestock use allowed on the Premises consistent with forage production, resource conservation, and recreational objectives. Typically, the grazing capacity for a Park District property is determined using vegetation production values for rangeland soil types developed by the NRCS. The NRCS through its online Web Soil Survey (websoilsurvey.nrcs.usda.gov/app/) provides vegetation production estimates for soil map units at 3 levels of annual production, favorable, average, and unfavorable, resulting from variation in amount and distribution of precipitation and in temperature over the course of a growing season. These estimates are based

upon an extensive, long-term vegetation sampling program conducted by the NRCS and its cooperators.

Starting with this range of total vegetative production, the Park District residual dry matter (RDM) target amount is subtracted from the total production, resulting in potential levels of forage available for livestock, under 3 vegetative production scenarios. RDM is a measure of dry, herbaceous plant material, representing the amount of plant residue that remains on the ground in the fall. The current Park District license (EBRPD 2020b) states that the "amount of residual dry matter on the ground at the end of the grazing season until regrowth begins shall be approximately 1,000 lbs/acre on all slopes, unless directed otherwise by the specific grazing management plans for the site." Further adjustments to available forage values may be made to account for habitat management, soil stability, water quality, fire hazard, or other considerations.

The unit of measure of livestock grazing capacity is an animal unit month (AUM), which is the amount of forage necessary to sustain a mature cow for a period of one month, defined on Park District rangelands as equivalent to 900 pounds of dry, herbaceous plant material.

See the current Park District licenses for Grazing units 1 and 4 for details about their livestock grazing capacity.

Although long-term vegetation production averages can be determined, these average values have limited practical use under the extreme fluctuations in production caused by California's highly variable annual weather patterns. Grazing capacity estimates provide a range of data points for setting annual stocking rates and provide a general guide around which stocking rates can be adjusted. Stocking rates themselves must be flexible in response to variations in forage production and the timing of actual use.

V. Grazing management

A. Park District grazing license requirements

The current Park District grazing license includes the following provisions:

- the grazing capacity in AUMs for each grazing unit;
- requirements for stocking rate and activity reporting every month by the grazing tenant;
- grazing tenant communication obligations, including an annual review and planning meeting in the fall;
- grazing tenant responsibility for achieving the fall RDM target;
- stocking rate reduction or livestock removal contingencies in low forage years;
- grazing tenant responsibilities for weed control;
- grazing tenant responsibilities for routine maintenance of grazing infrastructure;
- grazing tenant participation in infrastructure improvements through the Park District Resource Improvement Authorization process or in partnership with the NRCS or county RCD; and

- grazing tenant responsibilities for livestock management, including animal identification, prompt carcass disposal, maintenance of animal health, removal of problem animals; reporting of infectious animal disease and prompt removal of livestock exhibiting symptoms of diseases communicable to humans (EBRPD 2020b).

The grazing license also details the permitted use of supplemental feed:

- Livestock shall not receive supplemental feed (hay, alfalfa) to prolong grazing use, except under unusual or emergency circumstances and then only with the explicit permission of the Park District.
- Nutritional supplements are allowed and should be relocated, when sites become sufficiently grazed, to minimize the potential for resource damage from congregating animals.
- Nutritional supplements will be placed out of sight of roads, trails, and public use areas, in under-utilized areas and at least ¼ mile away from water, whenever possible.

B. General grazing management recommendations

Setting a stocking rate in California generally requires retrospective rather than prospective consideration. Annual forage production in California cannot be accurately predicted until February, by which time it is generally too late for a livestock operator to adjust herd size without significant financial impact; livestock decisions for the following spring are typically made in late summer/early fall of the previous year. Difficulties caused by forage prediction and measurement are part of the realities of grazing management in California.

A key to controlling overstocking is to build in a fall RDM-based rolling stocking rate that allows for flexibility based on weather-induced variation in production but prevents successive years of overuse. When fall RDM meets the minimum target, then the stocking rate suggested by the grazing capacity is appropriate for the following year's grazing season. If fall RDM has fallen below the minimum target, as can happen, for example, in a drought year because of the difficulty of predicting forage production before the start of the grazing season, the stocking rate for the following year's grazing season may need to be reduced. The reduced stocking rate is likely to ensure that fall RDM minimum targets are achieved for that grazing season. In other words, livestock use to below the fall RDM target may occasionally occur but only within a single season, which is unlikely to result in long-term damage to the rangeland resource.

In extreme drought years, however, when forage production fails, the Rangeland Specialist may decide that the grazing season has to be curtailed to protect Park District rangeland resources. In years when rainfall is running significantly below average, the Rangeland Specialist, in consultation with Operations staff and the grazing tenant, should re-evaluate forage production projections, animal numbers, and levels of utilization, typically in mid-February. Following the mid-February evaluation, livestock use may need to be modified, either by reducing stocking rate or curtailing the grazing season.

As briefly recommended in the Park District grazing license, placement of livestock attractants, such as salt and mineral licks, provides an opportunity to manage livestock distribution (George et al. 2007, 2008). Livestock attractants are useful both for drawing animals away from sensitive

or focal areas (for example, riparian zones) and for luring livestock to locations that would benefit from additional livestock use (e.g., high fire risk areas, wildlife habitat). RDM monitoring should prove helpful in determining where attractants could be located to meet management goals.

Maintaining up-to-date, accurate, and detailed grazing infrastructure records, preferably in a spatial database, is an important factor in planning for management actions related to the grazing program, including infrastructure maintenance and improvement. It is good practice to collect and incorporate into the database missing information such as fence type and dates of infrastructure installation and of major infrastructure maintenance. Assessing grazing program infrastructure needs at least annually is recommended.

Employing an adaptive management process is recommended, especially when the optimal management activity to achieve a particular management goal is not obvious. The adaptive management process entails setting clear goals, implementing management activities, monitoring management and control (i.e., non-managed locations) areas, analyzing monitoring data to determine whether management activities have achieved the goals, and then using the monitoring data to decide on next management steps. In general, designing monitoring protocols, including those for analysis and reporting, to meet the needs of the adaptive management process is a useful practice. See Section VI.C for detailed discussion of the adaptive management process.

C. Control of invasive plants with prescribed grazing

Controlling invasive plants has proven to be one of the greatest challenges facing California rangeland managers and restoration practitioners (Stromberg et al. 2007). Preventing new infestations is generally acknowledged as the most cost-effective method of managing invasive species (Lodge et al. 2006; Zavaleta et al. 2016), and, to the extent possible, grazing tenants should follow best management practices that reduce the likelihood that invasive plants are introduced into Park District land via livestock, vehicles, and livestock management activities (Cal-IPC 2012). For example, when possible, livestock grazing in weed-infested areas should occur before weed seeds have developed, reducing the likelihood that livestock will transport weed seeds to weed-free areas. Tools, equipment, vehicles, and clothing should be cleaned and free of weed seed/plant parts before grazing tenants enter Park District land. Many of these best management practices may also help reduce the spread of plant pathogens, such as *Phytophthora*.

Invasive plant management tools available to rangeland managers include livestock grazing; however, a single weed management tool typically does not result in successful control (DiTomaso et al. 2007). To increase the likelihood of successful long-term control, weed management experts recommend combining several weed management methods, tailored to situation-specific goals, constraints, and opportunities (DiTomaso et al. 2007).

Using livestock to control invasive plants often requires prescribed grazing, which is the application of specified livestock grazing actions to accomplish specific vegetation management goals. Grazing intensity, animal distribution, and grazing period are often rather different from standard, light to moderate intensity grazing, and animal performance may be significantly

affected. Consequently, working closely with the grazing tenant is necessary and may require reduced grazing fees if animal performance is likely to suffer significantly. Furthermore, intensive grazing, sometimes necessary for successful weed control, can have undesirable consequences:

- concentrated hoof impacts and greatly reduced vegetative cover (i.e., RDM) could result in increased soil erosion,
- greater area of bare ground may allow other weed species to establish and thrive, and
- intensive grazing may significantly impact desirable species in the weed-infested area.

Those caveats noted, prescribed grazing can work well in controlling some weed species (DiTomaso et al. 2007). An essential planning factor is that prescribed grazing has to be timed to the target species' phenology. Grazing must occur when weeds are most vulnerable to defoliation; poorly timed grazing can benefit the target species (Huntsinger et al. 2007). Timing prescription grazing to avoid vulnerable periods for desirable plants like native bunchgrasses may also be necessary. Another consideration is the effect of prescribed grazing on stocking rate: forage consumed as part of a grazing prescription should be considered when making stocking rate decisions, although Animal Unit Months in weed-infested areas may differ from standard calculations.

A further weed control-livestock grazing consideration arises in cases when herbicide is employed. If herbicide use is being contemplated, it is important to account for the fact that some herbicides have restrictions for use in rangelands; treated areas may have to be excluded from livestock grazing for weeks or even an entire season, depending on the herbicide (DiTomaso et al. 2013; Prather 2017). For example, Clethodim, recommended for goatgrass control, is not registered for use on land grazed by livestock unless grazing is excluded for 1-2 years (Beitz 2016). Herbicide use on rangeland weeds can also result in loss of organic certification for livestock that graze in the treated area so grazing tenants with organic livestock operations should be consulted before herbicides are used in their license areas. Although these trade-offs may be well worth making to control a weed population, the restriction on livestock use should be planned for, in consultation with the grazing tenant.

D. Grazing systems

Broadly speaking, a grazing system is any planned grazing program that controls livestock grazing to achieve specific goals. Since the 1940s, many specialized grazing systems have been developed in the western U.S., generally with the goals of restoring degraded rangeland sites, increasing vegetative production, or increasing livestock production (Holechek et al. 2011, p. 168). Although planned year-round grazing falls under the broad definition above, the term 'grazing system' is most often used to refer to a specialized form of grazing that entails rotating livestock among two or more pastures or other management units, often with periods of grazing and non-grazing recurring within a year or season (Vallentine 2001, p. 473). Compared to continuous grazing, rotational grazing systems tend to be more expensive to implement because of increased infrastructure (water developments and fencing) and labor costs (Barry et al. 2015).

Rotational grazing can vary from 'seasonal suitability grazing' to 'intensive rotational grazing,' among numerous other rotational systems (see chapter 14 in Vallentine 2001 and chapter 9 in

Holechek et al. 2011 for comprehensive reviews). In seasonal suitability grazing systems, animals are moved between pastures over the course of the season in a flexible scheme to take advantage of available forage, water, or other requirements. In intensive rotational grazing systems, pastures are grazed intensively by many animals per unit area for a short period (multiple times per day to a week or two) before the animals are moved to another pasture, and pastures are typically grazed repeatedly over the season (Barry et al. 2015). A recent survey of California ranchers found that many ranchers practiced rotational grazing of the seasonal suitability variety, but only a small percentage of the respondents practiced intensive rotational grazing, suggesting that California ranchers generally do not perceive sufficient net benefits resulting from intensive rotational systems (Roche et al. 2015).

Rotational grazing using medium to high intensity and medium to high frequency use of multiple, subdivided pastures is known to provide some benefits in mesic grasslands and irrigated pasture (Briske et al. 2008). In drier grasslands like the California annual grassland, studies have generally found no increase in livestock or vegetative production compared to continuous grazing (Vallentine 2001, p. 479; Briske et al. 2008; Holechek et al. 2011, p. 182; Barry et al. 2015). Rotational grazing studies have rarely been conducted in California; two studies in the California annual grassland found no benefit from rotational grazing compared to year-round grazing (Heady 1961; Ratliff 1986). Claims have been made that intensive rotational grazing also provides conservation benefits, but the evidence to support these claims is limited (Briske et al. 2013; 2014). Bartolome et al. (2014, p. 42) state: "[T]here is observational evidence for the effectiveness of seasonal use to improve habitat quality, but evidence for the habitat value of rotational grazing management is lacking." Importantly, intensive rotational grazing systems are typically designed to reduce the selectivity practiced by livestock and consequently increase the evenness of grazing use in a pasture (Heady 1961; Fuhlendorf and Engle 2001). The resulting homogeneity of vegetation structure across the landscape can work against conservation goals for a wide variety of taxa, including special status species (Fuhlendorf et al. 2012; Barry et al. 2015). The Park District applies livestock grazing to encourage a mosaic of vegetation structure and function across its rangelands to benefit biodiversity and ecosystem health in order to maintain conservation and climatic resiliency.

E. Climate change resiliency

With the advent of climate change, extreme drought years and multiyear droughts appear likely to occur with greater frequency in California (Polley et al. 2013; Chaplin-Kramer and George 2013); this will significantly affect grazing management in the Park District. Typical drought contingencies that grazing operators implement include moving livestock to other pastures nearby or to regions unaffected by drought, reducing overall herd size, early weaning, and supplemental feeding (McDougald et al. 2001). Pro-active planning for major drought events is highly recommended, and grazing tenants should participate in this strategizing. Important considerations include:

- creation of drought contingency plans,
- the need for reliable livestock water sources even after multiple years of drought,
- the circumstances in which supplemental feeding might be permitted, and
- how supplemental feeding would be implemented to minimize impacts of rangeland resources.

The Park District might consider developing a grassland bank strategy for certain parks to mitigate the impacts of extreme droughts. A grassland bank is a pasture that is held in reserve and only grazed intermittently as needed. Grassland banks could be a useful strategy in adapting to severe droughts that may occur more frequently with climate change. In addition, grassland banks can provide a manager with the flexibility to use management tools, such as prescribed fire, that temporarily reduce forage in a pasture without undue impact on a grazing tenant because livestock can be moved to the grassland bank.

F. Managing livestock-park user interactions

Overall, in the Park District's experience there are relatively few negative interactions between livestock and park users. However, the Park District takes all such incidents seriously and has developed proactive actions to address this concern.

Grazing animal informational signage is posted at the staging areas of parks with livestock grazing to acquaint park users about the presence and purpose of livestock. The signs describe the benefits of livestock grazing, including maintenance of healthy grasslands, reduction of vegetative fuel to reduce wildfire risk, control of shrubs and invasive weeds, enhancement of plant diversity including wildflowers and native grasses, and enhancement of wildlife habitat. The Park District also places signage directed at park users with dogs at the entrance gates of grazing units, notifying users that they are entering a cattle-grazing area and that when cattle are present, their dogs must be on leash. The Park District website also identifies those parks with livestock grazing so park users can choose what type of park to visit.

Any negative interactions that occur are recorded and handled by the park supervisor and the Public Safety Department. Claims filed with Public Safety are evaluated by the Risk Department. Grazing tenants are required in their licenses to remove identified problem livestock. Activities such as moving troughs away from trails, reconfiguring fence lines, and installing new corrals are conducted by Park District grazing tenants to minimize potential negative interactions.

G. Special Resource Protection Area

The LUPA recommends designating the 5 stockponds in northern Chen as a Special Resource Protection Area (SRPA) to protect habitat for California red-legged frog and California tiger salamander (Figure 1-1). Cattle grazing will continue in the SRPA as a habitat management tool to benefit the two special status amphibians (Ford et al. 2013). Annual monitoring will help determine whether adjustments to the grazing regime are warranted.

H. Podva grazing management requirements and recommendations

The Podva LTMP states that livestock grazing "will be managed by EBRPD in a manner that is consistent with their current grazing practices" (Live Oak Associates 2016a, p. 19). The LTMP requires the development of an annual grazing plan based on an adaptive management strategy. The annual grazing plan should consider:

- Rainfall amount and timing;

- Type and amount of seasonal grass stocks;
- Cattle (or other livestock) market economics;
- Impact of grazing on the covered species [Alameda whipsnake and California red-legged frog];
- Amount and type of livestock to be grazed on the conservation lands;
- Timing of grazing and, if necessary, movement of livestock on the conservation lands; and
- Timing of removal of livestock from all or portions of the conservation lands (Live Oak Associates 2016a, pp. 22-23).

Any activities associated with livestock management that "have the potential to put CRLF or AWS in harm's way" must be implemented with the avoidance and minimization measures specified in the 2016 document, *Redhawk Tract (Podva Property) California Red-legged Frog and Alameda Whipsnake Avoidance and Minimization Measures, Town of Danville, California* (Live Oak Associates 2016a, p. 23).

The LTMP allows for the use of livestock species other than cattle, if desired.

The two ponds on the Podva property are fenced "to control livestock access to these features" (Live Oak Associates 2016a, p. 19); the LTMP suggests short-term grazing inside the fenced ponds to control vegetation.

The Podva LTMP encourages the use of an adaptive management process:

> Adaptive management will be used to adjust the stocking rates and/or level of grazing to account for variations in the natural conditions from year to year. Adaptive management will also continue to be used at the conservation lands to adjust to fluctuations of plant biomass production due to timing, duration and amounts of precipitation events . . . [R]educing stocking rates during drought cycles can provide necessary relief to the covered species by maximizing available forage (prey) during poor years. This is a key part of managing these systems in an adaptive manner: shifting management strategies to maximize forage capacity for the species (Live Oak Associates 2016a, pp. 23, 29).

The LTMP also includes specific RDM targets and grazing intensity instructions:

> Grazing levels will be adjusted appropriately if the following occur:
- RDM exceeds 1500 pounds or falls below 500 pounds or falls outside the range determined to be appropriate by the EBRPD; or
- It is determined that grazing practices are adversely affecting the function and value of existing aquatic or riparian resources or are inhibiting implementation of the MMP, including achievement of the success criteria.

I. Faria grazing management requirements and recommendations

The Faria GMP states that Park District procedures and policies will "supersede or replace the details of this grazing management plan", and that "[a]daptive management should be implemented based on the monitoring results (Olberding Environmental 2015a, pp. 1,6).

Based on NRCS data and current use, an initial stocking rate of "twelve 1,000 pound animals during wet years and ten 1,000 pound animals during dry years" for the Podva parcel is recommended (Olberding Environmental 2015a, p. 3), and thereafter, stocking rates:

> should be adjusted in response to weather and forage. In case of a multi-year drought, cattle may need to be moved off the Preserve earlier than anticipated if forage levels are low. Stocking rate adjustments should occur on an as-needed basis at the beginning of, and midway through, each grazing season (Olberding Environmental 2015a, p. 4).

Seasonal grazing is prescribed, although with an allowance for summer grazing:

> Seasonal grazing during the fall, winter, and spring months (generally November through May or June) . . . The exact timing of the grazing start and end dates will correspond with the beginning of grass growth in the late fall and the reduction of suitable forage in early summer. Summer grazing may be allowed if the Land Manager and grazing operator mutually agree that it would be beneficial for the habitat quality of the Preserve (Olberding Environmental 2015a, p. 4).

The Faria LTMP also requires "activities such as maintaining created wetlands, maintaining adequate RDM, and preventing conversion to impermeable hard substrates" to "reduce or prevent excessive stormwater discharge" (Olberding Environmental 2015b, pp. 14-15). Additional requirements include:

- Watering and loading/unloading of livestock will be conducted in specified areas away from seasonal wetlands to minimize impacts caused by these activities.
- Livestock exclusion areas may be fenced to protect establishment of the riparian habitat.
- Flash grazing of the grazing exclusion areas may be allowed to reduce vegetation heights. Any flash grazing must be approved by the Land Manager prior to grazing . . .
- The major channel features will be fenced, eliminating livestock grazing and allowing extensive natural vegetative growth for filtration purposes. (Olberding Environmental 2015b, pp. 14, 15).

VI. Grazing monitoring and adaptive management approach

Grazing monitoring accomplishes two objectives:
1) compliance monitoring determines if an action complies with expectations or regulations; and
2) effectiveness monitoring determines if management actions are achieving the desired results (Bush 2006). Data from a properly designed monitoring program provide guidance both for compliance and effectiveness and are used to improve management practices (a continuous process called adaptive management). A good monitoring program efficiently produces at minimum cost the information required to accomplish stated goals. In general, sharing and discussing monitoring results with grazing tenants is recommended as an important source of feedback to tenants on their livestock management activities.

Compliance monitoring is integral to the Park District's grazing program and is implemented on a regular, on-going basis. Effectiveness monitoring is tied to specific goals and so is typically implemented on a project basis.

A. Compliance monitoring, including RDM monitoring

Compliance monitoring requires information about the number of animals, timing of grazing, distribution of grazing, and the intensity of grazing:

1. Livestock numbers: livestock are counted by the grazing tenant as they are brought onto or taken off the grazing unit. The Park District grazing license requires grazing tenants to submit monthly stocking reports that provide a daily accounting of animal numbers for each grazing unit or pasture.
2. The timing and distribution of grazing on a pasture or grazing unit: the monthly stocking reports detail this information.
3. The intensity (and distribution) of grazing: this is monitored through assessment of residual dry matter remaining in the fall. Fall RDM monitoring is the most important and commonly used compliance monitoring method on grazed California rangelands (Bush 2006). RDM information serves as an important discussion point between Park District staff and grazing tenants and informs assessment of goal-achievement in the previous grazing season and planning for the following grazing season.

Permanent RDM plots in representative locations in Park District grazing units are sampled in September or October every year by Operations staff in collaboration with the Rangeland Specialist and her staff. The RDM monitoring protocol for each plot involves clipping and weighing of herbaceous biomass within a 1-square foot quadrat; vegetation type and dominant species information is recorded, and 2 or more photographs of the plot are taken. All RDM information is uploaded to a single location and is then available for discussions with grazing tenants and for analysis of livestock use and distribution trends. As described in Section IV, the Park District RDM target is 1,000 lbs/acre on all slopes, unless directed otherwise by the specific GMP for a site.

In newly acquired Park District properties, RDM plots must be sited, following the grazing program's RDM plot siting protocol. Siting factors include soil type, vegetation type, distance from high use areas (e.g., water troughs), trails, roads, and fences, how representative the location is of the grazing unit and of average livestock use, and ease of access. At least one RDM plot should be sited in each separate licensed area. Currently, the existing siting average is one RDM plot per 150 grazed grassland acres (Vollmar 2020).

Currently, Grazing Unit 1 has only 2 RDM plots, both in the Podva property. RDM plots will be established in 2021 in the Chen pastures and Grazing Unit 4. The Faria property is not yet owned by the Park District, but once the property is acquired and a grazing tenant licensed, RDM plots will be sited, following the grazing program protocol.

B. Effectiveness monitoring for management actions

Effectiveness monitoring is usually more complex and expensive than compliance monitoring and requires longer-term data collection. Effectiveness monitoring is important even in those relatively rare instances when robust research information points clearly to a specific management action. This is because California rangelands vary a great deal from place to place and from year to year. Even when research indicates a management action will result in a particular outcome, in different locations and in different years, outcomes may not turn out as expected. Unexpected outcomes are even more likely when research does not provide clear management guidance. Consequently, site-specific effectiveness monitoring is necessary as part of an adaptive management approach (see next section) to generate the information necessary to manage a specific location effectively.

Effectiveness monitoring is tied to specific grazing management objectives, measures specific variables identified within objectives, and answers the question "am I meeting my stated grazing management objective?" The general approach to effectiveness monitoring is to establish permanent plot locations and measure critical response variables over a period sufficient to determine whether management actions are having the desired effect. Plots may be located in areas representative of general vegetation types or in areas of special concern, sites with grazing-affected listed species, or sites undergoing invasive species treatment. Establishing comparison control plots (locations in which management is not applied but which are as similar as possible to the areas under management) is necessary to differentiate between the effects of management activities such as prescribed grazing as compared to those changes that might appear to be the result of management but are actually caused by annual weather patterns or other non-management factors.

Park District staff will develop and implement effectiveness monitoring for specific projects, as program priorities, financial resources, and staff time permit.

C. Adaptive management approach

In general, an important reason for monitoring in complex and dynamic ecosystems such as California annual grassland is the essential role monitoring plays in adaptive management. Adaptive management of natural resources is the continuous process of developing a response dataset that is adequate for testing the effectiveness of management actions, then analyzing that dataset, and using the analysis to refine specific management goals and actions (Reever-Morghan et al. 2006). An adaptive management process can be a powerful tool for creating data-based feedback that improves management outcomes and long-term ecosystem conditions.

The crux of adaptive management is to monitor both areas under management and comparison control areas. A control area is a location in which management is not applied but that is as similar as possible to the managed area; the control area is monitored using the same methods employed in the managed area. Control plots allow the manager to compare what happens in the managed area to what happens in the control area, which helps to distinguish between those changes that really are the result of management versus those changes caused by some other factor, for example, annual rainfall. This comparison assists the manager in deciding whether the

time and money spent on a particular management action is actually achieving the desired results.

Generally, a quasi-experimental design is desirable, with multiple treatment and control monitoring plots (replication), as well as randomized location of plots and randomized assignment of treatment(s) to plots if feasible. Even if a rigorous design is not feasible, a simple treatment (management action) and control (no management action) design can provide information robust enough to guide management choices. It is essential to remember when planning an adaptive management process that staff time must be scheduled to analyze the monitoring data, and, importantly, the resulting analysis must be fed back into the management decision-making process. If the analysis suggests that a management action is not achieving its goals, then a new management approach should be considered and implemented, and evaluated, in turn, for effectiveness.

In general, effectiveness monitoring protocols, including analysis and reporting components, should be designed to meet the needs of the adaptive management process. Monitoring reports should explicitly address the question of whether management activities have achieved management goals. If goals have not been met, the report should recommend changes to management activities that the monitoring analysis suggests could improve the effectiveness of those activities.

Using an adaptive management approach will help achieve the Park District's Master Plan policy of managing "park wildlands with modern resource management practices based on scientific principles supported by available research. New scientific information will be incorporated into the planning and implementation of District wildland management programs as it becomes available" (EBRPD 2013).

D. Special Resource Protection Area monitoring

The LUPA requires regular monitoring of the Special Resource Protection Area (Figure 1-1), including annual assessment of grazing levels. As described above, compliance monitoring is an integral part of the grazing program and is conducted on a regular basis.

E. Grazing monitoring requirements on lands under conservation easement

Both the Podva and Faria LTMPs include conservation lands monitoring requirements and recommendations (Live Oak Associates 2016a; Olberding Environmental 2015a,b); only those directly related to the grazing program are described here.

1. Podva grazing monitoring requirements

The Podva LTMP requires a baseline biological assessment of the area under conservation easement and subsequent biological assessments of the area every 5 years thereafter (Live Oak Associates 2016a). The biological assessment includes, among other tasks, compiling a plant species list and measuring RDM (Live Oak Associates 2016a).

In addition, the LTMP requires an annual grazing assessment, including RDM measurements, photopoint monitoring, and assessments of native herbaceous plant species, "according to the EBRPD's standard monitoring protocols" (Live Oak Associates 2016a, p. 26). The LTMP further states:

> Factors to consider when conducting the grazing assessment include:
>
> - Habitats are meeting management objectives;
> - Plant cover, height, density is adequate;
> - Plant community composition indicates good rangeland health;
> - Native and non-native plant species are at acceptable levels;
> - Invasive weeds are at acceptable levels;
> - Groundcover is within normal range;
> - Wildlife and plant species diversity are at acceptable levels; and
> - Livestock grazing/management is or is not a significant factor (Live Oak Associates 2016a, p. 27).

The Podva LTMP requires an annual monitoring report, which is to include the results of the annual grazing assessment (and in every 5th year, the biological assessment) as well as a summary of the "condition of fences and gates based on that year's monitoring surveys and any fence maintenance or repair that had occurred" (Live Oak Associates 2016a, p. 28); repair of livestock water infrastructure, if any, is also to be reported. The annual report should also address "any problems requiring short- and/or long-term attention, and any changes in the monitoring or management program that appear to be warranted based on monitoring results to date" (Live Oak Associates 2016a, p. 31). The report is to be submitted by December 31 to the conservation easement holder, the Town of Danville, and other permitting agencies that require the report.

2. Faria grazing monitoring requirements

The Faria LTMP requires vegetation monitoring every 5 years, "to determine plant community types present and species composition, typically between March and August depending on flowering season" Olberding Environmental 2015b, p. 10). It further requires annual inspection of fences and gates.

The Faria GMP requires RDM monitoring and stocking rate record-keeping; the current Park District RDM monitoring protocol and stocking rate reporting appear to fulfill the grazing monitoring requirements of the Faria GMP.

The Faria LTMP and GMP require an annual monitoring report, including the results of the annual RDM monitoring (and in every 5th year, the vegetation monitoring), as well as:

- A summary of all grazing activities during the previous year;
- A summary of all other management actions undertaken during the preceding year;
- A list of all persons who participated in the monitoring and preparation of the annual report (Olberding Environmental 2015b, p. 19).

The annual report should also address "any problems that need near short and long-term attention (e.g., weed removal, fence repair, erosion control) . . . and . . . any changes in the monitoring or

management program that appear to be warranted based on monitoring results to date" (Olberding Environmental 2015b, p. 19). The report is to be submitted by January 31 to the conservation easement holder and the resource agencies.

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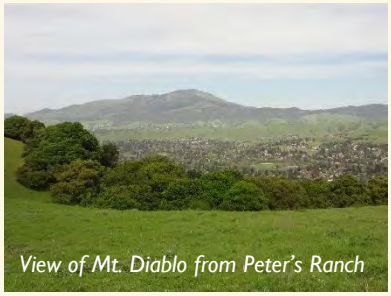
APPENDIX B - Community Meeting Summary

East Bay Regional Park District

SOUTHERN LAS TRAMPAS WILDERNESS REGIONAL PRESERVE
Land Use Plan Amendment (LUPA)
June 7, 2017 – San Ramon Community Center
Community Meeting Summary

Approximately 56 members of the public attended the first community meeting for the southern Las Trampas Wilderness Regional Preserve Land Use Plan Amendment (LUPA) on June 7, 2017. As part of the sign-in process, participants were given an opportunity to identify their favorite public access points and recreation activities within Las Trampas Wilderness Regional Preserve (Las Trampas).


View of Mt. Diablo from Peter's Ranch

During the presentation on the project, staff provided a brief overview of the approximately 760-acre southern Las Trampas study area and the various conditions tied to each of the project elements. This meeting also served as the California Environmental Quality Act (CEQA) scoping meeting. A link to the meeting
Following the presentation, attendees had the opportunity to pose questions and provide comments relating to the southern Las Trampas LUPA and provide input into subjects to be addressed during the environmental analysis of the proposed project. A summary of these public comments follows.


Community members attend the meeting


District staff presenting the project.

- Community members requested that sight line safety of the staging area ingress and egress, analysis of vehicle acceleration and deceleration, road frontage setback, aesthetics and landscaping amenities all be taken into consideration with regards to the proposed Chen staging area.
- There was consensus on prioritizing pedestrian, bicycling, and vehicle safety along Bollinger Canyon Road, particularly in regards to reduced speeds and coordinating with Contra Costa County on road safety designs.
- Community members asked for a summary of the District's grazing practices at Las Trampas and staff confirmed that a grazing program will continue in the Long-Term Management Plan as part of an effort to reduce wildfire hazards in southern Las Trampas, including within the conservation easement properties. Staff also confirmed that the District's own fire department has a mutual aid agreement with the local fire department to address fire safety in the project area.
- Community members were interested in the multi-use trails within the project area, including trails for mountain biking, and trail amenities, such as wayfinding signs and additional public access through trailheads.
- Community members wanted to know more about the land use planning process and how they can provide their input. Staff went over the timeline of the land use plan amendment and reiterated that the meeting was the first public scoping meeting with the primary purpose being to provide information about the project and to receive input from the community.
- The level of analysis under CEQA required for the project has not yet been determined, but will cover all new trails and the new staging area. All amenities on the Podva property are covered under the Redhawk (Podva) Environmental Impact Report (EIR). The open staging area and trail on the Elworthy properties were covered under the Quail Ridge EIR. These project components will not require further environmental analysis.

Staff will take all input from the community into consideration as the Land Use Plan Amendment is developed. Staff anticipates having a draft document ready for public review by the fall/winter of 2017/2018.

STAYING INVOLVED

There are several easy ways for you to receive information and participate in the southern Las Trampas Wilderness LUPA process and other District activities:

- *Request to be placed on the southern Las Trampas Wilderness LUPA e-mail mailing list*
- *Visit the District website at the following link: http://www.ebparks.org*
- *Volunteer - Information about our volunteer program can be accessed at the following link: http://www.ebparks.org*

For more information, please contact Neoma Lavalle at nlavalle@ebparks.org or (510) 544-2626, or Kim Thai at kthai@ebparks.org or (510) 544-2320.

APPENDIX C - Trail Construction and Trail Modification Best Management Practices

TRAIL CONSTRUCTION & TRAIL MODIFICATION BEST MANAGEMENT PRACTICES (BMPS)

Following are best management practices that will be employed to minimize adverse impacts to the parkland environment during trail construction, modification and/or restoration activities, as appropriate:

- Develop trails to contour alongside slopes (not the fall line of a slope) as fall-line trails become watercourses, erode easily and then are difficult to maintain. Contour trails should be cut on a full bench, rather than a combination of cut and fill. The cut material should be broadcast downslope, unless the trail is near a creek. Cut material can also be utilized for the ramp section of rolling dips if it is compacted one layer at a time.
- Out-slope trails in most cases (except for short sections at outside bends) to encourage water to run off the side of the trail, rather than along the trail. Trails should be built to have about 3 to 5 percent outslope after trail compaction has occurred, so initial out-sloping should be greater than 5 percent. After a year or two, it should be expected that maintenance would be needed to return and "de-berm" sections of trail where soil compaction and displacement have exceeded the outsloping.
- Incorporate rolling dips (grade reversals 12 to 20 feet long) that avoid the short and abrupt style of traditional "water bars" into a trail where they will enhance natural grade dips (as a backup to out-sloping) to avoid water flow along a trail.
- Locate the outside bend of a trail at a relative high point to help reduce erosion; a reduction in erosion is achieved because the upslope naturally slows a bicycle rider, which reduces the need to brake or skid, which can displace sediments on the trail surface.
- Locate climbing turns or switchbacks whenever possible where the side-slope is 10 percent or less, in order to create a sustainable, low-erosion trail. The actual trail gradient should be determined by site geology and terrain. The wider the turn and the lower the slope of the turn itself, the less braking and skidding (going downhill) is needed, and less wheel spinning (going uphill) is likely.
- Reduce locations where bicycles tend to brake heavily and or have to climb steep hills, which could cause erosion. Make a conscious effort to design trails with consistent "flow" (IMBA), 2004). Exaggerate grade reversals at outside bends. Gradual flow transitions should also reduce user conflicts.
- If landslides or slope failures occur, cut a temporary ramp through the edge of the scarp, have the trail traverse across the slide, and then cut another ramp to go up the scarp on the other side to reduce the tendency for users to create unsanctioned trails around the head of the landslide scarp.
- Close trails in areas with active landslides and highly erodible soils during wet weather and storm events.
- Maintain the trail corridor by trimming encroaching vegetation to keep trail in a safe and operable condition thereby encouraging users to stay within the constructed trail bed.
- Conform trail approaches as they intersect with other trails to reduce water collection at the junction and moderate the speed of trail users.
- Minimize disturbance to the soil surface to reduce erosion and maintenance problems; minimized trail widths to reduce the amount of bare soil subject to erosion and produce less concentrated runoff than wider trails (with all other factors being equal).
- Prepare specific erosion control plans as part of the trail construction documentation for new trail alignments. Criteria to be used in determining the erosion potential and developing the plan include: slope; soil type; soil composition and permeability; and the relative stability of the underlying geologic unit.

- Incorporate erosion- and sediment-control measures where trails are located in riparian zones to minimize the mobilization of sediment to creeks and other water bodies including:
    - Using paving stones or other rock work (to armor the trail surface).
    - Providing settling areas for trail drainage where water can infiltrate and sediment can settle out.
    - Constructing creek crossings so that they do not greatly alter the cross-sectional shape of the channel or floodplain.
    - Sloping the approach to a creek or drainage crossing downward toward the creek and then climbing upward when traveling away from the creek drainage bed, so that in the event of a blockage in the channel, the creek water would not be diverted to flow along the trail.
    - Enclosing and covering exposed stockpiles of dirt or other loose, granular construction materials that could contribute sediment to waterways.
    - Containing soil and filtering runoff from distributed areas by berms, vegetated filters, silt fencing, straw wattles, plastic sheeting, catch basins, or other means necessary to prevent the escape of sediment from disturbed areas.
    - Prohibiting the placement of earth or organic material where it may be directly carried into a stream, swale, ditch, marsh, pond, or body of standing water.
    - Prohibiting the following types of materials from being rinsed or washed into waterways: concrete, solvents and adhesives, fuels, dirt, gasoline, asphalt, and concrete saw slurry.
    - Only conducting dewatering activities with implementation of proper construction water quality control measures in place.
- Use rock drains and gravel surfaces where trails cross seep areas to minimize potential for trail users to bypass the soggy area in ever-increasing arcs. Use soil amendments such as sand, crushed rock, or gravel to make a trail less prone to compaction and displacement; amendments can also help the tread drain better.
- Limit the source of water for horse troughs to seeps, springs and existing water lines; do not divert water from creeks or other waterways.
- Abandon, obliterate and restore trails where it has been determined that the trail would be a significant risk to park resources or safety of the park users. In these cases, the decommissioned trail will be:
    - Blocked with local native vegetation materials such as limbs, logs, rocks and brush (or fencing) that will be placed in such a way as to create obstacles for the trail user
    - Rehabilitated by filling and reshaping the former trail surface to blend with the natural contours. If soil compaction has occurred, the soil will be scarified and aerated.
    - Revegetated by planting native vegetation, transplanted from the vicinity, or seeded with native species found in the area.
    - Posted "*not a trail, habitat restoration taking place."*

  Once the obliteration and restoration has been completed, the decommissioned trail should be totally obscured, present a difficult and uncomfortable route to the potential trail user, and, if possible, the view of the trail blocked from a designated trail.

APPENDIX D - List of Special Status Wildlife Species

Special Status Wildlife Species Las Trampas Wildernsess Regional Preserve

CLASS	COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS[1]	STATE STATUS[1]	OCCURRENCE[2]
Amphibians	California Red-legged Frog	*Rana draytonii*	FT	SSC	O/B
Birds	Peregrine Falcon	*Falco peregrinus*	Delisted	Delisted/CFP	O/B
Birds	Burrowing Owl	*Athene cunicularia*		SSC	K
Birds	Golden Eagle	*Aquila chrysaetos*	BGPA	CFP	O
Birds	Northern Harrier	*Circus cyaneus*		SSC[3]	K
Birds	White-tailed Kite	*Elanus leucurus*		CFP[3]	K
Birds	Loggerhead Shrike	*Lanius ludovicianus*		SSC[3]	K
Birds	Yellow Warbler	*Dendroica petechia brewsteri*		SSC	K[4]
Birds	Willow Flycatcher	*Empidonax traillii*	FE	SE	P[4]
Birds	Grasshopper Sparrow	*Ammodramus savannarum*		SSC	O/B
Mammals	American Badger	*Taxidea taxus*		SSC	P
Mammals	San Francisco Dusky-footed Wood Rat	*Neotoma fuscipes annectens*		SSC	O/B
Mammals	Pallid Bat	*Antrozous pallidus*		SSC	K
Mammals	Townsend's big-eared Bat	*Corynorhinus townsendii*		SSC	K
Reptiles	Western Pond Turtle	*Emys marmorata*	Candidate species for listing	SSC	P
Reptiles	Alameda Whipsnake	*Masticophis lateralis euryxanthus*	FT	ST	K*

[1] Status definitions and governing agencies as follows:

U.S. Fish and Wildlife Service
- FE Listed as endangered by the Federal Government
- FT Listed as threatened by the Federal Government
- FSC Federal Species of Concern
- FC Federal Candidate
- BGPA Bald Eagle Protection act

California Fish and Game Commission
- SE Listed as endangered by the state of California
- ST Listed as threatened by the state of California
- SSC Species of Special Concern
- CFP Fully Protected Species
- CP Protected Species

[2] Occurrence: O=observed during our surveys, K=known to occur, P=potential to occur, U=unlikely to occur, B=breeding confirmed, and R=rare species, * CNDDB records & Biological Resource and Reports (Elworthy, Podva, Faria)

[3] Rookeries or nesting only

[4] Migrant

Source: East Bay Regional Park District 11-27-17

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Amphibians	Arboreal Salamander	*Aneides lugubris*	yes		K	
Amphibians	Bullfrog	*Rana catesbeiana*		yes	K	
Amphibians	California Newt, Coast Range	*Taricha torosa*	yes	yes	K	
Amphibians	California Slender Salamander	*Batrachoseps attenuatus*	yes	yes	K	
Amphibians	Ensatina, Yellow-eyed	*Ensatina eschscholtzi*	yes	yes	K	
Amphibians	**Foothill Yellow-legged Frog**	***Rana boylii***		no		**SSC**
Amphibians	Pacific Treefrog	*Hyla regilla*	yes	yes	O/B	
Amphibians	**Red-legged Frog, California**	***Rana draytonii***	**yes**	**yes**	**O/B**	**FT,SSC**
Amphibians	Rough-skinned Newt, Northern	*Taricha granulosa*	No		P	
Amphibians	**Tiger Salamander, California**	***Ambystoma californiense***		**no**		**FT, ST, SSC**
Amphibians	**Western Spadefoot**	***Spea hammondi***		no		**SSC**
Amphibians	Western Toad, California	*Bufo boreas*		yes	K	
Birds	Acorn Woodpecker	*Melanerpes formicivorus*	yes	yes	K	
Birds	Allen's Hummingbird	*Selasphorus sasin*	yes	yes	O	
Birds	American Avocet	*Recurvirostra americana*		no		
Birds	American Bittern	*Botaurus lentiginosus*		no		
Birds	American Coot	*Fulica americana*		no		
Birds	American Crow	*Corvus brachyrhynchos*	yes	yes	O/B	
Birds	American Dipper	*Cinclus mexicanus*		no		
Birds	American Goldfinch	*Carduelis tristis*	yes	yes	O	
Birds	American Green-winged Teal	*Anas crecca*		no		
Birds	American Kestrel	*Falco sparverius*	yes	yes	O/B	
Birds	American Pipit	*Anthus rubescens*		yes	K	
Birds	American Robin	*Turdus migratorius*	yes	yes	O/B	
Birds	**American White Pelican**	***Pelecanus erythrorhynchos***		**no**		**SSC**
Birds	American Wigeon	*Anas americana*		no		
Birds	Anna's Hummingbird	*Calypte anna*	yes	yes	O/B	
Birds	Arctic Loon	*Gavia arctica*		no		
Birds	Ash-throated Flycatcher	*Myiarchus cinerascens*	yes	yes	O/B	
Birds	Baird's Sandpiper	*Calidris bairdii*		no		
Birds	**Bald Eagle**	***Haliaeetus leucocephalus***		no		**BGPA,SE,CFP, Fed Delisted**
Birds	Band-tailed Pigeon	*Columba fasciata*	yes	yes	O/B	
Birds	**Bank Swallow**	***Riparia riparia***		no		**ST**
Birds	Barn Swallow	*Hirundo rustica*	yes	yes	O/B	
Birds	Barrow's Goldeneye	*Bucephala islandica*		no		
Birds	Belted Kingfisher	*Ceryle alcyon*		yes	K	
Birds	Bewick's Wren	*Thryomanes bewickii*	yes	yes	O/B	
Birds	Black Phoebe	*Sayornis nigricans*	yes	yes	O/B	
Birds	Black Scoter	*Melanitta nigra*		no		
Birds	**Black Skimmer**	***Rynchops niger***		**no**		**SSC**
Birds	**Black Tern**	***Chlidonias niger***		**no**		**SSC**
Birds	Black Turnstone	*Arenaria melanocephala*		no		
Birds	Black-bellied Plover	*Pluvialis squatarola*		no		
Birds	Black-chinned Hummingbird	*Archilochus alexandri*		yes	K	
Birds	Black-chinned Sparrow	*Spizella atrogularis*		yes	K	
Birds	Black-crowned Night Heron	*Nycticorax nycticorax*		no		

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Birds	Black-headed Grosbeak	*Pheucticus melanocephalus*	yes	yes	O/B	
Birds	Black-necked Stilt	*Himantopus mexicanus*		no		
Birds	Black-throated Gray Warbler	*Dendroica nigrescens*		yes	K	
Birds	Blue Grosbeak	*Guiraca caerulea*		yes	K	
Birds	Blue-gray Gnatcatcher	*Polioptila caerulea*		yes	K	
Birds	Blue-winged Teal	*Anas discors*		no		
Birds	Bonaparte's Gull	*Larus philadelphia*		no		
Birds	Brandt's Cormorant	*Phalacrocorax penicillatus*		no		
Birds	Brewer's Blackbird	*Euphagus cyanocephalus*	yes	yes	O	
Birds	Brown Creeper	*Certhia americana*		yes	K	
Birds	**Brown Pelican**	***Pelecanus occidentalis***		no		**CFP,St Delisted,Fed Delisted**
Birds	Brown-headed Cowbird	*Molothrus ater*		yes	O	
Birds	Bufflehead	*Bucephala albeola*		no		
Birds	**Burrowing Owl**	***Athene cunicularia***		**yes**	**K**	**SSC**
Birds	Bushtit	*Psaltriparus minimus*	yes	yes	O/B	
Birds	Bullock's Oriole	*Icterus bullockii*	yes	yes	O/B	
Birds	Cackling (Aleutian Canada) Goose	*Branta hutachinsii leucopareia*		no		Fed Delisted
Birds	**California Black Rail**	***Laterallus jamaicensis coturniculus***		no		**ST, CFP**
Birds	**California Clapper Rail**	***Rallus longirostris obsoletus***		no		**FE,SE,CFP**
Birds	**California Gull**	***Larus californicus***		**no**		**CWL**
Birds	California Quail	*Callipepla californica*	yes	yes	O/B	
Birds	California Towhee	*Pipilo fuscus*	yes	yes	O/B	
Birds	California Thrasher	*Toxostoma redivivum*	yes	yes	O/B	
Birds	Calliope Hummingbird	*Stellula calliope*		yes	K	
Birds	Canada Goose	*Branta canadensis*		no	K	
Birds	Canvasback	*Aythya valisineria*		no		
Birds	Canyon Wren	*Catherpes mexicanus*		yes	K	
Birds	Caspian Tern	*Hydroprogne caspia*		no		
Birds	Cattle Egret	*Bubulcus ibis*		no		
Birds	Cedar Waxwing	*Bombycilla cedrorum*	yes	yes	O	
Birds	Chestnut-backed Chickadee	*Parus rufescens*	yes	yes	O/B	
Birds	Chipping Sparrow	*Spizella passerina*		yes	K	
Birds	Cinnamon Teal	*Anas cyanoptera*		no		
Birds	Cliff Swallow	*Hirundo pyrrhonota*	yes	yes	O/B	
Birds	Common Barn Owl	*Tyto alba*	yes	yes	O	
Birds	Common Goldeneye	*Bucephala clangula*		no	O	migration
Birds	**Common Loon**	***Gavia immer***		**no**		**SSC**
Birds	Common Merganser	*Mergus merganser*		no		
Birds	Common Moorhen (Gallinule)	*Gallinula chloropus*		no		
Birds	Common Murre	*Uria aalge*		no		
Birds	Common Poorwill	*Phalaenoptilus nuttalii*		yes	K	
Birds	Common Raven	*Corvus corax*	yes	yes	O/B	
Birds	Common Snipe	*Gallinago gallinago*		no	O	migration
Birds	Common Tern	*Sterna hirundo*		no		
Birds	Common Yellowthroat	*Geothlypis trichas*		no		
Birds	**Cooper's Hawk**	***Accipiter cooperii***	**yes**	**yes**	**O**	**CWL**

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Birds	Dark-eyed (Oregon) Junco	*Junco hyemalis*	yes	yes	O/B	
Birds	**Double-crested Cormorant**	***Phalacrocorax auritus***		**no**		**CWL**
Birds	Downy Woodpecker	*Picoides pubescens*	yes	yes	O	
Birds	Dunlin	*Calidris alpina*		no		
Birds	Dusky Flycatcher	*Empidonax oberholseri*		yes	K	migration
Birds	Eared Grebe	*Podiceps nigricollis*		no		
Birds	**Elegant Tern**	***Sterna elegans***		**no**		**CWL**
Birds	Eurasian Wigeon	*Anas penelope*		no		
Birds	European Starling	*Sturnus vulgaris*	yes	yes	O/B	
Birds	**Ferruginous Hawk**	***Buteo regalis***		yes	K	**CWL**
Birds	Forster's Tern	*Sterna forsteri*		no		
Birds	Fox Sparrow	*Passerella iliaca*		yes	O	
Birds	Gadwall	*Anas strepera*		yes	K	
Birds	Glaucous Gull	*Larus hyperboreus*		no		
Birds	Glaucous-winged Gull	*Larus glaucescens*		no		
Birds	**Golden Eagle**	***Aquila chrysaetos***		**yes**	**K**	**BGPA, CFP, CWL**
Birds	Golden-crowned Kinglet	*Regulus satrapa*	yes	yes	O	
Birds	Golden-crowned Sparrow	*Zonotrichia atricapilla*	yes	yes	O	
Birds	**Grasshopper Sparrow**	***Ammodramus savannarum***	**yes**	**yes**	**O**	**SSC**
Birds	Great Blue Heron	*Ardea herodias*		yes	K	
Birds	Great Egret	*Casmerodius albus*		yes	K	
Birds	Great Horned Owl	*Bubo virginianus*	yes	yes	O/B	
Birds	Greater Roadrunner	*Geococcyx californianus*		no		
Birds	Greater Scaup	*Aythya marila*		no		
Birds	Greater White-fronted Goose	*Anser albifrons*		no		
Birds	Greater Yellowlegs	*Tringa melanoleuca*		no		
Birds	Green-backed Heron	*Butorides striatus*		yes	K	
Birds	Hairy Woodpecker	*Picoides villosus*		yes	K	
Birds	Hammond's Flycatcher	*Empidonax hammondii*		yes	K	migration
Birds	Heermann's Gull	*Larus heermanni*		no		
Birds	Hermit Thrush	*Catharus guttatus*	yes	yes	O	
Birds	Hermit Warbler	*Dendroica occidentalis*		yes	K	migration
Birds	Herring Gull	*Larus argentatus*		no		
Birds	Hooded Merganser	*Lophodytes cucullatus*		no		
Birds	Hooded Oriole	*Icterus cucullatus*	yes	yes	K	migration
Birds	Horned Grebe	*Podiceps auritus*		no		
Birds	**Horned Lark, California**	***Eremophila alpestris actia***	**yes**	**yes**	**O/B**	**CWL**
Birds	House Finch	*Carpodacus mexicanus*	yes	yes	O/B	
Birds	House Sparrow	*Passer domesticus*	yes	yes	O/B	
Birds	House Wren	*Troglodytes aedon*	yes	yes	O/B	
Birds	Hutton's Vireo	*Vireo huttoni*	yes	yes	O/B	
Birds	Killdeer	*Charadrius vociferus*	yes	yes	O/B	
Birds	Lark Sparrow	*Chondestes grammacus*		yes	K	
Birds	Lawrence's Goldfinch	*Carduelis lawrencei*		yes	K	
Birds	Lazuli Bunting	*Passerina amoena*	yes	yes	O	
Birds	Least Sandpiper	*Calidris minutilla*		no		

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Birds	**Least Tern, California**	***Sternula antillarum browni***		no		**FE,SE,CFP**
Birds	Lesser Golden-Plover	*Pluvialis dominica*		no		
Birds	Lesser Goldfinch	*Carduelis psaltria*	yes	yes	O/B	
Birds	Lesser Scaup	*Aythya affinis*		no		
Birds	Lesser Yellowlegs	*Tringa flavipes*		no		
Birds	Lewis' Woodpecker	*Melanerpes lewis*		yes	K	
Birds	Lincoln's Sparrow	*Melospiza lincolnii*		no		
Birds	**Loggerhead Shrike**	***Lanius ludovicianus***		**yes**	**K**	**SSC**
Birds	**Long-eared Owl**	***Asio otus***		no		**SSC**
Birds	**Long-billed Curlew**	***Numenius americanus***		**no**		**CWL**
Birds	Long-billed Dowitcher	*Limnodromus scolopaceus*		no		
Birds	MacGillivray's Warbler	*Oporornis tolmiei*		yes	K	migration
Birds	Mallard	*Anas platyrhynchos*	yes	yes	O/B	
Birds	Marbled Godwit	*Limosa fedoa*		no		
Birds	Marsh Wren	*Cistothorus palustris*		no		
Birds	**Merlin**	***Falco columbarius***		yes	**K**	**CWL**
Birds	Mew Gull	*Larus canus*		no		
Birds	Mountain Bluebird	*Sialia currucoides*		no		
Birds	Mourning Dove	*Zenaida macroura*	yes	yes	O/B	
Birds	Nashville Warbler	*Vermivora ruficapilla*		no		
Birds	Northern Oriole	*Icterus galbula*	yes	yes	O/B	
Birds	Northern Flicker	*Colaptes auratus*		yes	K	
Birds	**Northern Harrier**	***Circus cyaneus***		**yes**	**K**	**SSC**
Birds	Northern Mockingbird	*Mimus polyglottos*	yes	yes	O/B	
Birds	Northern Pintail	*Anas acuta*		no		
Birds	Northern Pygmy-Owl	*Glaucidium gnoma*		yes	K	rare
Birds	Northern Rough-winged Swallow	*Stelgidopteryx serripennis*		yes	K	
Birds	Northern Saw-whet Owl	*Aegolius acadicus*		yes	K	
Birds	Northern Shoveler	*Anas clypeata*		no		
Birds	Nuttall's Woodpecker	*Picoides nuttallii*	yes	yes	O/B	
Birds	Oak Titmouse	*Baeolophus inornatus*	yes	yes	O/B	
Birds	Oldsquaw	*Clangula hyemalis*		no		rare
Birds	Olive-sided Flycatcher	*Contopus borealis*	yes	yes	O/B	
Birds	Orange-crowned Warbler	*Vermivora celata*	yes	yes	O/B	
Birds	**Osprey**	***Pandion haliaetus***		yes	K	**WL**
Birds	Pacific-slope Flycatcher	*Empidonax difficilis*	yes	yes	O	
Birds	Parasitic Jaeger	*Stercorarius parasiticus*		no		
Birds	Pectoral Sandpiper	*Calidris melanotos*		no		
Birds	Pelagic Cormorant	*Phalacrocorax pelagicus*		no		
Birds	**Peregrine Falcon, American**	***Falco peregrinus anatum***		**yes**	**O/B**	**CFP,Fed Delisted, St Delisted**
Birds	Phainopepla	*Phainopepla nitens*		yes	K	rare
Birds	Pied-billed Grebe	*Podilymbus podiceps*		no		
Birds	Pine Siskin	*Carduelis pinus*		yes	K	
Birds	Plain Titmouse	*Parus inornatus*	yes	yes	O/B	
Birds	**Prairie Falcon**	***Falco mexicanus***		**yes**	**K**	**CWL**
Birds	Purple Finch	*Carpodacus purpureus*		yes	K	

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Birds	Red Knot	*Calidris canutus*		no		
Birds	Red-breasted Merganser	*Mergus serrator*		no		
Birds	Red-breasted Nuthatch	*Sitta canadensis*		yes	K	
Birds	Red-breasted Sapsucker	*Sphyrapicus ruber*		yes	K	
Birds	Red-necked Grebe	*Podiceps grisegena*		no		
Birds	Red-necked Phalarope	*Phalaropus lobatus*		no		
Birds	Red-shouldered Hawk	*Buteo lineatus*	yes	yes	O	
Birds	Red-tailed Hawk	*Buteo jamaicensis*	yes	yes	O/B	
Birds	Red-throated Loon	*Gavia stellata*		no		
Birds	Red-winged Blackbird	*Agelaius phoeniceus*	yes	yes	O/B	
Birds	**Redhead**	***Aythya americana***		**no**		**SSC**
Birds	Ring-billed Gull	*Larus delawarensis*		no		
Birds	Ring-necked Duck	*Aythya collaris*		yes	K	wintering on ponds
Birds	Ring-necked Pheasant	*Phasianus colchicus*		no		
Birds	Rock Dove (Domestic Pigeon)	*Columba livia*	yes	yes	O	
Birds	Rock Wren	*Salpinctes obsoletus*	yes	yes	O	
Birds	Ross' Goose	*Chen rossii*		no		
Birds	Rough-legged Hawk	*Buteo lagopus*		yes	K	
Birds	Ruby-crowned Kinglet	*Regulus calendula*	yes	yes	O	
Birds	Ruddy Duck	*Oxyura jamaicensis*		no		
Birds	Ruddy Turnstone	*Arenaria interpres*		no		
Birds	Rufous Hummingbird	*Selasphorus rufus*		yes	K	
Birds	Rufous-crowned Sparrow	*Aimophila ruficeps*	yes	yes	O	
Birds	Rufous-sided Towhee	*Pipilo erythrophthalmus*	yes	yes	O/B	
Birds	Sage Sparrow	*Amphispiza belli*		yes	K	
Birds	**San Pablo Song Sparrow**	***Melospiza melodia samuelis***		**no**		**SSC**
Birds	Sanderling	*Calidris alba*		no		
Birds	Sandhill Crane	*Grus canadensis*		no		
Birds	Savannah Sparrow	*Passerculus sandwichensis*		yes	K	
Birds	**Saltmarsh Common Yellowthroat**	***Geothlypis trichas sinuosa***		no		**SSC**
Birds	Say's Phoebe	*Sayornis saya*	yes	yes	O	
Birds	Scrub Jay	*Aphelocoma coerulescens*	yes	yes	O/B	
Birds	Semipalmated Plover	*Charadrius semipalmatus*		no		
Birds	**Sharp-shinned Hawk**	***Accipiter striatus***	**yes**	**yes**	**O**	**CWL**
Birds	Short-billed Dowitcher	*Limnodromus griseus*		no		
Birds	**Short-eared Owl**	***Asio flammeus***		no		**SSC**
Birds	Snow Goose	*Chen caerulescens*		no		
Birds	Snowy Egret	*Egretta thula*		no		
Birds	**Snowy Plover, Western**	***Charadrius alexandrinus nivosus***		**no**		**FT, SSC**
Birds	Solitary Vireo	*Vireo solitarius*		yes	K	
Birds	**Song Sparrow**	*Melospiza melodia*	yes	yes	O	
Birds	**Song Sparrow, Alameda**	***Melospiza melodia pusillula***		**no**		**SSC**
Birds	**Song Sparrow, Suisun**	***Melospiza melodia maxillaris***		**no**		**SSC**
Birds	Sora	*Porzana carolina*		no		
Birds	Spotted Sandpiper	*Actitus macularia*		no		wintering on ponds
Birds	Spotted Towhee	*Pipilo maculatus*	yes	yes	O/B	

Wildlife Resource Checklist Las Trampas Land Use Plan Amendment

CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Birds	Stellar's Jay	*Cyanocitta stelleri*	yes	yes	O	
Birds	Surf Scoter	*Melanitta perspicillata*		no		
Birds	Surfbird	*Aphriza virgata*		no		
Birds	**Swainson's Hawk**	***Buteo swainsoni***		no		**ST**
Birds	Swainson's Thrush	*Catharus ustulatus*		yes	K	
Birds	Thayer's Gull	*Larus thayeri*		no		
Birds	Townsend's Solitaire	*Myadestes townsendi*		no		
Birds	Townsend's Warbler	*Dendroica townsendi*	yes	yes	O	migration
Birds	Tree Swallow	*Tachycineta bicolor*		yes	K	
Birds	**Tricolored Blackbird**	***Agelaius tricolor***		no		**SSC**
Birds	Tundra (Whistling) Swan	*Cygnus columbianus*		no		
Birds	Turkey Vulture	*Cathartes aura*	yes	yes	O	
Birds	Varied Thrush	*Ixoreus naevius*		yes	K	
Birds	**Vaux's Swift**	***Chaetura vauxi***		**no**		**SSC**
Birds	Violet-green Swallow	*Tachycineta thalassina*	yes	yes	O/B	
Birds	Virginia Rail	*Rallus limicola*		no		
Birds	Wandering Tattler	*Heteroscelus incanus*		no		
Birds	Warbling Vireo	*Vireo gilvus*	yes	yes	O	
Birds	Water Pipet	*Anthus spinoletta*		yes	K	
Birds	Western Bluebird	*Sialia mexicana*	yes	yes	O/B	
Birds	Western Flycatcher	*Empidonax difficilis*	yes	yes	O/B	
Birds	Western Grebe	*Aechmophorus occidentalis*		no		
Birds	Western Gull	*Larus occidentalis*		no		
Birds	Western Kingbird	*Tyrannus verticalis*	yes	yes	O	
Birds	Western Meadowlark	*Sturnella neglecta*	yes	yes	O/B	
Birds	Western Sandpiper	*Calidris mauri*		no		
Birds	Western Screech-Owl	*Otus kennicottii*	yes	yes	O	
Birds	Western Scrub-Jay	*Aphelocoma californica*	yes	yes	O/B	
Birds	Western Tanager	*Piranga ludoviciana*	yes	yes	O	migration
Birds	Western Wood-Pewee	*Contopus sordidulus*	yes	yes	O	
Birds	**Western Yellow-billed Cuckoo**	***Coccyzus americanus occidentalis***		no		**SE**
Birds	Whimbrel	*Numenius phaeopus*		no		
Birds	White-breasted Nuthatch	*Sitta carolinensis*	yes	yes	O/B	
Birds	White-crowned Sparrow	*Zonotrichia leucophrys*	yes	yes	O	
Birds	White-throated Sparrow	*Zonotrichia albicollis*		yes	K	
Birds	White-throated Swift	*Aeronautes saxatalis*	yes	yes	O	
Birds	**White-tailed Kite**	***Elanus leucurus***		**yes**	**K**	**CFP**
Birds	Wild Turkey	*Meleagris gallopavo*	yes	yes	O/B	
Birds	Willet	*Catoptrophorus semipalmatus*		no		
Birds	**Willow Flycatcher**	***Empidonax traillii***		**yes**	**P**	**FE,SE**
Birds	Wilson's Phalarope	*Phalaropus tricolor*		no		
Birds	Wilson's Warbler	*Wilsonia pusilla*	yes	yes	O	
Birds	Winter Wren	*Troglodytes troglodytes*		yes	K	
Birds	Wood Duck	*Aix sponsa*		yes	K	
Birds	Wrentit	*Chamaea fasciata*	yes	yes	O/B	
Birds	**Yellow Warbler**	***Dendroica petechia brewsteri***		**yes**	**K**	**SSC, spring migration**

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Birds	Yellow-billed Magpie	*Pica nuttalli*		yes	K	
Birds	**Yellow-breasted Chat**	***Icteria virens***		**no**		**SSC, spring migration**
Birds	**Yellow-headed Blackbird**	***Xanthocephalus xanthocephalus***		**no**		**SSC**
Birds	Yellow-rumped (Audubon's) Warbler	*Dendroica coronata*	yes	yes	O	
Birds	Yellow-rumped (Myrtle) Warbler	*Dendroica coronata*	yes	yes	O	
Mammals	Audubon Cottontail	*Sylvilagus audubonii*	yes	yes	O	
Mammals	**Alameda Island Mole**	***Scapanus latimanus parvus***				**SSC**
Mammals	**American Badger**	***Taxidea taxus***		**yes**	**P**	**SSC**
Mammals	Big Brown Bat	*Eptesicus fuscus*		yes	K	
Mammals	**Big Free-tailed Bat**	***Nyctinomops macrotis***				**SSC**
Mammals	Black Rat	*Rattus rattus*		yes	K	
Mammals	Black-tailed Hare	*Lepus californicus*	yes	yes	O	
Mammals	Bobcat	*Lynx rufus*	yes	yes	O	
Mammals	Botta Pocket Gopher	*Thomomys bottae*	yes	yes	O	
Mammals	Brazilian Free-tailed Bat	*Tadarida brasiliensis*		no		
Mammals	Broad-footed Mole	*Scapanus latimanus*		yes	K	
Mammals	Brush Mouse	*Peromyscus boylii*		yes	K	
Mammals	Brush Rabbit	*Sylvilagus bachmani*	yes	yes	K	
Mammals	California Ground Squirrel	*Spermophilus beecheyi*	yes	yes	O/B	
Mammals	California Meadow Mouse	*Microtus californicus*	yes	yes	O	
Mammals	California Mouse	*Peromyscus californicus*		yes	K	
Mammals	California Myotis	*Myotis californicus*		yes	K	
Mammals	California Pocket Mouse	*Perognathus californicus*		yes	K	
Mammals	Virginia Opossum	*Didelphis marsupialis*	yes	yes	O	
Mammals	Coyote	*Canis latrans*	yes	yes	O/B	
Mammals	Deer Mouse	*Peromyscus maniculatus*	yes	yes	K	
Mammals	Desert Wood Rat	*Neotoma lepida*		no		
Mammals	**Dusky-footed Wood Rat, San Fransc**	***Neotoma fuscipes annectens***	**yes**	**yes**	**O/B**	**SSC**
Mammals	Fox Squirrel	*Sciurus niger*	yes	yes	O	
Mammals	Fringed Myotis	*Myotis thysanodes*		no		
Mammals	Gray Fox	*Urocyon cinereoargenteus*	yes	yes	O/B	
Mammals	Hairy-winged Myotis	*Myotis volans*		yes	K	
Mammals	Heermann Kangaroo Rat	*Dipodomys heermanni*		no		
Mammals	Hoary Bat	*Lasiurus cinereus*		yes	K	
Mammals	House Mouse	*Mus musculus*		yes	K	
Mammals	Kangaroo Rat, Berkeley	*Dipodomys heermanni berkeleyensis*		no		
Mammals	**Kit Fox, San Joaquin**	***Vulpes macrotis mutica***		no		**FE,ST**
Mammals	Little Pocket Mouse	*Perognathus longimembris*		no		
Mammals	Long-eared Myotis	*Myotis evotis*		yes	K	
Mammals	Long-tailed Weasel	*Mustela frenata*		yes	K	
Mammals	Mountain Lion	*Felis concolor*		yes	K	
Mammals	Black-tailed Deer	*Odocoileus hemionus columbarius*	yes	yes	O/B	
Mammals	Muskrat	*Ondatra zibethica*		no		
Mammals	Norway Rat	*Rattus norvegicus*		yes	K	
Mammals	Ornate Shrew	*Sorex ornatus*		yes	K	
Mammals	**Pallid Bat**	***Antrozous pallidus***		yes	**K**	**SSC**

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Mammals	Pig, Feral	*Sus scrofa*	yes	yes	O	
Mammals	Pinyon Mouse	*Peromyscus trueii*		yes	K	
Mammals	Raccoon	*Procyon lotor*	yes	yes	O	
Mammals	**Red Bat, Western**	***Lasiurus blossevillii***		**no**		**SSC**
Mammals	Red Fox	*Vulpes fulva*		yes	K	
Mammals	**Ringtail**	***Bassariscus astutus***		**no**		**CFP**
Mammals	River Otter	*Lutra canadensis*		no		
Mammals	**Salt Marsh Harvest Mouse**	***Reithrodontomys raviventris***		no		**FE,SE,CFP**
Mammals	**Salt-marsh Wandering Shrew**	***Sorex vagrans halicoetes***		no		**SSC**
Mammals	San Joaquin Pocket Mouse	*Perognathus inornatus inornatus*		no		
Mammals	**San Pablo Vole**	***Microtus californicus***		no		**SSC**
Mammals	Silver-haired Bat	*Lasionycteris noctivagans*		yes	K	
Mammals	Spotted Skunk	*Spilogale putorius*		no		
Mammals	Striped Skunk	*Mephitis mephitis*	yes	yes	O/B	
Mammals	**Townsend's big-eared Bat**	***Corynorhinus townsendii***		**yes**	**K**	**SSC**
Mammals	Trowbridge Shrew	*Sorex trowbridgii*		yes	K	
Mammals	Vagrant Shrew	*Sorex vagrans*		no		
Mammals	Western Harvest Mouse	*Reithrodontomys megalotis*	yes	yes	O	
Mammals	**Western Mastiff Bat**	***Eumops perotis californicus***		**no**		**SSC**
Mammals	Western Pipistrelle	*Pipistrellus hesperus*		yes	K	
Mammals	Yuma Myotis	*Myotis yumanensis*		yes	K	
Reptiles	**Blunt-nosed Leopard Lizard**	***Gambelia silus***		**no**		**FE,SE,CFP**
Reptiles	California Black-headed Snake	*Tantilla planiceps*		no		
Reptiles	**California Legless Lizard, Black**	***Anniella pulchra nigra***		no		**SSC**
Reptiles	**California Legless Lizard, Silvery**	***Anniella pulchra***		no		**FSC,SSC**
Reptiles	California Mountain Kingsnake,Coast	*Lampropeltis zonata*		no		
Reptiles	**Coast Horned Lizard**	***Phrynosoma blainvillii***		no		**SSC**
Reptiles	Coast Garter California	*Thamnophis elegans sirtalis*	yes	yes	K/B	
Reptiles	**Common Garter Snake, Giant**	***Thamnophis gigas***				**FT, ST**
Reptiles	Common Garter Snake, Valley	*Thamnophis sirtalis*		no		
Reptiles	Common Garter Snake,Calif.Red-side	*Thamnophis sirtalis*		no		
Reptiles	Common Kingsnake, California	*Lampropeltis getulus*	yes	yes	K/B	
Reptiles	Gilbert's Skink, Variegated	*Eumeces gilberti*	yes	yes	O/B	
Reptiles	Glossy Snake, California	*Arizona elegans*		yes	K	
Reptiles	Gopher Snake, Pacific	*Pituophis melanoleucus*	yes	yes	O/B	
Reptiles	Long-nosed Snake, Western	*Rhinocheilus lecontei*		no		
Reptiles	Night Snake, California	*Hypsiglena torquata*		yes	K	
Reptiles	Northern Alligator Lizard, SF	*Gerrhonotus coeruleus*		yes	K	
Reptiles	Racer, Western Yellow-bellied	*Coluber constrictor*	yes	yes	O/B	
Reptiles	Ringneck Snake, Pacific	*Diadophis punctatus*	yes	yes	O/B	
Reptiles	Rubber Boa, Pacific	*Charina bottae*		yes	K	
Reptiles	Sagebrush Lizard, Northern	*Sceloporus graciosus*		yes	K	
Reptiles	Sharp-tailed Snake	*Contia tenuis*	yes	yes	O/B	
Reptiles	Side-blotched Lizard, California	*Uta stansburiana*		no		
Reptiles	**Silvery Legless Lizard**	***Anniella pulchra pulchra***		**no**		**SSC**
Reptiles	Southern Alligator Lizard, Calif.	*Gerrhonotus multicarinatus*	yes	yes	O	

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CLASS	COMMON NAME	LATIN NAME	OBS	EXP	OCCURR	STATUS
Reptiles	Striped Racer, Alameda	*Masticophis lateralis lateralis*		yes	K/B	
Reptiles	Western Aquatic Garter Snake	*Thamnophis couchi*		no		
Reptiles	Western Aquatic Garter Snake,S.Cruz	*Thamnophis atratus atratus*		yes	K/B	
Reptiles	Western Fence Lizard, Northwestern	*Sceloporus occidentalis*	yes	yes	O/B	
Reptiles	**Western Pond Turtle**	***Emys marmorata***		**yes**	**K**	**SSC**
Reptiles	Western Rattlesnake, North.Pacific	*Crotalus viridis*		yes	K	
Reptiles	Western Skink, Western subspp.	*Eumeces skiltonianus*	yes	yes	O/B	
Reptiles	Western Terrestrial Garter Snake	*Thamnophis elegans*		yes	O/B	
Reptiles	Western Whiptail, California	*Cnemidophorus tigris*		yes	K	
Reptiles	**Whipsnake, Alameda**	***Masticophis lateralis euryxanthus***		**yes**	**K**	**FT,ST**
Reptiles	**Whipsnake, San Joaquin**	***Masticophis flagellum ruddocki***		**no**		**SSC**
Invertebrates	**Longhorned Fairy Shrimp**	***Branchinecta longiantenna***		no		**FE**
Invertebrates	**Vernal Pool Fairy Shrimp**	***Branchinecta lynchi***		no		**FT**

APPENDIX E - Faria Long-Term Resource Management Plan

LONG TERM RESOURCE MANAGEMENT PLAN

THE FARIA ONSITE PRESERVE

136-ACRE EBRPD PARCEL

Contra Costa County, California

Prepared for:

FARIA LT VENTURES, LLC
5000 Executive Parkway, Suite 530
San Ramon, California 94583

Prepared by:

OLBERDING ENVIRONMENTAL, INC.
Wetland Regulatory Consultants
3170 Crow Canyon Road, Suite 260
San Ramon, California 94583

AUGUST 2015

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LIST OF ATTACHMENTS

DISTRIBUTION

U.S. Army Corps of Engineers
San Francisco District, Regulatory Division
1455 Market Street, 16th Floor
San Francisco, CA 94103
Attn: Holly Costa
(415) 503-6780 / Holly.N.Costa@usace.army.mil

U.S. Fish and Wildlife Service
Coast Bay/Forest Foothill Division Chief
2800 Cottage Way
Sacramento, CA 95825
Attn: Ryan Olah
(916) 414-6623 / Ryan_Olah@fws.gov

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: Katie Hart
(510) 622-2356 / khart@waterboards.ca.gov

California Department of Fish and Wildlife
7329 Silverado Trail
Napa, CA 94558
Attn: Rob Stanley
(707) 944-5573 / Robert.Stanley@wildlife.ca.gov

Faria LT Ventures, LLC
5000 Executive Parkway, Suite 530
San Ramon, CA 94583
Attn: Pat Toohey
(925) 355-1305 / ptoohey@laffertycommunities.com

ENGEO Incorporated
2010 Crow Canyon Place, Suite 250
San Ramon, CA 94583
Attn: Jon Buck
(925) 395-2543 / jbuck@engeo.com

This report should be cited as: Olberding Environmental, Inc. August 2015. *Long-term Resource Management Plan for The Faria Onsite Preserve – 136 Acre EBRPD Parcel*, Contra Costa County, California. Prepared for Faria LT Ventures, LLC, San Ramon, CA.

1.0 INTRODUCTION AND RESPONSIBLE PARTIES

1.1 Purpose of the Preserve

The Faria Onsite Preserve 136-Acre East Bay Regional Park District Parcel (Preserve) is being established by the Land Owner, Faria LT Ventures, LLC, to provide compensatory mitigation for unavoidable impacts to natural resources including wetlands, riparian, and species habitat resulting from The Faria Preserve Residential Housing Development Project (Project). The purpose of the Preserve is to conserve and protect wetlands/waters of the U.S. and state, covered species, and/or covered habitats.

The East Bay Regional Park District (EBRPD) parcel, in conjunction with the adjacent 103-acre Geologic Hazard Abatement District (GHAD) parcel, including the offsite Roberts Ranch and Ambrose Preserves, provide compensatory mitigation for impacts associated with the Project.

A separate Mitigation and Monitoring Plan (MMP) has been prepared for the wetland, channel and riparian habitat that is being preserved, created, enhanced, and restored. The MMP has been submitted to the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and San Francisco Bay Regional Water Quality Control Board (RWQCB) for review and approval.

The Project and the Onsite Preserve are located just north of the intersection of Bollinger Canyon Road and Crow Canyon Road, west of Interstate 680 (I-680), in San Ramon, California. A portion of the Project is located in the City of San Ramon and a portion is located in unincorporated Contra Costa County.

The Preserve consists of land adjacent and north of the developed areas of the Project. The Preserve includes preserved and created wetlands/waters of the U.S. and State and enhanced riparian areas. It also includes potential habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*) federally and state listed as Threatened, and California red-legged frog (CRLF--*Rana draytonii*) federally listed as Threatened.

1.2 Purpose of this Long-term Resource Management Plan

The purpose of this long-term RMP is to ensure the Preserve is managed, monitored, and maintained in perpetuity. This RMP establishes objectives, priorities and tasks to monitor, manage, maintain and report on the habitats on the Preserve. This RMP is a binding and enforceable instrument, implemented by the conservation easement covering the Preserve.

1.3 Responsible Parties

The parties responsible for preparing and ensuring construction of the mitigation as well as long-term management of the habitats in perpetuity are identified below.

1.3.1 Applicant/Permittee

Faria LT Ventures, LLC

Attn: Pat Toohey
5000 Executive Parkway, Suite 530
San Ramon, CA 94583
Attn: Pat Toohey
(925) 355-1305 / ptoohey@laffertycommunities.com

1.3.2 Preparer of the RMP

Olberding Environmental, Inc.
193 Blue Ravine Road, Suite 165
Folsom, CA 95630
Attn: Jeff Olberding
(916) 985-1188 / jeff@olberdingenv.com

1.3.3 Land Owner

The Land Owner is currently Faria LT Ventures, LLC. Future land ownership will be transferred to the EBRPD. If land ownership changes hands prior to the successful completion of the restored and enhanced mitigation as described within the MMP, then EBRPD will not become responsible for achieving success. The Applicant will be responsible for implementing the mitigation program as described within the MMP.

The Applicant is responsible the implementation of all construction and management activities associated with the achievement of performance standards and as described in the MMP. The Land Owner and subsequent land owners should land ownership transfer occur, will be responsible for implementing the elements of this RMP on the Preserve. The Land Owner shall be obligated to manage and monitor the Preserve in perpetuity to preserve the habitat and conservation values in accordance with the permits, Conservation Easement, RMP, and MMP.

The Land Owner, and the Resource Agencies (Corps, USFWS, CDFW and RWQCB), and Conservation Easement Grantee shall meet and confer upon the request of any one of them, to consider revisions to the RMP which may be necessary or appropriate to better conserve the habitat and conservation values of the covered areas.

Regardless of who owns the Preserve, the Land Owner shall be responsible for submitting regular summary reports to the Resource Agencies and the Conservation Easement Grantee.

Any subsequent grading, or alteration of the topography and/or hydrology of the Preserve by the Land Owner or its representatives must be approved by the Resource Agencies and Conservation Easement Grantee and the necessary permits, such as a Section 404 permit, must be obtained, if required.

Land Owner responsibilities include, but are not limited to, all management and monitoring of the Preserve and Conservation Easement as identified in this MMP and RMP and as required by the Conservation Easement.

Until such time as any land is transferred to any new Land Owner, any notices or communication to the Land Owner should be directed to Faria LT Ventures, LLC.

Faria LT Ventures, LLC
5000 Executive Parkway, Suite 530
San Ramon, CA 94583
Attn: Pat Toohey
(925) 355-1305 / ptoohey@laffertycommunities.com

1.3.4 Land Manager

A Land Manager is required to ensure that wetland and biological resources within the Preserve are protected and maintained in perpetuity. The Land Manager is Olberding Environmental. The Land Manager, and subsequent land managers upon transfer, shall implement the MMP; managing and monitoring the mitigation areas in perpetuity to preserve their habitat and conservation values in accordance with the MMP, Conservation Easement, and this RMP. Upon transfer of ownership to the EBRPD, either the EBRPD will serve as the Land Manager or EBRPD may hire its own consultant to fill this role.

The Land Manager is responsible for hiring a Monitoring Biologist. The Monitoring Biologist will be a professional botanist, biologist, or restoration ecologist familiar with California flora and fauna, and will have demonstrated knowledge and experience with similar projects. The Monitoring Biologist must also have a working knowledge regarding the special status species that may recolonize the covered areas after construction including Alameda whipsnake and California red-legged frog.

The Monitoring Biologist must also be familiar with vegetation management practices for maintaining grassland, wetland and riparian habitat characteristics favorable to the special status species listed above and other associated sensitive species.

Until such time as any portion of the covered areas are transferred to a new Land Owner, the covered areas will be managed by Olberding Environmental. Any notices or communication to the Land Manager should be directed to Olberding Environmental.

Olberding Environmental, Inc.
193 Blue Ravine Road, Suite 165
Folsom, CA 95630
Attn: Jeff Olberding
(916) 985-1188 / jeff@olberdingenv.com

1.3.5 Conservation Easement and Conservation Easement Grantee

The conservation easement will ensure that the Preserve will be retained forever and prevent any use of the Preserve that would impair or interfere with the conservation values of the easement area. The conservation easement is included in Attachment 2.

No later than 18 months after receiving the final Incidental Take Permit from the CDFW, the Land Owner will record the conservation easement in the Contra Costa County Official Records. The terms of the easement will be incorporated into any legal instrument that would transfer any interest in the Preserve.

The Conservation Easement Grantee is the Wildlife Heritage Foundation (WHF). The USFWS, CDFW and RWQCB are identified as Third-Party Beneficiaries of the conservation easement. The Third-Party Beneficiaries all have the right of access to the Preserve and the right to enforce all of the obligations of Grantor and Grantee.

The responsibilities of the Conservation Easement Grantee are described in the conservation easement and include preserving and protecting the conservation values of the Preserve, preventing any activity that is inconsistent with the purposes of the easement, performing annual compliance monitoring inspections, and preparing reports on the results of the compliance monitoring inspections and providing these reports to the Land Manager and Resource Agencies on an annual basis.

Any notices or communication to the Conservation Easement Grantee should be directed to WHF.

Wildlife Heritage Foundation
563 Second Street, Suite 120
Lincoln, CA 95648
Attn: Pat Shea
(916) 434-2759 / pshea@wildlifeheritage.org

1.3.6 Endowment Fund and Endowment Fund Holder

The Applicant will establish an Endowment Fund to provide income to fund perpetual management, maintenance, monitoring and other activities on the Preserve. WHF will hold and invest the Endowment Fund.

The costs associated with management and monitoring activities of the Preserve will be identified using a Property Analysis Record (PAR) (Attachment 4).

The Conservation Easement will not be officially recorded until the Endowment Fund is fully funded and the startup costs (i.e. initial site protection and enhancement costs) are funded by the Applicant. The endowment principal refers to the portion of the Endowment Fund that is non-wasting and that is to be maintained and managed in perpetuity to generate earnings and appreciation in value for use in funding perpetual management, maintenance, monitoring, and other activities. Distribution of the management funds from the Endowment Fund would be based on various management activities performed annually.

An Interim Endowment Fund will also be established to provide income to fund the first three years of management, maintenance, monitoring and other activities on the Preserve consistent with the RMP. The purpose of the Interim Endowment Fund is to create a buffer of the long-term endowment so as not to erode the initial investment funds. The Applicant will fund the Interim Endowment Fund and WHF will hold and invest it.

Although it has been typical practice for the Land Manager to seek reimbursement for land management activities from the Endowment Fund after the activities have occurred, Scott Wilson of CDFW has indicated that reimbursement for such activities could occur at the

beginning of the year instead of at the end. Thus, the Land Manager will invoice the Easement Grantee at the beginning of each calendar year for management and monitoring activities it intends to take the following year.

2.0 DESCRIPTION OF THE PRESERVE

2.1 Setting and Location

The Preserve is located just north of the intersection of Bollinger Canyon Road and Crow Canyon Road, west of I-680, in San Ramon, California. The entire development portion of the Project site is located within the incorporated city limits of San Ramon, and most of the Preserve is located in unincorporated Contra Costa County. Bollinger Canyon Road runs through the Preserve roughly in the middle in north/south orientation.

Attachment 1, Figure 1 depicts the regional location of the Preserve in the San Francisco Bay Area. Attachment 1, Figure 2 illustrates the vicinity of the Preserve in relationship to the City of San Ramon and nearby conserved and protected properties. Attachment 1, Figure 3 identifies the location of the Preserve on an USGS Quadrangle base map. Attachment 1, Figure 4 shows the location of the Preserve on an aerial base map. Attachment 1, Figure 5 shows the proximity of the Preserve with regards to critical habitat designated for Alameda whipsnake and California red-legged frog.

2.2 History and Land Use

The Preserve is located within the City of San Ramon Northwest Specific Plan Area. This area contains several distinctive natural characteristics, such as rugged topography, major and minor ridgelines, creeks and riparian corridors, and native oak woodlands. The area also presents several challenges in the form of natural hazards, such as the presence of the Calaveras Fault zone, steep slopes, and landslides. The current and historic land use of the Preserve is primarily rangeland for cattle or open space.

2.3 Cultural Resources

The San Ramon area includes several sites of both historic and prehistoric value, and local archaeological sites include both Native American habitations as well as rock art. There are also valuable historic structures, such as the original farmhouses of early European settlers from the nineteenth century.

Cultural resources studies of the Project site in 2002 and 2004 were conducted as part of environmental review of the Project by the City of San Ramon; however, no evidence of prehistoric or historically significant archaeological resources was observed during the field surveys. It is likely that the generally steep topography and apparent lack of perennial water sources on or within the immediate vicinity of the site make it unlikely that significant prehistoric cultural resources in particular are present within the site. In addition, no historic resources such as refuse deposits, building remains, or structure elements were noted during either the 2002 field survey, 2004 reconnaissance.

2.4 Hydrology and Topography

A prominent characteristic of the area is the rugged topography with slopes greater than 20 percent. There are two major ridgelines on the Preserve which run in a northwest-southeast

direction and are over 500 feet in elevation. There are a number of localized intermittent (or ephemeral) drainage channels on the Preserve. Most are very steep in grade and well vegetated with oak woodland and/or riparian vegetation. Seasonal wetlands/Seeps occur on the Preserve. Many on the Preserve are associated with slope failure areas due to extensive cattle grazing which has greatly altered many of the areas.

2.5 Existing Easements and Encumbrances

A portion of the Preserve on the west side of the Bollinger Canyon Road will include creation of wetlands and waters of the U.S. and riparian enhancement. It will be important to protect this area such that it persists over time. The public trail system will connect to the EBRPD trails to the west and the Project and GHAD Parcel to the east and provide access to these trails with a staging area off Bollinger Canyon Road. The public trail system and staging area off Bollinger Canyon Road will not be included in the area covered by the conservation easement and is not subject to the specifications of this RMP.

2.6 Adjacent Land Uses

The Preserve is located in an area in Contra Costa County that has been identified as important open space to protect natural resources, scenic views and watershed values.

Land uses adjacent to the Preserve are as follows:

- The GHAD Parcel and grazing land/open space east,
- Grazing land/open space with ranchettes to the south,
- Grazing land/open space (designated Agricultural Lands by the Contra Costa County General Plan) to the north, and
- EBRPD open space to the west (designated Agricultural Lands by the Contra Costa County General Plan).

3.0 HABITAT AND SPECIES DESCRIPTIONS

3.1 Biological Resources

Habitats on the Preserve are characteristic of the East Bay foothills, consisting of large expanses of non-native annual grassland habitat and dense stands of oak and bay woodland in the ravines.

The Preserve supports four habitat types; non-native annual grassland, coast live oak woodland, seasonal wetland, and drainage channel habitat.

These habitat types are described in further detail below.

3.1.1 Non-Native Annual Grassland Habitat

Non-native annual grassland represents the dominant plant community within the Preserve. The grassland habitat is dominated non-native annual grasses of European origin, primarily due to a long history of grazing. Plant species include wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), hare barley (*Hordeum murinum* spp. *leporinum*), and Italian ryegrass (*Festuca perennis*), among others. Common non-native forbs observed includes black mustard (*Brassica nigra*), yellow starthistle (*Centaurea solstitialis*), Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), filaree (*Erodium* spp.), and bur clover (*Medicago polymorpha*), among others.

3.1.2 Coast Live Oak Woodland Habitat

Coast live oak woodland consists primarily of dense, closed canopy groves associated with the drainages and is dominated by coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), valley oak (*Quercus lobata*), and California buckeye (*Aesculus californica*). Characteristic shrub species observed on the site include snowberry (*Symphoricarpus albus*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), coyote brush (*Baccharis pilularis*), and wood fern (*Dryopteris arguta*), among others. Characteristic herbaceous plants detected on-site include such non-native species as brome grasses, wild oats, and Italian thistle, among others.

3.1.3 Drainage Channel Habitat

Numerous intermittent and ephemeral drainage channels occur within the Preserve. Many of the drainage features are sparsely vegetated, dominated by grass and forb species such as rabbit's foot grass (*Polypogon monspeliensis*), loosestrife (*Lythrum hyssopifolia*), toad rush (*Juncus bufonius*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), curly dock (*Rumex crispus*), and bristly ox-tongue (*Helminthotheca echioides*). Riparian habitat observed along the drainage channels includes coast live oak, California bay, valley oak, and California buckeye, snowberry, poison oak, blackberry, coyote brush, and wood fern.

3.1.4 Seasonal Wetland

Seasonal and seep wetland features were observed throughout the Preserve. Vegetation is dominated by such non-native wetland indicator species as perennial ryegrass with lesser amounts of Mediterranean barley rabbits foot grass, Italian ryegrass, curly dock bristly ox-tongue

and bitter dock (*Rumex obtusifolius*), among others. As such sites dry out in the summer, typical non-native upland species begin to appear. Such species include field bindweed (*Convolvulus arvensis*), Fitch's spike weed (*Centromadia fitchii*) and yellow star thistle, among others.

3.2 Endangered and Threatened Species

The two special status species with potential to occur in the Preserve area are:

- Alameda whipsnake **Federally and State Threatened**
- California red-legged frog **Federally Threatened**

The Preserve also falls within Critical Habitat for Alameda whipsnake (Attachment 1, Figure 5).

The Alameda whipsnake is a slender, fast-moving, semi-arboreal, diurnal snake with a broad head, large eyes, and slender neck; characteristics typical of snake species that predate on lizards. This species is commonly associated with small to large patches of chaparral or coastal scrub vegetation, interspersed with other native vegetation types and rock lands throughout Contra Costa County, most of Alameda County, and portions of northern Santa Clara and western San Joaquin counties. Chaparral and coastal scrub vegetation serve as the center of home ranges, provide for concealment from predators, and provide foraging opportunities. However, verified observations have been made up to 4 miles from coastal scrub and chaparral habitat. (USFWS 2011.)

Primary habitat for the Alameda whipsnake is scrub/shrub habitat. Where scrub habitat is present, the Alameda whipsnake will move as much as 1,000 feet into oak woodland habitats such as that found on the Project site.

Appropriate scrub habitat for Alameda whipsnake is mostly absent on the Preserve, but scrub habitat, ungrazed grasslands, and oak woodlands are present on the hillside immediately west of the Preserve.

California red-legged frogs breed in lowland and foothill streams and wetlands, including livestock ponds (Jennings and Hayes 1994). They may also be found in upland habitats near breeding areas and along intermittent drainages connecting aquatic sites. Adults may take refuge during dry periods in rodent holes or leaf litter in riparian habitats. Although California red-legged frogs typically remain near streams or ponds, recent studies in Santa Cruz suggest that they are capable of moving 1 mile or more in upland habitat or through ephemeral drainages (Bulger 1999).

The Preserve provides habitat that may be potentially used by California red-legged frog for dispersal, foraging, and breeding. Parts of the intermittent drainages are seep fed and saturated or inundated for much of the year are particularly desirable for California red-legged frog.

4.0 MANAGEMENT AND MONITORING

The overall goal of long-term management is to ensure the long-term preservation of the habitats of the Preserve. Routine monitoring and minor maintenance tasks are intended to assure the viability of the preserved/protected areas in perpetuity.

4.1 Biological Resources

The approach to long-term management of the Preserve is to conduct annual site inspections and monitor selected characteristics to determine stability and ongoing trends of the preserved and created habitats, including the wetlands and riparian habitat. Annual monitoring will assess the condition of the preserve areas, degree of erosion, invasion of exotic or deleterious species, water quality, fire hazard, and other property conditions that may warrant management actions.

While it is not anticipated that major management modifications to the Preserve will be needed, an objective of this RMP is to conduct monitoring to identify any issues that arise, and use adaptive management to determine what actions might be appropriate.

Adaptive management is an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the Resource Agencies in discussion with the Land Manager, and/or EBRPD staff as necessary. Adaptive management includes those activities necessary to address the effects of climate change, fire, flood, or other natural events, force majeure, etc. Before considering any adaptive management changes to this RMP, the relevant stakeholders will consider whether such actions will help ensure the continued viability of the biological resources on the Preserve.

The Land Manager shall implement the tasks as described below.

Element A.1 Biological Monitoring

Objectives: Monitor, conserve and maintain the Preserve's habitat components to meet the Management Goals of the Preserve. Ensure that habitat conditions remain suitable for Alameda whipsnake and California red-legged frog. Review management procedures and sampling protocols to assess whether adjustments need to be made to achieve the goal of maintaining suitable habitat for Alameda whipsnake and California red-legged frog.

Task A.1-1 – Vegetation Monitoring

Task: Conduct vegetation monitoring. Collect biological monitoring data to identify and evaluate conditions onsite, create an ongoing record using consistent data points to monitor trends, and provide early identification of any problems at the site. In Years 1, 5, 10, 15, 20, and every 5 years thereafter in perpetuity, conduct field monitoring to determine plant community types present and species composition, typically between March and August depending on flowering season. Record incidental observations of all additional species observed within the Preserve during field studies.

Task: Digitally link data to GIS database. Download GPS data and link to GIS database.

Task: Analyze data. Analyze monitoring data and compare with baseline and previous years' data in order to ensure maintenance and positive development of habitat components for Alameda whipsnake and California red-legged frog. Make recommendations for any additional habitat management needs.

Element A.2 California Red-legged Frog Presence/Absence Monitoring

Task A.2-1 – California Red-legged Frog Presence / Absence Monitoring

Task: Conduct presence / absence monitoring. During Years 1, 5, 10, 15, 20 and every 5 years thereafter in perpetuity. A species biologist will conduct field monitoring to assess species presence /absence and the presence of suitable habitat for the California red legged frog. The biologist will prepare a letter report or memorandum describing methods used and presenting monitoring results, an analysis of the monitoring data, and a comparison of the new data with baseline and previous years' data. Predatory aquatic species will be monitored and results will be included in letter report.

Task: Digitally link data to GIS database. Download GPS data and link to GIS database.

Task: Analyze data. Analyze monitoring data and compare with baseline and previous years' data.

Element A.3 Alameda Whipsnake Presence/Absence Monitoring

Task A.3-1 – Alameda Whipsnake Presence / Absence Monitoring

Task: Conduct presence / absence monitoring. During Years 1, 5, 10, 15, 20 and every 5 years thereafter in perpetuity. A species biologist will conduct field monitoring to assess species presence /absence of the Alameda whipsnake. The biologist will prepare a letter report or memorandum describing methods used and presenting monitoring results, an analysis of the monitoring data, and a comparison of the new data with baseline and previous years' data.

Task: Digitally link data to GIS database. Download GPS data and link to GIS database.

Task: Analyze data. Analyze monitoring data and compare with baseline and previous years' data.

Element B.1 Vegetation Management

The goal of the vegetation management activities is to maintain the existing competitive advantage of grassland species over exotic invasive annual plant species. This section describes tasks involving invasive species research and annual site inspections, as well as methods to be used for vegetation management. Managed grazing is the primary vegetation management methods.

Objective: Monitor and maintain control over non-native invasive plant species, including but not limited to noxious weeds that diminish site quality for which the Preserve was established. The Land Manager shall consult the following sources for guidance on what species may threaten the site and on management of those species:

- California Department of Food and Agriculture (CDFA) list of "noxious weeds" that are subject to regulation or quarantine by county agricultural departments(Encycloweedia: http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hp.htm);

- California Department of Food and Agriculture's Integrated Pest Control Branch (http://www.cdfa.ca.gov/phpps/ipc/);

- University of California Statewide Integrated Pest Management Program list of "Exotic and invasive pests and diseases that threaten California's agricultural, urban, or natural areas" (http://www.ipm.ucdavis.edu/GENERAL/links.html); and

- California Invasive Plant Council's California Invasive Plant Inventory (www.cal-ipc.org)

Task B.1-1 – Vegetation Management/ Invasive Plant Monitoring

Task: Mapping of non-native invasive species cover or presence shall occur annually during long-term management. Mapping shall be accomplished through use of available technologies, such as GPS/GIS and aerial photography as appropriate.

Task: Each year's annual survey shall include a qualitative assessment (e.g. visual estimate of cover) of potential or observed noxious weeds or other non-native species invasions. Additional actions to control invasive species will be evaluated and prioritized.

Task B.1-2 – Vegetation Management/ Weed Control

Task: Control of invasive plants will occur at least once per every two years, and may include the use of specific herbicides. Manual or mechanical control activities may be utilized if herbicide application is determined not to be feasible or desirable by the Land Manager. Manual methods include hand pull or the use of hand held tools to remove nuisance vegetation. Mechanical methods may include mowing with string trimmer as determined by the Land Manager.

The following procedure must be adhered to prior to application of herbicides at the Preserve:

Herbicide application is allowable, but should only be considered feasible after manual and mechanical methods have been ruled out. Small spot treatments will be prioritized over large-scale broadcast methods to minimize the footprint of the herbicide application. Techniques, such as wicking, tight nozzle, or cut stump treatments that are more precisely targeted than large-scale broadcast methods will be prioritized for herbicide application events. The Conservation Easement Grantee must be notified if any herbicide are going to be used within any easement covered areas (notification only; no approval or review is required).

Application of herbicides will be accomplished in accordance with the following standards:

- Herbicides will be used only by a qualified and licensed applicator (QAL) and only applied according to a licensed pest control advisor (PCA) recommendation.

- Under the direction of the Land Manager, a biological monitor will accompany sprayers to prevent impacts to non-target native vegetation that is to be retained.

- Target vegetation will only be sprayed using EPA-approved post-emergent herbicides which are recommended for use in wetlands.

The type of herbicide used, target species, frequency and duration of use, minimization measures used in applying the herbicide, and the methods used to avoid introducing herbicides into wetlands and channels shall be recorded for inclusion within the annual report.

Objective: Maintain the existing competitive advantage of beneficial grassland species over non-native plant species, including but not limited to noxious weeds, through the use of allowable management methods: managed grazing, mowing, and/or manual methods. Prescribed burns will not be allowed without the concurrence and written permission of the Resource Agencies and county fire marshal.

Task B.1-3 – Vegetation Management/ Livestock Grazing

Task: Review and explore potential vegetation management regimes as opportunities and funding arise. If determined to maintain site quality, develop specific vegetation management practices and implement actions as funding allows. Mechanical or manual methods may be used if grazing is not feasible on a case by case basis as determined by the Land Manager; however, grazing will be the preferred method for vegetation management.

Task: Implement annual grazing on the Preserve to maximize habitat values. A Grazing Management Plan has been prepared for the Preserve (Attachment 5). Key features of the Grazing Management Plan are summarized below:

- The amount of rainfall received in a given year may dictate an increase or decrease in the length of grazing based on when wetlands begin drying up at the end of the water year.

- Watering and loading/unloading of livestock will be conducted in specified areas away from seasonal wetlands to minimize impacts caused by these activities.

- Livestock exclusion areas will be fenced to protect establishment of the riparian habitat.

- Flash grazing of the grazing exclusion areas may be allowed to reduce vegetation heights. Any flash grazing must be approved by the Land Manager prior to grazing.

The type of livestock grazed and the duration of seasonal grazing may be increased or decreased on an individual or group of paddocks as an adaptive management approach to meet the overall goal to ensure the long-term preservation of the existing and created wetlands, riparian and upland habitat values. Although cattle will likely be the most feasible type of livestock for grazing the Preserve, sheep and goats will likely be more appropriate for flash grazing of riparian exclusion areas.

To evaluate progress in maximizing wetland habitat development and attaining the vegetation management objective of maintaining the existing competitive advantage of wetland species over exotic annual plant species, the Land Manager, with the assistance, as necessary, of a specialist(s) in grazing management, will include in the annual monitoring report any recommendations for modifications to the grazing plan.

If grazing is not feasible in a particular area, then vegetation management will need to be accomplished with mowing and/or hand removal. Mowing may be accomplished with deck mower or string trimmer as long as a minimum stubble height of 6 inches is maintained.

4.2 Site Management

Element B.2 Sedimentation, Erosion, and Excessive Stormwater Discharge

Objective: Prevent impacts to wetlands from sedimentation and erosion.

Objective: Prevent excess stormwater discharges that would alter the site's hydrology regime. The Land Manager will reduce or prevent excessive stormwater discharge

through activities such as maintaining stockponds, maintaining adequate RDM, and preventing conversion to impermeable hard substrates.

Task B.2-1 – Sedimentation, Erosion & Excess Stormwater Discharge Control Inspection

Task: Inspect the site annually for signs of sedimentation, erosion, or excess stormwater control problems. Following the first rainfall period of at least 1 inch; document any sedimentation, erosion, or excess stormwater discharge control problems on the maintenance monitoring form.

Task B.2-2 – Sedimentation, Erosion & Excess Stormwater Discharge Control Corrective Measures

Task: Correct sedimentation, erosion, or excess stormwater discharge control problems. Excessive stormwater discharges may be corrected by working with adjacent land owners and/or with onsite methods such as installation of vegetative filter strips within the drainage, installing bank stabilization fabric or willow wattles, or removing sediment from wetlands. The major channel features will be fenced, eliminating livestock grazing and allowing extensive natural vegetative growth for filtration purposes.

Element B.3 Fire Hazard Reduction

A vegetation fuel management plan to reduce the risk of wildfire will be produced according to San Ramon Valley Fire Protection District standards for the Preserve and will be implemented and managed by the GHAD in coordination with EBRPD, the Land Manager and the Conservation Easement Grantee. Other potential wildfire fuels in the Preserve will be reduced as needed where approved by the Land Manger, and with notice to the Resource Agencies, and Conservation Easement Grantee.

Objective: Maintain the site as required for fire control while limiting impacts to biological values.

Task B.3-1 – Fire Hazard/Inspection

Task: Monitor vegetation in areas required for fire control and record information on fire risk, vegetation height, and recommended fire control actions.

Task B.3-2 – Fire Hazard Mitigation

Task: Maintain vegetation in areas required for fire control, according to San Ramon Valley Fire Protection District standards and after notification to the Resource Agencies and Conservation Easement Grantee. A vegetation fuel management plan will be produced for the Project which will include actions within the Preserve designating appropriately managed buffers to minimize the risk of catastrophic wildfire.

Element C.1 Site Security

The Preserve will be fenced. Research, educational programs and public access will be allowed on the Preserve. Public access, educational programs and research are not funded or a part of this RMP.

All maintenance visits by the Land Manager will include inspection for any evidence of vandalism. The Preserve will be monitored for signs of excessive or uncontrolled human disturbance such as off-road vehicle use, presence of brush and litter, human foot traffic, and runoff water entering the Preserve. Disturbance will be recorded along with remedial action being taken (e.g., repair fence, gate(s), fill tire ruts to original grade, or replace signage).

The Preserve should remain free of trash and other debris.

Objective: Monitor sources of trash and trespass.

Objective: Collect and remove trash, repair vandalized items, and rectify trespass impacts.

Task C.1-1 – Site Security/Inspection

Task: During each site visit, record occurrences of trash and/or trespass. Record type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and/or trespass impact.

Task C.1-1 – Site Security/Trash Removal

Task: At least once yearly collect and remove trash.

Element C.2 Public Access Management

Public access to the Preserve is proposed.

Objective: Provide appropriate public access to the Preserve that is consistent with its conservation values. Permitted uses may include hiking, non-motorized bicycle riding, horseback riding, wildlife observation, photography, environmental education and interpretation on designated trails. Scientific research may be permitted on a cases-by-case basis. Dogs may be allowed during daylight hours and only if on leash.

Task C.2-1 – Public Access Monitoring/Management

Task: Annually monitor the potential effects of public access to the conservation values of the Preserve. If adverse effects are identified, conduct public access management changes to mitigate adverse effects. Such changes may include temporary or permanent closure of portions or all of the Preserve, relocation of certain public access facilities or restrictions on certain uses.

Element C.3 Mosquito Abatement

The goal of mosquito abatement is to eliminate or minimize mosquito populations within wetland habitats.

Objective: Monitor potential mosquito breeding locations and document onsite conditions regarding presence/absence of mosquitos. Work with mosquito and vector control district and/or Resources Agencies as necessary.

Task C.3-1: Mosquito Monitoring and Abatement

Task: Conduct annual inspection for potential mosquito breeding locations and document onsite conditions regarding presence/absence of mosquitos. Results of the inspection will be included in the annual report.

Task: If necessary, inspect site in coordination with County mosquito abatement official. Document conditions at site regarding presence/absence of vector breeding areas; photograph, GPS, and map potential problem areas; and discuss with agency representative. The Land Manager will implement any recommendations from the County Mosquito Abatement District as long as they either pose no risk to special-status species or their habitats; or are justified by a significant health risk. Any mosquito abatement activities recommended by the County Mosquito Abatement District will be reviewed by an appropriate species biologist and approved prior to implementation.

Element C.4 Maintain Fencing, Gates, Locks, and Signs

The goal of this element is to maintain fencing to preserve site integrity, prevent damage to habitat and associated biota, and to facilitate the ongoing management of the Preserve.

Inspect fencing to prevent unauthorized access and ensure it is maintained in good condition. Check to see that there is proper tension in the wire or fencing parts, the wire or metal grill work is not broken, and appropriate post alignment and stability are maintained.

Replace existing fencing site wide when it is no longer functional; assume that all wire fencing and posts will need to be replaced every 20 years, per EBRPD recommendation.

Signs identifying the Preserve as an open space preserve will be located at vehicle access points and at appropriate intervals along the preserve boundary/property line. Replace signs if they are found to be damaged, illegible, or if the contact information needs to be updated. Replace locks on an as-needed basis to maintain site security.

Objective: Monitor condition of fences, gates, locks, and signs.

Objective: Maintain/replace fences, gates, locks, signs to prevent casual trespass and to facilitate property management access.

Task C.4-1: Fencing, Gates, Locks, Signs/Inspection

Task: Inspect fencing, gates, locks and signs for damage or need for maintenance and document observations on inspection sheet. GPS locations and create map showing locations of facilities needing repair or replacement.

Task C.4-2: Fencing, Gates, Locks, Signs/Repair

Task: Maintain/repair fences, gates, and signs as necessary by replacing posts, wire, and/or gates.

Task C.4-3: Fencing, Gates, Locks, Signs/Replacement

Task: Replace fences and gates as necessary by replacing posts, wire, and/or gates. Assumes 5-strand barbed wire on metal posts with 10-foot centers with end post braces for tension support. Replace worn gates. Replace signs and locks.

Element C.5 Maintain Access Roads

Access to the Preserve will typically involve the use of a standard truck; however the use of a small quad ATV or UTV will be allowed when transport with standard truck is not feasible as approved by the Land Manager.

Objective: Monitor condition of access roads.

Objective: Maintain access roads to facilitate property management access.

Task C.5-1: Access Road/Inspection

Task: During each site visit, record condition of access roads. Record location, type and recommendations to implement access road repair or replacement, if applicable. To be maintained by the GHAD in coordination with the EBRPD.

Task C.5-2: Access Road/Repair

Task: Maintain/repair access roads as necessary by adding rock, leveling and smoothing, and compaction activities. To be maintained by the GHAD in coordination with the EBRPD.

4.3 Reporting and Administration

Element D.1 Annual Report

Objective: Provide an annual report on all management tasks conducted and general site conditions to the Conservation Easement Grantee and Conservation Easement Third-Party Beneficiaries.

Task D.1-1: Prepare Annual Report

Task: The Land Manager will produce the annual report and any other additional documentation. Include a summary. Complete and circulate to the Resource Agencies by January 31 of each year following recordation of the conservation easement.

Task: Make recommendations with regard to (1) any habitat enhancement measures deemed to be warranted; (2) any problems that need near short and long-term attention (e.g., weed removal, fence repair, erosion control); and (3) any changes in the monitoring or management program that appear to be warranted based on monitoring results to date. The annual report will include the following:

- A summary of all grazing activities during the previous year.
- A summary of all other management actions undertaken during the preceding year.
- A list of all persons who participated in the monitoring and preparation of the annual report.
- A description of any changes to the methodology for implementation of the RMP and recommendations for modifications to the plan.
- Recommendations for remedial actions. If remedial actions have been implemented then the report will document the efficacy of the actions.
- A summary of fire hazard reduction measures implemented during the previous year.
- A summary of efforts made to control invasive plant species within the wetlands and channels, including mechanical measures, and all application of herbicides including the amount and type of herbicide that was used.

Task D.1-2: Prepare Biological Section of Annual Report

Task: The Land Manager or Monitoring Biologist will produce the biological section of the annual report every five years based on the results of the biological monitoring described under Element A.1-3, vegetation monitoring and special-status species monitoring.

Annual Conservation Easement Monitoring Report

Objective: Provide annual report on Conservation Easement status to the Corps and Third-Party Beneficiaries of the Conservation Easement.

Task Easement Grantee to Prepare Easement Report

Task: Prepare annual conservation easement compliance report. The Conservation Easement Grantee will complete and submit the annual conservation easement compliance report to the Land Manager by December 31 of each monitoring year. Include a summary and photographs. The Land Manager will include a copy of the report in the annual reports.

4.4 Schedule

A schedule outlining the proposed frequency of routine monitoring and maintenance procedures for long-term management of the Preserve is shown in Table 2. Monitoring and maintenance activities as described in this RMP will start as soon as the habitat is constructed and/or the recordation of a conservation easement(s).

The interim management period is a minimum of three years from the date the Conservation Easement is recorded (the land is protected) and the endowment is fully funded. The Interim Management Fund (as described above in Section 1.3.6) will provide funding for activities prescribed in this plan during the three year interim management period. After the Endowment Fund has been fully funded for three years, routine monitoring and maintenance activities will be funded by the interest generated by the Endowment Fund.

Table 2. Schedule of Routine Monitoring and Maintenance Activities

Element	Frequency
A. Biological Monitoring	
Element A.1 Vegetation Monitoring	
Task: Conduct Vegetation Monitoring	Every 5 years
Task: GPS/GIS download and database	Every 5 years
Task: Data analysis and recommendations	Every 5 years
Element A.2 California Red-legged Frog Monitoring	
Task: Conduct Presence/Absence Monitoring	Every 5 years
Task: GPS/GIS download and database	Every 5 years
Task: Data analysis and recommendations	Every 5 years
Element A.3 Alameda Whipsnake Monitoring	
Task: Conduct Presence/Absence Monitoring	Every 5 years
Task: GPS/GIS download and database	Every 5 years
Task: Data analysis and recommendations	Every 5 years

Table 2. Schedule of Routine Monitoring and Maintenance Activities

Element	Frequency
B. Vegetation Management	
Element B.1 Vegetation Management	
Task: Map non-native invasive plant species.	Annually
Task: Monitor non-native invasive plant species.	Annually
Task: Non-native invasive species/herbicide Event	Every 2 years
Task: Explore vegetation management options.	Annually
Task: Implement annual grazing program.	Annually
Element B.2 Sedimentation ,Erosion , and Excessive Stormwater Discharge	
Task: Inspect for Sedimentation, Erosion, Discharge.	Annually
Task: Corrective Measures- Erosion	Every 10 years
Element B.3 Fire Hazard Reduction	
Task: Fire Hazard Inspection	Annually
Task: Fire Hazard Mitigation Activities	Every 5 years
C. Site Security	
Element C.1 Site Security	
Task: Record locations of trash and trespass	Annually
Task: Collect and remove trash	Annually
Element C.2 Public Access Management	
Task: Public Access Monitoring/Management	Annually
Element C.3 Mosquito Abatement	
Task: Inspection for Mosquito Habitat	Annually
Task: Mosquito Abatement	Annually as needed
Element C.4 Fences. Gates, Locks, Signs	
Task: Monitor Fences, Gates, Locks, Signs	Annually
Task: Repair Fences, Gates, Locks, Signs	Annually as needed
Task: Replace Fences, Gates	Every 20 years
Task: Replace Locks, Signs	Every 5 years
Element C.5 Access Roads	
Task: Monitor access roads	Annually
Task: Repair/maintain access roads	Annually
D. Reporting and Administration	
Element D.1 Annual Report	
Task: Prepare annual report.	Annually by January 31
Task: Prepare biological section of annual report.	Every 5 years
Task: Make management recommendations	Annually

PLAN AMENDMENTS AND NOTICES

4.5 Transfer

Any subsequent transfer of responsibilities under this RMP to a different Land Owner and/or Land Manager shall be requested by the Land Owner in writing to the Resource Agencies, shall require written approval, and shall be incorporated into this RMP by amendment.

Any subsequent Land Owner assumes the Land Manager responsibilities described in this RMP, and as required in any conservation easement, unless otherwise amended in writing by the Resource Agencies.

The Conservation Easement Grantee must be informed of any transfer 60 days prior to transfer.

4.6 Replacement

If the Land Manager fails to implement the tasks described in this RMP and is notified of such failure in writing by the Resource Agencies, the Land Manager shall have 90 days to cure such failure. If failure is not cured within 90 days, the Land Manager may request a meeting with the Resource Agencies to resolve the failure. Such meeting shall occur within 30 days or a longer period if approved by the Resource Agencies. Based on the outcome of the meeting, or if no meeting is requested, the Resource Agencies may designate a replacement land manager in writing by amendment of this RMP. If the Land Manager fails to designate a replacement, then such public or private land or resource management organization acceptable to and as directed by the Resource Agencies may enter onto the Preserve in order to fulfill the purposes of this RMP.

4.7 Amendments

The Land Owner, Land Manager**,** Resource Agencies, and Conservation Easement Grantee may meet and confer from time to time, upon the request of any one of them, to revise this RMP to better meet management objectives and preserve the habitat and conservation values of the Preserve. Any proposed changes to this RMP shall be discussed with the Resource Agencies, Land Owner, Land Manager, and Conservation Easement Grantee. Any proposed changes will be designed with input from all parties (input from the Conservation Easement Grantee is advisory only, not mandatory). Amendments to this RMP shall be approved by the Land Owner, Land Manager, and Resource Agencies in writing; RMP amendments shall be required management components and shall be implemented by the Land Owner.

If the USFWS and/or CDFW determines, in writing, that continued implementation of this RMP would jeopardize the continued existence of a state or federally listed species, any written amendment to this RMP determined by the USFWS and/or CDFW as necessary to avoid jeopardy, shall be a required management component and shall be implemented by the Land Owner.

4.8 Notices

Any notices regarding this RMP shall be directed as follows:

Resource Agencies

U.S. Army Corps of Engineers
San Francisco District, Regulatory Division
Attn: Chief, Regulatory Division
1455 Market Street, 16th Floor
San Francisco, CA 94103

U.S. Fish & Wildlife Service
Attn: Field Supervisor
Sacramento Field Office
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

California Department of Fish and Wildlife
Attn: Regional Manager
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558

San Francisco Bay Regional Water Quality Control Board
Attn: Executive Officer
1515 Clay Street, Suite 1400
Oakland, CA 94612

Applicant/Permittee

Faria LT Ventures, LLC
Attn: Pat Toohey
5000 Executive Parkway, No. 530
San Ramon, CA 94583

Land Manager

Olberding Environmental, Inc.
Attn: Jeff Olberding
193 Blue Ravine Road, Suite 165
Folsom, CA 95630

Conservation Easement Grantee

Wildlife Heritage Foundation
Attn: Executive Director
563 Second Street, Suite 120
Lincoln, CA 95648

5.0 FUNDING AND TASK PRIORITIZATION

5.1 Funding

The costs associated with management and monitoring activities of the Preserve will be identified using a Property Analysis Record (PAR). The PAR, included in Attachment 4, details the tasks and identifies the anticipated costs associated with each task.

5.1.1 Acquisition and Establishment

The Applicant is responsible for acquisition and establishment costs, including initial corrective actions, associated with the Preserve including inspections by agency staff, legal review and assistance, access road improvement, and fence, gate and sign installation. Satisfactory completion of any initial corrective actions will be verified through onsite inspections by the Land Manager. Following the successful completion of initial corrective actions, any measures needed to correct unanticipated items will be funded through the contingency fund established as a part of the Endowment Fund.

5.1.2 Habitat Establishment

The Applicant is responsible for all habitat establishment costs including project planning and design, construction, plant installation and maintenance, and monitoring until successful habitat establishment is confirmed by the Resource Agencies, as described in the MMP. It is anticipated that successful wetland establishment will be documented by Year 5, and successful riparian establishment will be documented by Year 10. In the event that wetland and riparian establishment is not successful within the identified time frames, the Applicant will be responsible for all remedial actions. Long-term management actions as described in this RMP will be initiated during Year 1 concurrently with wetland and riparian mitigation establishment.

5.1.3 Interim Management Funding

The Applicant is responsible for funding the initial corrective actions, Interim Endowment Fund, and the Endowment Fund. The Endowment Fund is required to be established and be fully funded for three years prior to any withdrawals. The Interim Endowment Fund included in the PAR is non-recurring and is the amount of money needed to cover the first three years of long-term monitoring and management as described in this RMP.

5.1.4 Endowment Fund

The Applicant is responsible for funding the long-term Endowment Fund. The Endowment Fund will be held by the WHF. The capitalization rate used in the PAR is 4.0 percent. The PAR also includes the following assumptions to ensure long-term viability and security of the Endowment Fund:

- A 10 percent “contingency” line item to be paid by the Applicant at the time of endowment establishment, in order to hedge against underestimation of the fund, unanticipated expenditures, inflation, or catastrophic events.

- Three years delayed withdrawal after the endowment is fully funded, allowing enough time for the interest earned from the fully funded endowment to sufficiently mature before invoicing against it.

- Payment for non-annualized large capital expenses such as fence replacement shall be withheld from the annual disbursement until the year of anticipated need.

An Interim Endowment Fund will also be established to provide income to fund the first three years of long-term monitoring and management on the easement areas consistent with the RMP. The purpose of the Interim Endowment Fund is to create a buffer of the long-term endowment so as not to erode the initial investment funds.

The Endowment Fund and Interim Endowment Fund will be transferred to the Endowment Fund Holder concurrently with recordation of the Conservation Easement. Proof of funding will be provided to the RWQCB, USFWS and CDFW (Third-Party Beneficiaries) upon request.

The responsibilities of the Endowment Fund holder will be described in an Endowment Agreement. These responsibilities will include working with the Applicant and Land Manager to fund ongoing monitoring and maintenance work, and preparing and submitting annual fiscal reports.

5.2 Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. If task prioritization is required, the Land Owner and Land Manager and Third-Party Beneficiaries shall discuss task priorities and funding availability to determine which tasks will be implemented. The Conservation Easement Grantee will be notified of any changes in task prioritization (notification only; no approval or review is required).

In general, tasks are prioritized in this order: (1) required by a local, state, or federal agency; (2) tasks necessary to maintain or remediate habitat quality; and (3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the Land Manager and Resource Agencies as necessary**.**

6.0 REFERENCES AND LITERATURE CONSULTED

Bulger, J.B., N.J. Scott Jr., and R.B. Seymour. 2003. Terrestrial activity and conservation of adult California red-legged frogs *Rana aurora draytonii* in coastal forests and grasslands. Biological Conservation 110:85-95.

California Department of Fish and Wildlife Natural Diversity Data Base. 2013. Computer listings and map locations of historic and current recorded occurrences of special-status species and natural communities of special concern for USGS 7.5-minute quadrangle maps: Diablo, Dublin, Hayward, and Las Trampas Ridge. September.

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_____. 2013. State and federally listed Endangered and Threatened Animals of California. http://www.dfg.ca.gov/endangered/t_e_animal.pdf.

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APPENDIX F - Podva Long-Term Management Plan

LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

REDHAWK TRACT (PODVA PROPERTY)
CONSERVATION LANDS
LONG-TERM MANAGEMENT PLAN
TOWN OF DANVILLE, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.

Rick Hopkins, Ph.D., Principal and Senior Wildlife Ecologist
Davinna Ohlson, M.S., Senior Project Manager and Plant/Wildlife Ecologist
Mark Jennings, Ph.D., Associate Herpetologist

Prepared for

Ponderosa Homes II, Inc.
Attn: Jeffrey Schroeder
6130 Stoneridge Mall Road, Suite 185
Pleasanton, CA 94588

April 14, 2016 PN 1529-03

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Oakhurst: P.O. Box 2697 • 33930 Sierra Way, Suite B • Oakhurst, CA 93644 • Phone: (559) 642-4880 • (559) 642-4883
Truckee: 11050 Pioneer Trail, Suite 203 • Truckee, CA 96161 • Phone: (530) 214-8947
www.loainc.com

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1.0 INTRODUCTION

Live Oak Associates, Inc. (LOA), has prepared this long-term management plan for the approximately 30-acre Redhawk Tract Conservation Lands (a part of the larger Podva property, hereafter referred to as the "project site" or "site") located in the Town of Danville, Contra Costa County, California.

1.1 PURPOSE OF ESTABLISHMENT

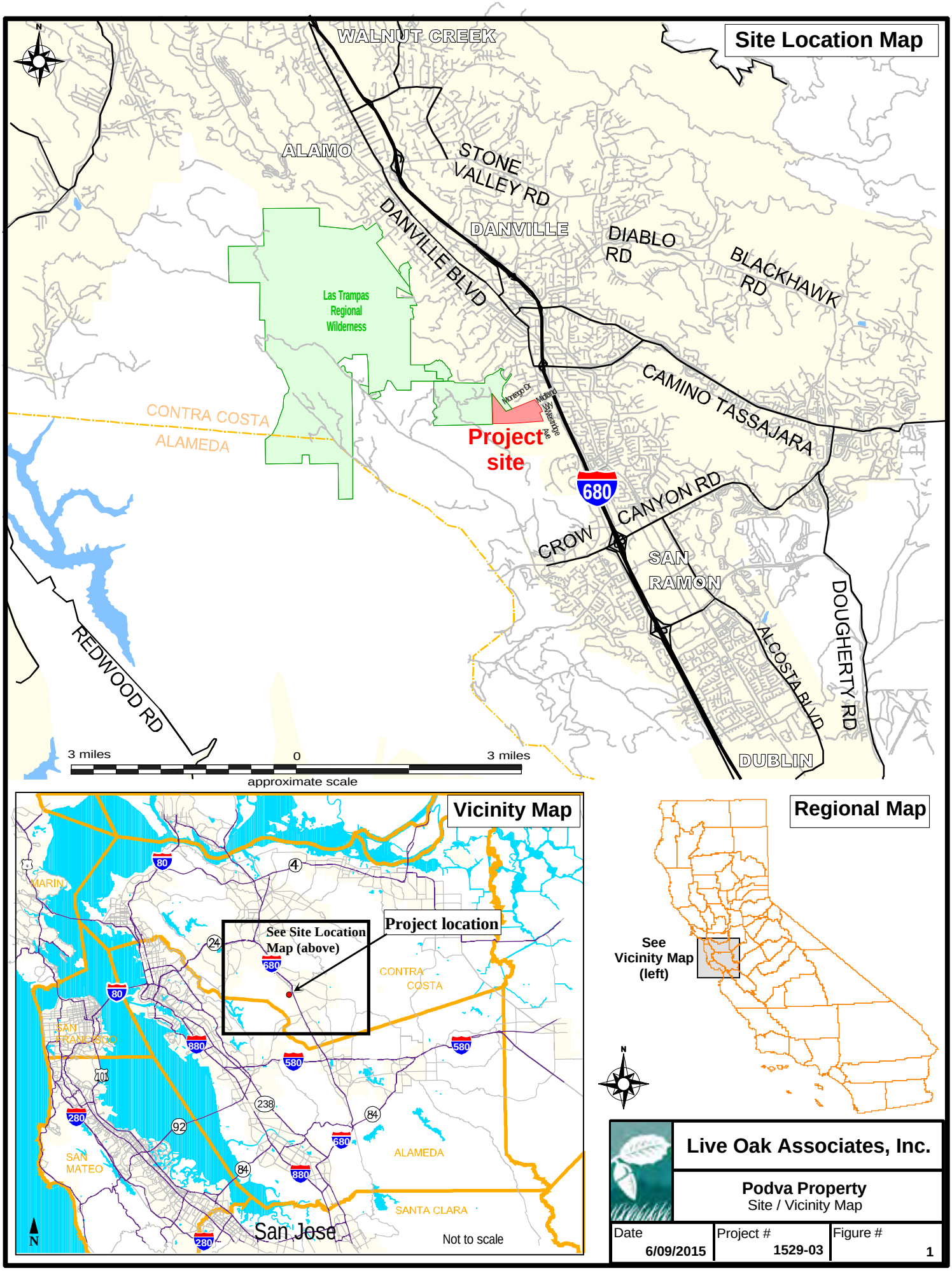
This long-term management plan ("LTMP") has been prepared to provide for the management of 30 acres of conservation lands suitable for the California red-legged frog (*Rana draytonii;* CRLF), Alameda whipsnake (*Masticophis lateralis euryxanthus*; AWS), and other regionally sensitive wildlife species. These conservation lands are being protected in perpetuity under a conservation easement to mitigate impacts to biological resources, specifically impacts to CRLF and AWS, as identified in the Podva Property Final Environmental Impact Report (RBF 2014) [FEIR]. While other special status species, such as the western pond turtle (*Actinemys marmorata*) and burrowing owl (*Athene cunicularia*), have not been detected on the site to date, the habitat management strategies discussed in this document will benefit these species as well.[1]

Implementation of this LTMP will occur concurrently with implementation of the *Redhawk Tract (Podva Property) Waters of the U.S. and Riparian Mitigation and Monitoring Plan* (LOA 2016a).

1.2 PROJECT LOCATION

The project site is located at the terminus of Midland Way, west of Highway 680, in the Town of Danville, Contra Costa County, California (Figure 1). The project site is located in the Diablo

[1] This LTMP will be submitted to the Town of Danville for inclusion in the Final Environmental Impact Report (FEIR) and project entitlements for the project. The project applicant will also be seeking necessary permits from several state and federal natural resources agencies. While the applicant intends that this LTMP will satisfy the permitting and mitigation requirements of those other agencies, to the extent those agencies impose different and/or additional requirements, this LTMP may later be amended to incorporate them. Any later amended version of this LTMP, however, must provide at least the same amount of mitigation and conservation benefit as the version submitted to the Town and incorporated into the FEIR.



Live Oak Associates, Inc.	
Podva Property Site / Vicinity Map	
Date 6/09/2015	Project # 1529-03
Figure # 1	

and Las Trampas Ridge 7.5" U.S. Geological Survey (USGS) quadrangles in section 32 of township 1 south, range 1 west on the Mt. Diablo Meridian. The site ranges in elevation from approximately 465 ft. (142 m) National Geodetic Vertical Datum (NGVD) at the east end of the site to approximately 1040 ft. (317 m) NGVD in the site's southwest corner.

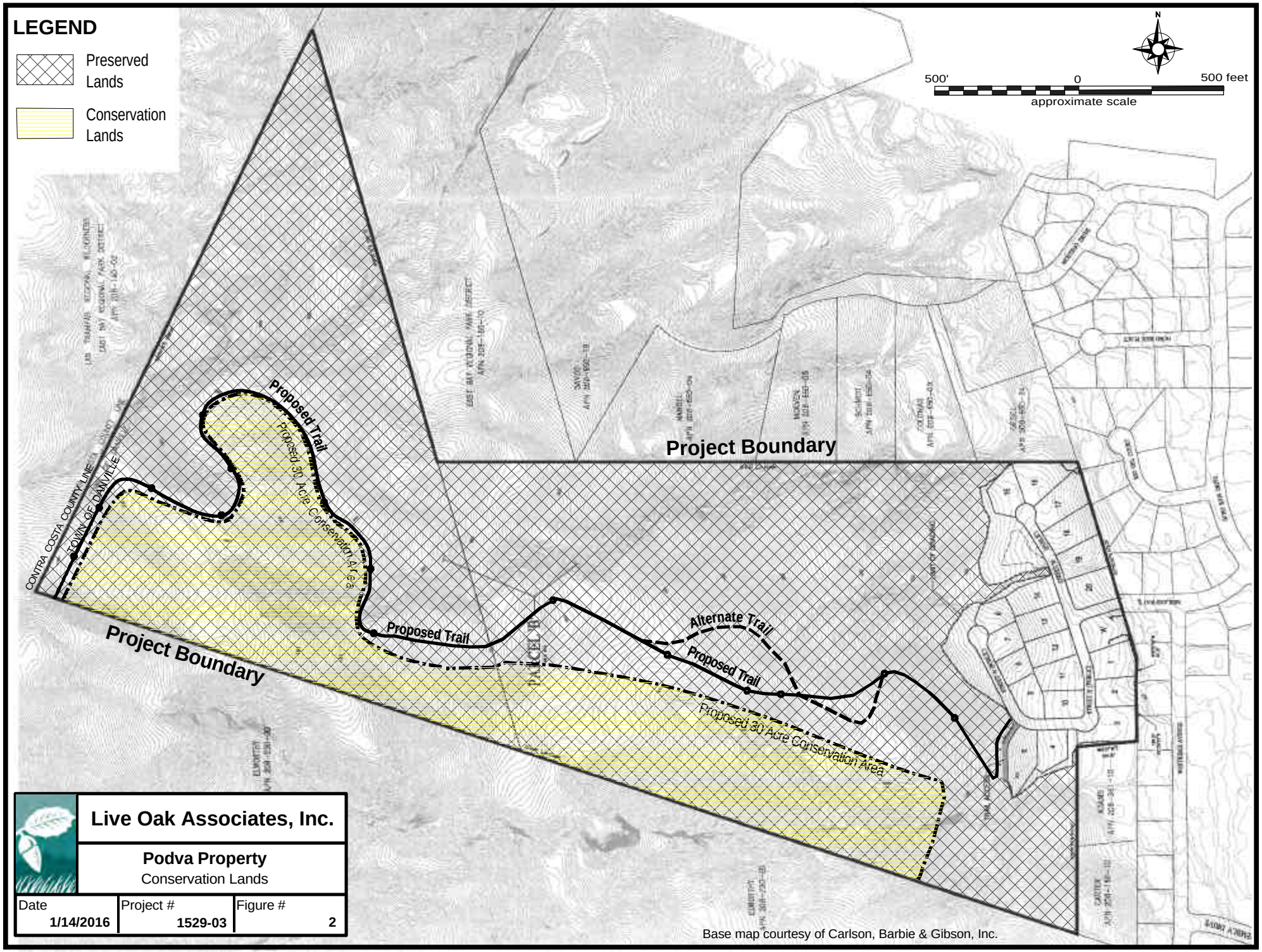
1.3 PROJECT DESCRIPTION

The proposed project consists of the development of a 20-lot single-family residential subdivision with a minimum 10,000 sq ft lot. The project proposes to locate the subdivision on approximately 9.2 acres at the eastern end of the site (Figure 2). This area is noted as parcels A and B in the final environmental impact report (FEIR) prepared for the project (RBF 2014). Associated infrastructure will include the extension of Midland Way to the subdivision, storm drainage improvements, including a detention basin and a bioretention area, and water and sewer line improvements.

The remainder of the site, comprising approximately 96 acres (and noted as parcel C in the FEIR), will be permanently preserved as open space and dedicated in fee title to the East Bay Regional Park District (EBRPD). Of these 96 acres of dedicated open space, 30 acres of covered species habitat (i.e., the project site addressed by this long-term management plan) will be protected and managed in perpetuity under conservation easement. A public trail will be located in the open space preserve outside of the conservation lands identified herein. This trail will connect to the existing Las Trampas Regional Wilderness, which is also part of the EBRPD, immediately west of the site.

1.4 PREVIOUSLY COMPLETED BIOLOGICAL STUDIES

Biological studies completed for the larger Redhawk Tract include a biological evaluation (LOA 2012a) and an investigation of potential waters of the United States (LOA 2011). A comprehensive set of rare plant surveys was completed for the development footprint of the residential subdivision (LOA 2012b). A habitat assessment of the site for CRLF, AWS, California tiger salamander (*Ambystoma californiense*), and western pond turtle was also completed, the findings of which are included in the biological evaluation.


LEGEND
Preserved Lands
Conservation Lands
N
500'
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500 feet
approximate scale
Project Boundary
Proposed Trail
Proposed 30 Acre Conservation Area
Proposed Trail
Alternate Trail
Proposed Trail
Proposed 30 Acre Conservation Area
Project Boundary
CONTRA COSTA COUNTY LINE
TOWN OF DANVILLE
Live Oak Associates, Inc.
Podva Property
Conservation Lands
Date
1/14/2016
Project #
1529-03
Figure #
2
Base map courtesy of Carlson, Barbie & Gibson, Inc.

1.5 RESPONSIBLE PARTIES

The conservation lands will be protected by a conservation easement deed. The Wildlife Heritage Foundation will be the conservation easement holder (hereafter referred to as the "easement holder"). The role of the easement holder is to provide oversight of and monitor compliance with this LTMP. The Wildlife Heritage Foundation will hold an oversight and compliance endowment for that purpose.

The EBRPD will be the preserve manager (hereafter referred to as the "preserve manager") and will manage and monitor the entire 30 ac of conservation lands. The EBRPD will hold a separate management endowment for the conservation lands.

Together, the preserve manager and the easement holder will be responsible for implementation of this long-term management plan, with the exception below. The responsibilities of the preserve manager are set forth in section 3.0 of this plan. The responsibilities of the easement holder are set forth in section 4.0 of this plan.

The EBRPD has management responsibility of the entire 30 ac with the exception of those areas called out in the MMP that occur on the conservation lands, which will be the responsibility of Ponderosa Homes for the required monitoring period as specified in the MMP. The LTMP and the MMP will be implemented concurrently by the EBRPD and Ponderosa Homes.

Successful implementation of the MMP is expected to take ten years and is considered complete once the regulatory agencies have signed off of the mitigation effort. If success is not achieved at the end of ten years, management and monitoring will continue until the regulatory agencies have provided sign-off.

Once all of the regulatory agencies have signed off of the mitigation effort specified in the MMP, management responsibility of those areas will also be transferred to the EBRPD. Thereafter, the EBRPD will have sole management responsibility for this long-term management plan.

Ponderosa Homes' contact information is:

Ponderosa Homes II, Inc.
6130 Stoneridge Mall Road, Suite 185
Pleasanton, CA 94588
Phone: (925) 460-8910
Contact: Jeffrey Schroeder

The EBRPD's contact information is:

East Bay Regional Park District
2950 Peralta Oaks Court
Oakland, CA 94605
Phone: (888) 327-2757
Contact: Neoma Lavalle

The Wildlife Heritage Foundation's contact information is:

Wildlife Heritage Foundation
563 Second Street, Suite 120
Lincoln, CA 95648
Phone: (916) 434-2759
Contact: Patrick Shea

2.0 HABITAT AND SPECIES DESCRIPTIONS

2.1 BIOTIC HABITATS

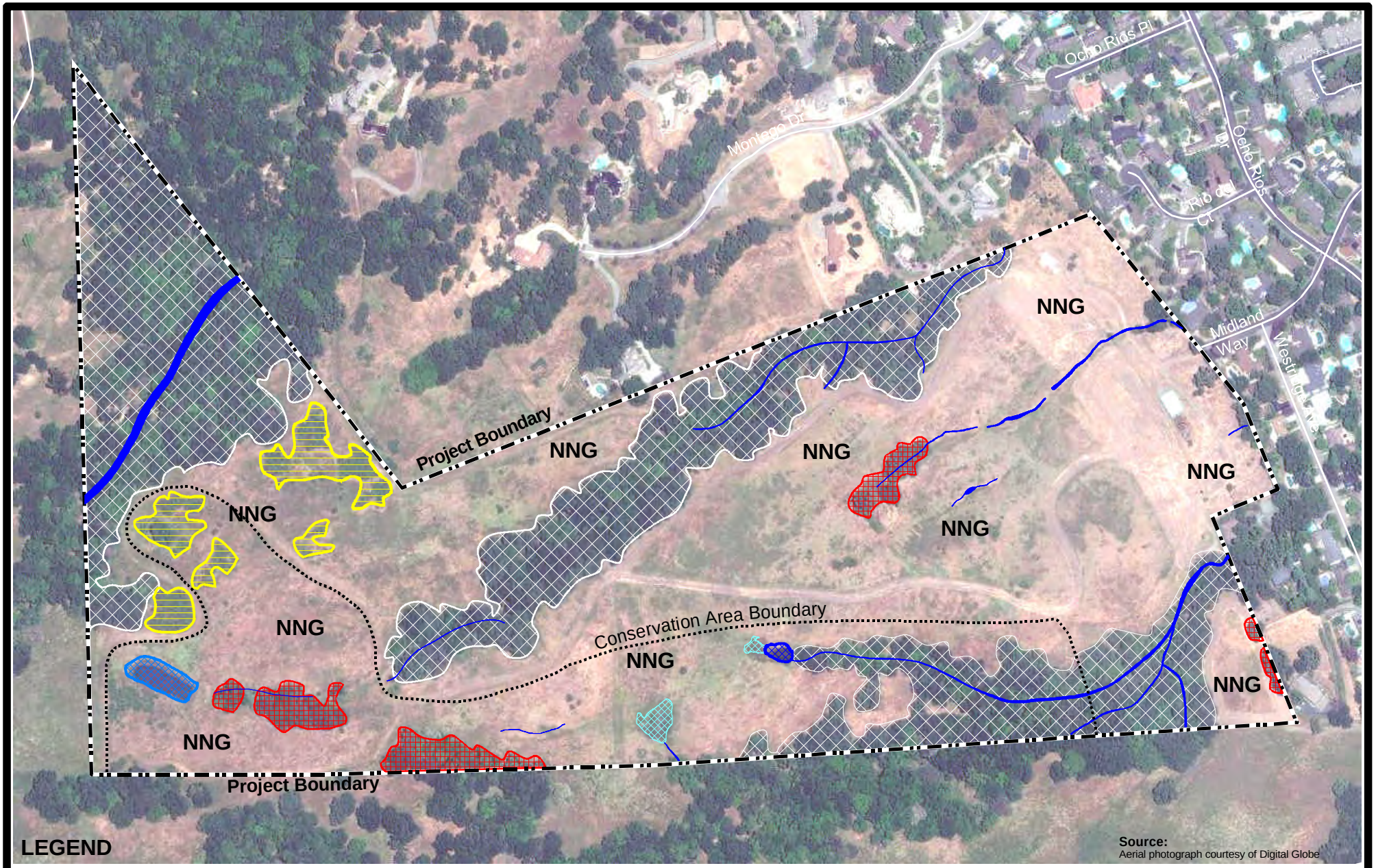
The biological evaluation prepared for the site (LOA 2012) identified five biotic habitats (Figure 3). The habitats were classified as "annual grassland," "riparian woodland and seasonal drainage," "ponds and wetlands," "oak woodland," and "coyote brush scrub."

2.1.1 Annual Grassland

The site primarily consists of non-native grasslands dominated by annual grasses and forbs of European origin. Non-native annual grasses common to this habitat include soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), wild oats (*Avena fatua*), Italian ryegrass (*Lolium multiflorum*), foxtail barley (*Hordeum murinum*), canary grass (*Phalaris californica*), and rattail fescue (*Vulpia myuros*). Common non-native forbs observed include common groundsel (*Senecio vulgaris*), Italian thistle (*Carduus pycnocephalus*), purple salsify (*Tragopogon porrifolius*), black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), cheeseweed mallow (*Malva parviflora*), burclover (*Medicago polymorpha*), rose clover (*Trifolium hirtum*), yellow devil's-claw (*Proboscidea lutea*), and buffalo berry (*Solanum rostratum*). Native species observed include cocklebur (*Xanthium strumarium*), California goosefoot (*Chenopodium californicum*), Carolina geranium (*Geranium carolinianum*), blue-eyed grass (*Sisyrinchium bellum*), and vinegarweed (*Trichostema lanceolatum*).

Coyote brush (*Baccharis pilularis*) is sparsely scattered through the grassland habitat. At the eastern end of the site, several cherry plums (*Prunus cerasifera*) occur near ephemeral channel remnants (section 2.1.2). Also at the eastern end of the property are a metal barn, a wood barn, and some agricultural equipment.

Grasslands provide important habitat to many terrestrial vertebrates. A number of these species are expected to utilize grasslands occurring on the site throughout all or part of the year as breeding and foraging habitat.



Live Oak Associates, Inc.

Podva Property
Biotic Habitats

Date	Project #	Figure #
4/14/2016	1529-03	3

Debris, thatch, leaf litter, and small mammal burrows provide cover for several reptile species that forage in grasslands for small mammals and birds. These include the Coast Range fence lizard (*Sceloporus occidentalis bocourtii*), which was observed during field surveys, California alligator lizard (*Elgaria multicarinata multicarinata*), Pacific gophersnake (*Pituophis catenifer catenifer*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*). They may also provide suitable cover and aestivation habitat for amphibians utilizing nearby aquatic habitats (section 2.1.3).

Numerous resident and migratory birds breed and forage in grassland habitats. Red-tailed hawks (*Buteo jamaicensis*) were observed flying over the site. Raptors such as the turkey vulture (*Cathartes aura*) and white-tailed kite (*Elanus leucurus*) would also utilize this habitat. Other birds observed in this habitat include the introduced wild turkey (*Meleagris gallopavo*), mourning dove (*Zenaida macroura*), acorn woodpecker (*Melanerpes formicivorus*), western scrub-jay (*Aphelocoma californica*), tree swallow (*Tachycineta bicolor*), American robin (*Turdus migratorius*), red-winged blackbird (*Gelaius phoeniceus*), and house finch (*Carpodacus mexicanus*).

Mammals are common to this habitat. A dead striped skunk (*Mephitis mephitis*) was observed near the wood barn, and evidence of skunk prey digs was also present. California ground squirrels (*Spermophilus beecheyi*) and their burrows were observed throughout the site, and Botta's pocket gopher (*Thomonys bottae*) burrows were also present on the site. Other small mammals likely to occur in this habitat include the western harvest mouse (*Reithrodontomys megalotis*) and California meadow vole (*Microtus californicus*). Small mammals often attract predators, including reptiles and birds previously discussed. The abundance of small mammals also attracts larger mammalian predators known to occur in the region, including coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), and bobcats (*Lynx rufus*). Black-tailed deer (*Odocoileus hemionus columbianus*) were also present on the site.

Bat species such as the Mexican free-tailed bat (*Tadarida brasiliensis*) may forage over this habitat for insects. However, structures on the site would not provide suitable habitat for bats.

The metal barn has no openings, and the wood barn is likely too open for bats to roost. No evidence of bats (e.g., guano) in or around these structures was present.

2.1.2 Riparian Woodland and Seasonal Drainage

Riparian woodland habitat with a relatively dense, closed canopy is associated with two seasonal tributary channels along the site's northern and southern boundaries and their lesser order seasonal tributary channels (Figure 3). The main channels conveyed water at the time of the May 2011 survey, while the lesser order channels were dry. Riparian woodland is also present in the northwest corner of the site. The overstory vegetation was dominated by valley oaks (*Quercus lobata*) and coast live oaks (*Quercus agrifolia*), while California bay (*Umbellularia californica*) and blue oaks (*Quercus douglasii*) were also present. This habitat had a modest to dense shrub layer of California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), and common snowberry (*Symphoricarpos albus* var. *laevigatus*). The herbaceous understory consisted of such species as Baltic rush (*Juncus balticus*), common yarrow (*Achillea millefolium*), Italian thistle, soap plant (*Chlorogalum pomeridianum* var. *pomeridianum*), bugle hedgenettle (*Stachys ajugoides*), miner's lettuce (*Claytonia perfoliata*), foxtail barley, beardless wildrye (*Leymus triticoides*), California brome (*Bromus carinatus*), and ripgut brome. The channel beds themselves were largely devoid of vegetation.

The ephemeral channel remnants along the eastern boundary of the site supported a few riparian trees, including valley oak, coast live oak, California bay, and arroyo willow (*Salix lasiolepis*).

The seasonal drainage channels lacking associated riparian habitat supported upland herbaceous species similar to that of the surrounding upland habitat (section 2.1.2).

Riparian systems serve as dispersal corridors and islands of habitat for an estimated 83% of amphibians and 40% of reptiles in California (Brode and Bury 1984). The onsite drainages that convey water provide a seasonal source of drinking water for species occurring in the surrounding habitats and, when wet, also provide breeding habitat for Pacific treefrogs (*Hyla regilla*). Leaf litter and decaying logs provide a moist microclimate suitable for amphibians such

as the Pacific treefrog. Reptiles that may utilize riparian systems include the Skilton's skink (*Eumeces skiltonianus skiltonianus*), California alligator lizard, Pacific gophersnake, and California kingsnake (*Lampropeltis getula californiae*).

Many resident and migratory bird species occur in riparian habitats. Birds observed in the riparian woodland include the Steller's jay (*Cyanocitta stelleri*) and dark-eyed junco (*Junco hyemalis*). Resident species that may be found in this habitat include the Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), Anna's hummingbird (*Calypte anna*), downy woodpecker (*Picoides pubescens*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), warbling vireo (*Vireo gilvus*), western scrub-jay, bushtit (*Psaltriparus minimus*), and song sparrow (*Melospiza melodia*). Winter migrants may include the sharp-shinned hawk (*Accipiter striatus*) and ruby-crowned kinglet (*Regulus calendula*). Summer migrants may include the ash-throated flycatcher (*Myiarchus cinerascens*), Pacific-slope flycatcher (*Empidonax difficilis*), orange-crowned warbler (*Oreothlypis celata*), and Bullock's oriole (*Icterus bullockii*).

The structural and faunal diversity of riparian zones provide an abundant food source for and attract a variety of mammalian species. For example, the deer mouse (*Peromyscus maniculatus*) feeds on soil-dwelling larvae as well as a variety of seeds and leaves. Other constituent mammals of riparian woodlands in the region include the brush rabbit (*Sylvilagus bachmani*), introduced eastern fox squirrel (*Sciurus niger*), and raccoon (*Procyon lotor*).

2.1.3 Ponds and Wetlands

Two ponds are present onsite; the lower pond is located approximately in the center of the site, and the upper pond is in the southwest corner. In average rainfall years, both ponds hold water into the summer. Vegetation occurring in the ponds include common spikerush (*Eleocharis macrostachya*), tall flatsedge (*Cyperus eragrostis*), Mexican rush (*Juncus mexicanus*), and curly dock (*Rumex crispus*).

A wetland swale is associated with the lower pond. Vegetation occurring in the swale includes poison hemlock (*Conium maculatum*), curly dock, rabbitsfoot grass (*Polypogon monspeliensis*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and Italian ryegrass. A second wetland swale is located in the grasslands along the site's southern boundary and supported such species as Mediterranean barley, Italian ryegrass, rabbitsfoot grass, and curly dock.

Coast Range newts (*Taricha torosa torosa*), Pacific treefrogs, California red-legged frogs (*Rana draytonii*), and Diablo Range garter snakes (*Thamnophis atratus zaxanthus*) were observed in the upper pond. No amphibians or reptiles were observed at the lower pond, although raccoon prints were seen. Wildlife from the surrounding habitats could use these features as seasonal drinking sources.

2.1.4 Oak Woodland

Relatively small areas of oak woodland are associated with swales at the upstream end of dry seasonal drainage channels. This habitat was dominated by the same oak species comprising the riparian woodlands but generally lacked understory vegetation.

Wildlife inhabiting the surrounding grasslands and riparian woodlands would also be expected to occur within this habitat.

2.1.5 Coyote Brush Scrub

Within the grasslands in the site's northwest corner are small patches of coyote brush (*Baccharis pilularis*). Wildlife species expected to occur in the surrounding habitats could occasionally pass through these patches as well.

2.2 COVERED SPECIES

The long-term conservation management plan is designed to conserve and protect lands in perpetuity for the CRLF and AWS. Field surveys have been completed to identify areas for enhancement of CRLF breeding habitat. All other areas of the preserved lands are considered foraging and/or dispersal habitat for the CRLF.

While other special status species, such as the western pond turtle and burrowing owl, have not been detected on the site to date, the habitat management strategies discussed in this document will benefit these species as well should they occur on the site in the future.

2.2.1 California Red-Legged Frog

Legal status. The CRLF was listed as threatened by the U.S. Fish and Wildlife Service under the authority of the Federal Endangered Species Act on May 23, 1996. It is designated as a species of special concern in California. The species had been extirpated from 70 percent of its historic range, and remaining populations are currently threatened by a wide variety of human impacts (66 FR 14626).

Status on the project site. Dr. Mark Jennings completed a habitat assessment of the site on August 1, 2011, in order to evaluate its potential for CRLF habitat. During his site visit, Dr. Jennings observed a breeding population in the upper pond, including eight juvenile and four adult CRLF during afternoon daylight hours; suitable emergent vegetation around the pond may have supported many more individuals at the time of the site visit. While no CRLF were observed in the lower pond, it also serves as potential breeding habitat for the species. The upland habitat surrounding the two ponds and the nearby drainages to the west and south of the ponds may be potential dispersal habitat for CRLF.

2.2.2 Alameda Whipsnake

Legal status. The Alameda whipsnake, also known as the Alameda striped racer, was listed as Threatened by the State of California in 1971. On December 5, 1997, the U.S. Fish and Wildlife Service listed the AWS as threatened under the authority of the Federal Endangered Species Act. The critical habitat designation for the subspecies was completed by the USFWS on October 3, 2000 (50 CFR 17 58933-58962).

Status on the project site. AWS were not observed on the site during any of the field surveys conducted by LOA. However, the site is within USFWS-designated critical habitat for AWS.

The nearest CNDDB record is approximately 3.5 miles to the northwest of the site in the adjacent hills. Dr. Mark Jennings visited the site on August 1, 2011, in order to evaluate the potential for AWS habitat onsite. He concluded that the site supports AWS habitat in the form of the riparian woodlands and scrub areas of coyote brush in the upper portions of the site to be preserved as open space. AWS would also be able to forage in the grasslands adjacent to these habitats. He did not observe any suitable rock outcrops or piles that may be used as a hibernaculum, although such habitats may occur on adjacent properties.

Although the AWS may cross grassland areas adjacent to the riparian woodland and scrub habitats, the flat area of the development envelope is not suitable habitat due to the presence of domestic cats, introduced wild turkeys, and the disturbed nature of the soil from past dryland farming practices.

2.2.3 Other Species

The FEIR determined impacts to be less than significant for other regionally occurring special status species such as the western pond turtle and burrowing owl, as surveys have not detected these species even though potential habitats exists onsite. The management strategies provided herein would benefit these species if they were to occur on the site in the future.

3.0 CONSERVATION LANDS MANAGEMENT AND MONITORING

The purpose of this management plan is to provide for the long-term management of the conservation lands. This plan shall be implemented concurrently with the MMP and will continue in perpetuity. The term "conservation lands" refers to the 30 acres onsite that are proposed to be preserved as open space and managed specifically for the covered species (i.e., CRLF and AWS). These 30 acres are part of the larger 96-acre open space to be preserved and dedicated to the EBRPD. While the entire 96-acre open space preserve will be managed for the conservation of regional species within the context of an open space park, this plan explicitly focuses on the management of the conservation lands for the covered species. Through land management and monitoring, the conservation lands will meet established conservation goals and objectives.

3.1 KEY ELEMENTS OF CONSERVATION STRATEGY

The following are the key elements of the conservation strategy for fully mitigating impacts to the covered species (i.e., CRLF and AWS) and their habitat.

1. The conservation lands will be managed for the protection of habitat for the covered species.
2. The existing habitat conditions on the conservation lands will be preserved and enhanced for the benefit of the covered species.
3. The conservation lands will be preserved and managed in perpetuity and will have open space uses that are compatible with the conservation easement, project entitlements, EBRPD policies, and the Town of Danville's General Plan policies.
4. The conservation lands will be managed for the covered species upon recordation of the easement (i.e., mitigation precedes impact).
5. Covered species found in areas proposed to be impacted will be salvaged and relocated to the conservation lands.
6. Impacts of management actions will be kept to a minimum on the conservation lands.

3.2 CONSERVATION GOALS AND OBJECTIVES

The conservation goals are broad, guiding principles for the conservation program. The objectives provide direction in management in order to meet the conservation goals. The goals and objectives guide the development of an adequate and effective conservation program.

Goal 1

Maintain habitat that can support viable, self-sustaining populations of the covered species within the identified conservation lands.

Objective: Establish and manage permanent conservation lands to benefit the covered species.

Objective: Preserve a large, continuous space with a mosaic of habitats for the covered species and other regionally occurring species.

Objective: Maintain connectivity with adjacent landscapes.

Objective: Implement a monitoring program that provides information on changes in suitable habitat and evidence of continued use or likely use by CRLF and AWS. Evidence will be integrated into a feedback loop for adaptively managing the site.

Goal 2

Establish a conservation program for the project and conservation lands that is consistent with published recovery plans.

Objective: Protect conservation lands in perpetuity in order to benefit covered species.

Objective: Protect existing habitats that support populations known to occur (e.g., CRLF) or possibly occur (e.g., AWS) on the conservation lands.

Goal 3

Implement an effective adaptive management program.

Objective: Use the ongoing monitoring for the project site and mitigation lands to adjust the management strategy in order to promote covered species viability.

Objective: Collect data systematically on covered species on an annual basis and manage data for accessibility.

Objective: Maintain a central database that uses geographical information system for spatial analysis and presentation of covered species locations.

Goal 4

Establish a funding mechanism that provides for the long-term management of the conservation lands.

Objective: EBRPD revenues and a Community Facilities District (CFD) (e.g., property assessment fee and/or public fees) will fund normal park operations and maintenance of the 66-acre open space located to the north of the conservation lands.

Objective: With respect to the 30-acre conservation lands, a wasting endowment for the first three years of monitoring and a non-wasting endowment will be held by the conservation easement holder to fund long-term monitoring. A separate wasting and non-wasting endowment will be established for and held by the preserve manager. The purpose of these endowments is to pay for the first three years of management activities, as well as the long-term management and monitoring of the conservation lands.

Goal 5

Recreational use of the open space preserve adjoining the conservation lands will be compatible with the conservation objectives.

Objective: Areas designated for recreational use by the EBRPD will be located outside of the conservation lands.

Objective: Priority will be placed on retaining the conservation value of the conservation lands.

3.3 CONSERVATION LANDS MANAGEMENT

3.3.1 Overview

Those areas of the Redhawk Tract that constitute the conservation lands have been grazed since the late 19th or early 20th century. Grazing on the property was discontinued in the mid-2000s. Under this conservation management strategy, grazing will resume on the conservation lands in perpetuity. In addition to or instead of cattle grazing, the conservation lands may be grazed by

other livestock. Grazing operations may include herding, watering, animal care, and/or maintenance and repair activities associated with livestock operations. All grazing operations will be conducted in conformance with the guidelines stipulated herein to preserve conservation lands and conserve the covered species in perpetuity.

3.3.2 Management Goals and Objectives

The overall management goals of the conservation lands are to:

1. Maintain the habitat values within the conservation lands for the covered species.
2. Ensure that the use of the conservation lands for grazing operations is compatible with the overall goal of maintaining habitat values for the covered species.
3. Ensure that uses of the conservation lands as provided for in the conservation easement and as provided for herein are conducted in such a manner as to limit disturbance of habitat values for the covered species.
4. Regularly survey for the covered species within the conservation lands.
5. Conduct annual monitoring of the conditions and characteristics of vegetation that may support populations of the covered species within the conservation lands.

3.3.3 Management Strategy

The management strategy consists of four parts: grazing, habitat management, facilities/operations management, and protection of lands in perpetuity.

<u>Grazing</u>

1. Ongoing grazing is integral to managing the conservation lands for the covered species. Grazing management will be controlled for timing, duration, and intensity for the expressed purpose of optimizing the landscape for the covered species and reducing potential fire danger. Monitoring of grazing intensity may result in recommendations for the ongoing ranching operation to modify timing, duration, and intensity of grazing to best benefit the covered species.

2. Grazing will be managed by EBRPD in a manner that is consistent with their current grazing practices. The EBRPD currently oversees grazing on lands in the adjacent Las Trampas Regional Wilderness.

Habitat Management

1. While possible, it is unlikely that CRLF or AWS will be encountered during habitat construction (i.e., 380 linear feet of ephemeral creek channel). All CRLF and AWS encountered in project construction areas and areas on the conservation lands where they are at risk of being harmed through anthropogenic effects will be relocated out of the construction zone to suitable adjacent conservation areas on the site.
2. No recreational uses will be allowed within the conservation lands. The limited placement of trails will be sited within the footprint of an existing unimproved road located in the open space preserve adjoining the conservation lands. Recreational use of the open space preserve will be constrained to these trails.
3. Efforts will be made to increase the breeding potential for CRLF on the conservation lands and, more specifically, in areas onsite where CRLF are known to occur (i.e., at the upper stock pond). These efforts include the installation of appropriate fencing around the two stock ponds to control livestock access to these features. They may also include adaptive management measures, such as the control of invasive plant species, pulse grazing inside the ponds to prevent them from filling in, and/or planting native species, should such action be required based on monitoring results.

Facilities/Operations Management

1. Signage will be installed around the perimeter of the conservation lands restricting access by individuals not authorized by the ranching operation, preserve manager, or conservation easement.
2. No roads will occur on the conservation lands. No vehicles shall access the conservation lands except as necessary to implement the MMP. Any vehicles occurring in the conservation lands will adhere to a 15 mph speed limit.
3. No garbage will be disposed of on the conservation lands. Trash will be picked up when necessary.

4. All trash and garbage within the residential subdivision is to be contained in covered receptacles. This is to minimize the availability of artificial food sources that would attract raccoons and other potential predators of CRLF and AWS.
5. Signage will be posted along the trail cautioning the public not to enter environmentally sensitive habitat, not to feed wildlife, and not to release unwanted pets on the conservation lands.
6. Fences and gates will be maintained by the preserve manager as necessary by replacing posts, wire, and/or gates to prevent casual trespass and to allow necessary access.

Protection of Conservation Lands

1. The conservation lands will be dedicated in fee title to the EBRPD as part of the 96-ac open space preserve. A conservation easement will be recorded on the conservation lands prior to the start of project construction. Future development rights will be prohibited on these lands except as specified in the conservation easement.
2. Adverse farming practices, creation of new roads, and development are prohibited unless expressly permitted by the preserve manager or by the conservation easement.
3. The preserve manager and the conservation easement will permit ongoing grazing operations, especially to reduce potential fire danger, and prohibit future development of these lands.

Prohibited Activities

4. The following activities are prohibited:
    a. Supplemental watering except for restoration and enhancement activities described in the MMP;
    b. Use of herbicides, pesticides, rodenticides, fertilizers, or other agricultural chemicals except as part of an integrated pest management program or for weed abatement activities necessary to control or remove invasive, exotic plant species as described in the MMP;
    c. Incompatible fire protection activities except fire prevention activities set forth within this document;

d. Use of off-road vehicles and use of any other motorized vehicles except as set forth within this document;
e. Recreational activities except as permitted by the conservation easement, project entitlements, EBRPD policies, and the Town's General Plan policies;
f. Residential, commercial, retail, institutional, or industrial uses;
g. Planting, gardening, or introduction or dispersal of non-native plant or animal species (including unwanted pets and problem urban wildlife such as trapped possums);
h. Filling, dumping, excavating, draining, dredging, mining, drilling, removing or exploring for or extraction of minerals, loam, gravel, soil, rock, sand or other material on or below the surface of the conservation lands;
i. Altering the general topography of the conservation lands, including, but not limited to, building of roads and other development, except as necessary to implement the MMP; and
j. Removing, destroying, or cutting of trees, shrubs or other vegetation, except for fire breaks, prevention or treatment of disease, control of invasive species that threaten the integrity of the habitat, personal safety, or activities described in the conservation easement.

3.3.4 Grazing

Current Grazing Practices on the Conservation Lands

Grazing operations have been conducted on the Redhawk Tract since the late 19th or early 20th century and was discontinued in the mid-2000s. This long-term management plan proposes to resume grazing operations, which will be overseen by the EBRPD. Grazing operations will be conducted on the conservation lands as outlined in the EBRPD's *Wildland Vegetation Management Program Procedural Manual* (2005). Per this manual, a grazing unit management plan (GUMP) will be prepared for the conservation lands specifically or for the larger 96 ac of proposed open space being transferred in fee title to the EBRPD, of which the conservation lands are part. Otherwise, the conservation lands will be incorporated into an existing GUMP.

A range analysis will be completed for the conservation lands in order to estimate forage production and establish appropriate stocking levels (EBRPD 2005). The range analysis is an appraisal of various characteristics of the grazing unit, including soil, slope, aspect, vegetative features, and water availability. The range analysis can also include a review of historical and, if applicable, current grazing levels to help determine the livestock carrying capacity on a given area of rangeland.

Adaptive management strategies will allow the preserve manager to make annual adjustments to stocking rates based on rainfall, grass type and stock, seasonality of rainfall, and other variables that adhere to the EBRPD's grazing practices and levels. The preserve manager may allow for periods of no grazing on the conservation lands to allow for grass stock recovery as long as it is consistent with the conservation of the listed species and does not constitute a significant fire danger.

Adaptive Management Strategy for the Annual Grazing Plan

The development of annual grazing plans will be based on an adaptive management strategy that has been defined as an integrated method for addressing uncertainty in natural resource management (Holling 1978; Walters 1986; Gundersen 1999). The purpose of adaptive management is to provide ways to improve conservation actions in the rubric of the stated biological goals and objectives of maintaining or improving conditions, where feasible, on the project site. As a frame of reference, for example, the USFWS Five Point Policy for Habitat Conservation Plans (HCPs) (USFWS 2000) states that adaptive management is defined as a method for examining alternative strategies for meeting measurable biological goals and objectives, and then, if necessary, adjusting future conservation management actions according to what is learned. Factors to be considered in development of the annual grazing plan shall include, but would not be limited to, the following:

1. Rainfall amount and timing;
2. Type and amount of seasonal grass stocks;
3. Cattle (or other livestock) market economics; and
4. Impact of grazing on the covered species.

The annual grazing plan will be developed by the preserve manager. Grass stocks will be evaluated, and results from the prior year's monitoring reports and recommendations will be reviewed. Specific grazing plans for the current year will be developed and shall include, but would not be limited to:

1. Amount and type of livestock to be grazed on the conservation lands;
2. Timing of grazing and, if necessary, movement of livestock on the conservation lands; and
3. Timing of removal of livestock from all or portions of the conservation lands.

The annual grazing plan will also record any maintenance activities such as fence repair, livestock watering system repair, and cleanup of trash or trespass debris that are to be done in the calendar year. A schedule and budget will be prepared for the annual repair and maintenance activities. A copy of the annual grazing plan will be included in the annual report.

Adaptive management will be used to adjust the stocking rates and/or level of grazing to account for variations in the natural conditions from year to year. Adaptive management will also continue to be used at the conservation lands to adjust to fluctuations of plant biomass production due to timing, duration and amounts of precipitation events.

3.3.5 Avoidance and Minimization Measures for CRLF and AWS

Carrying out the management and maintenance responsibilities included in this plan, or implementation of those elements of the MMP that are located on the conservation lands (i.e., channel creation), may require activities such as large equipment use, construction of temporary access roads, trenching or digging, construction of fire breaks, grading of existing dirt roads, approved vegetation cutting or disking, and other activities associated with livestock operations, emergency operations, or management of the conservation lands. If these activities have the potential to put CRLF or AWS in harm's way, then the avoidance and minimization measures described in *Redhawk Tract (Podva Property) California Red-legged Frog and Alameda Whipsnake Avoidance and Minimization Measures* (LOA 2016b) will be implemented.

3.3.6 Permanent Disturbances to Habitat Within the Conservation Lands

No permanent structures, pads, roads, or other facilities shall be permitted on the conservation lands.

3.3.7 Security, Safety, and Public Access

A public trail will pass through the 96 acres of preserved open space but not on the conservation lands themselves. This trail will connect the development area to the existing Las Trampas Regional Wilderness on lands immediately west of the site.

The conservation lands shall have no general public access nor any regular public or private use other than those uses permitted by this LTMP. Research, educational programs, or other efforts may be allowed on the conservation lands as deemed appropriate by the easement holder, preserve manager, and permitting agencies but are not specifically funded or a part of this long-term management plan.

To avoid disturbance to the conservation lands and minimize disturbance to the preserved open space, individuals using the trail shall not go off trail.

If required, potential mosquito abatement issues will be addressed through the development of a plan by the preserve manager and the mosquito and vector control district in coordination with and approved by the permitting agencies.

Maintaining the natural burning regime of the conservation lands is beneficial for AWS and other species. However, potential wildfire fuels will be reduced as needed by mowing or disking in areas where approved by the permitting agencies.

3.4 CONSERVATION LANDS MONITORING

3.4.1 Overview

The overall goal of monitoring is to foster the long-term viability of the conservation lands to support the covered species. Routine monitoring and maintenance tasks are intended to ensure

that the conservation lands meet the stated conservation goals in perpetuity. The conservation lands will be monitored to assess their health within defined parameters in order to maintain viable populations of CRLF and AWS, regardless of whether or not these species actually occur on the site. The monitoring results will inform management decisions that address changes in habitat conditions for CRLF and AWS. Monitoring evaluates the success of the conservation program in meeting its stated biological objectives.

Monitoring will be conducted to document the presence, distribution, and relative abundance of CRLF and AWS. Effectiveness in monitoring evaluates the success of the conservation program in meeting its stated biological objectives. In this case, regular monitoring of the relative abundance of target species populations will serve to inform the effectiveness of ongoing management, including the timing and extent of grazing.

The conservation lands will be monitored to inform decisions related to modifications of any management prescription (e.g., grazing). Standard monitoring methods include walking surveys.

3.4.2 Land Management Monitoring

Biological Assessment

The Year 1 monitoring report shall include a biological assessment of the conservation lands to serve as a baseline against which to measure future habitat conditions and values. This effort will be repeated in Year 5 and every five years thereafter to ensure that conditions on the site have been improved or maintained as per conservation goals and objectives. The assessment should include the following biological measurements:

Vegetation/Habitat

- Plant species richness. This consists of a list of species compiled by a qualified biologist, either during a separate one-day field survey or as part of other monitoring efforts described herein. A separate inventory should be maintained for the different habitats onsite, including grasslands, coyote brush scrub, woodlands, and aquatic features such as the stock ponds and seasonal wetland, as these habitats represent different uses in the life history of the CRLF and AWS;
- Hydroperiod of the stock ponds;

- Residual dry matter (RDM);
- Soil erosion (extent and location); and
- Natural disturbances.

Wildlife

- Wildlife species richness. This consists of a list of species compiled by a qualified biologist, either during a separate one-day field survey or as part of other monitoring efforts described herein; and
- Distribution status (if any) of listed species.

The results of the assessment shall be maintained in an appropriate database. The biological assessment shall be conducted by a qualified biologist. The initial baseline assessment methodology and approach shall be submitted to the Town of Danville and to other agencies to the extent required by their permits.

Annual Grazing Assessment

The covered species would benefit from a program that manages the grazing cycle specific to their needs. Grazing intensity, season of livestock use, type and class of livestock, and frequency of use are important grazing parameters for managing for the covered species. Moderate to heavy stocking rates have been found to benefit the covered species (Barry 2011; Germano et al. 2011). The residual dry matter (RDM) is the typical metric for grazing intensity. Moderate stocking rates removes about 50 to 75 percent of the forage each year, retaining about 1,000 to 1,500 pounds of RDM on the ground prior to fall rains, while heavy stocking removes more than 75 percent of the forage, retaining less than 500 pounds of RDM.

The annual report shall include an assessment of the previous year's grazing practices and their associated impacts on the biological values of the conservation lands and their impact on listed species. Once per year, the EBRPD shall evaluate rangeland conditions within the conservation lands according to the EBRPD's standard monitoring protocols. This includes RDM

measurements, photopoint monitoring, and assessments of native herbaceous plant species (EBRPD 2005). Factors to consider when conducting the grazing assessment include:

- Habitats are meeting management objectives;
- Plant cover, height, density is adequate;
- Plant community composition indicates good rangeland health;
- Native and non-native plant species are at acceptable levels;
- Invasive weeds are at acceptable levels;
- Groundcover is within normal range;
- Wildlife and plant species diversity are at acceptable levels; and
- Livestock grazing/management is or is not a significant factor.

Grazing levels will be adjusted appropriately if the following occur:

- RDM exceeds 1500 pounds or falls below 500 pounds or falls outside the range determined to be appropriate by the EBRPD; or
- It is determined that grazing practices are adversely affecting the function and value of existing aquatic or riparian resources or are inhibiting implementation of the MMP, including achievement of the success criteria.

If a problem is identified with a particular grazing practice or a particular criterion is not being met, then a more in-depth, quantitative assessment of grazing practices may be required, and adaptive management measures may be taken.

Aquatic Habitat Assessment

An annual survey will be conducted to qualitatively monitor the general condition of aquatic features (i.e., streams, wetlands, and stock ponds). General topographic conditions, hydrology, general vegetation cover and composition, invasive species, and erosion will all be noted, evaluated, and, if necessary, mapped during a site examination in the spring. Notes to be made will include observations of species encountered, water quality, general extent of wetlands, and any occurrences of erosion and/or invasive plant species.

Because the upper stock pond is known to support CRLF, the hydroperiod of this pond should also be monitored. Ideally, the pond should hold water from December/January through August and should have a minimum depth of 4 ft. from winter through early summer (i.e., June/July) during seasons of normal or above-normal rainfall.

Invasive Species

The annual report shall include any new invasive species that may threaten the diversity or abundance of native species through competition for resources or by causing physical or chemical changes to the invaded habitat. Each year's annual survey will include a qualitative assessment (e.g., visual estimate of cover) of potential or observed noxious weeds or other non-native species invasions. Additional actions to control invasive species will be evaluated and prioritized.

Trash and Trespass

Major occurrences of trash and/or trespass will be recorded, as well as the type, location, and management mitigation recommendations to avoid, minimize, or rectify a trash and/or trespass impact.

Fire Hazard Reduction

The annual report shall report on any fire hazard conditions that may need corrective action as required for fire control while limiting impacts to biological values.

Infrastructure

The annual report shall summarize the condition of fences and gates based on that year's monitoring surveys and any fence maintenance or repair that had occurred.

3.4.3 Wildlife Monitoring

Monitoring is an essential component of maintaining the conservation lands. The goals and objectives of the conservation strategy center on maintaining suitable habitat conditions for CRLF and AWS. Monitoring is also an important component of an effective adaptive

management program. Monitoring refers to activities that document the presence, abundance, and distribution of the covered species on the conservation lands. All incidental sightings of CRLF and AWS will be entered into a central database, and this information will be reported annually with the monitoring results.

Wildlife monitoring will take place on the conservation lands annually for the first five years and every five years thereafter. Monitoring efforts will focus on indices that are indicative of a long-term trend. The expectation is that populations of the covered species, if present onsite, will fluctuate due to changing weather conditions. During drought periods, all populations of the covered species are expected to decline to accommodate reduced forage or prey, while during normal or wet years, populations are expected to increase, in some cases quite dramatically. Therefore, fluctuations in the populations of covered species is normal and to be expected; what is not expected is if populations do not recover during favorable rainfall years. Monitoring, particularly grazing intensity and timing, can be key to ensuring that forage capacity is not adversely affected to the point that the species cannot persist through drought cycles. Therefore, reducing stocking rates during drought cycles can provide necessary relief to the covered species by maximizing available forage (prey) during poor years. This is a key part of managing these systems in an adaptive manner: shifting management strategies to maximize forage capacity for the species.

If a population decline is regional and unrelated to specific conditions on the conservation lands, changing management practices on the conservation lands will most likely not affect the population numbers, as the reason for decline is most likely on a larger scale than the conservation lands. Adaptive management of the conservation lands will be applied using information gathered during monitoring efforts. This allows for management of the site to remain appropriate given the amount and pattern of annual precipitation or other regional factors; in a drought year, one may expect some populations to decline in a natural setting; this decline should not be attributed to the management practices on the conservation lands, but to the lack of moisture on the landscape if the decline is regionwide. This monitoring has been designed to determine the effectiveness of management in meeting goals and objectives of the conservation

strategy. Monitoring efforts and techniques can be modified in consultation with the USFWS and CDFW.

CRLF Monitoring Methods

Monitoring data to be gathered will consist of the survey location of covered species (spatial distribution), species presence (or absence), relative abundance (number detected per given unit of effort), and any other relevant CRLF data typically collected by the EBRPD.

During monitoring efforts, general information such as location, duration, weather conditions, and observers will be recorded. All sightings of covered and special status species and their sign will be recorded and location data collected. Qualified biologists familiar with CRLF will conduct this monitoring.

Monitoring for CRLF will occur annually for the first five years of the monitoring effort and every five years thereafter. A qualified biologist shall perform all surveys on foot. These surveys shall be conducted at the two onsite stock ponds and along their associated downstream riparian channel systems.

Alameda Whipsnake Monitoring Methods

There is currently no survey protocol for AWS. Monitoring for AWS will consist of a habitat assessment of the coyote brush scrub occurring onsite and other habitats (e.g., grassland) where AWS are reasonably expected to occur. As with monitoring for the CRLF, monitoring for AWS will occur annually for the first five years of the monitoring effort and every five years thereafter. A qualified biologist shall perform all surveys on foot.

3.4.4 Annual Monitoring Report

A monitoring report shall be prepared annually by the preserve manager and shall include a summary of land management activities for that year (section 3.4.2; table 5). The report shall also include recommendations regarding 1) any habitat enhancement measures deemed to be warranted, 2) any problems requiring short- and/or long-term attention, and 3) any changes in the

monitoring or management program that appear to be warranted based on monitoring results to date. The report will ensure the implemented grazing systems are compatible with the overall management goals of this LTMP. The annual report prepared by the preserve manager will be submitted, along with any other relevant documentation (e.g., the monitoring report prepared by Ponderosa Homes for those channel creation specified in the MMP that occur on the conservation lands), by December 31 of each year to the easement holder, Town of Danville, and other agencies as required by permits they may issue.

Table 5. Annual monitoring report requirements.

Report element	Reporting frequency
Biological assessment	Years 1 and 5, every five years thereafter (i.e., years 10, 15, 20, etc.)
Grazing assessment	Annually
Aquatic habitat assessment	Annually
Trash, fire hazards, and infrastructure	Annually
Invasive species assessment	Annually
CRLF and AWS monitoring	Annually for years 1-5, every five years thereafter (i.e., years 10, 15, 20, etc.)
Five-year summary	Every five years (i.e., years 5, 10, 15, 20, etc.)

Every five years, the annual report shall include the biological assessment (section 3.4.2) and the results of the CRLF and AWS monitoring (section 3.4.3). The annual report shall also include a five-year summary report to compare data from multiple years and to describe coarse changes in CRLF and AWS populations and habitat distribution. The findings from the five-year reports will be used to inform any adaptive management recommendations or changes to current management practices. The findings will also be used to identify the need for any additional monitoring or data gathering that augments information regarding the status of covered species in the project area.

4.0 MANAGEMENT OVERSIGHT AND COMPLIANCE MONITORING

The conservation easement holder shall provide oversight of and ensure compliance with this LTMP. Their responsibilities include, but would not be limited to, the following:

- Baseline biological study. This survey will be completed prior to recordation of the conservation easement and will establish a baseline against which to compare future habitat conditions and values. As part of the survey, photo points will be established to document the condition of the conservation lands.
- Annual biological survey. This includes photo point monitoring using the photo points established during the baseline study.
- Monitoring of fences and incidents of trash.
- Monitoring of trespass, vandalism, and encroachment issues.
- Review of all monitoring reports described in section 3.0. This includes the annual (or five-year) biological assessment, grazing assessment, aquatic habitat assessment, CRLF and AWS monitoring, invasive species assessment, onsite maintenance reports, and five-year summary report.

The easement holder will synthesize this information to evaluate the ecological function of the conservation lands and determine if they are serving their mitigation requirements.

5.0 OTHER MANAGEMENT ELEMENTS

5.1 TRANSFER, REPLACEMENT, AMENDMENTS, AND NOTICES

5.1.1 Transfer

Any subsequent transfer of responsibilities under this long-term management plan to a different preserve manager shall be requested by the preserve manager in writing to the permitting agencies, shall require written approval by the permitting agencies, and shall be incorporated into this long-term management plan by amendment. Any subsequent property owner assumes preserve manager responsibilities described in this long-term management plan and as required in the conservation easement unless otherwise amended in writing by the permitting agencies.

5.1.2 Replacement

If the preserve manager fails to implement the tasks described in this long-term management plan and is notified of such failure in writing by any of the permitting agencies, the preserve manager shall have 180 days to cure such failure. If failure is not cured within 180 days, the preserve manager may request a meeting with the permitting agencies to resolve the failure. Such meeting shall occur within 90 days or a longer period, if approved by the permitting agencies. Based on the outcome of the meeting, or if no meeting is requested, the permitting agencies may designate a replacement preserve manager in writing by amendment of this long-term management plan. If the preserve manager fails to designate a replacement preserve manager, then such public or private land or resource management organization acceptable to and as directed by the permitting agencies may enter onto the conservation lands property in order to fulfill the purposes of this long-term management plan.

5.1.3 Amendments

The easement holder, preserve manager, and permitting agencies may meet and confer from time to time, upon the request of any one of them, to revise this LTMP to better meet management objectives and the habitat and conservation values of the conservation lands. Until such time that the responsibilities of Ponderosa Homes outlined in this LTMP are determined to be complete, Ponderosa Homes may also request to meet and confer with the easement holder, preserve manager, and permitting agencies. Any proposed changes to the conservation management plan

shall be discussed, developed, and approved with input from all parties. Amendments to the conservation management plan shall be approved by the permitting agencies in writing, shall include required management components, and shall be implemented by the preserve manager.

Should available funding not be sufficient to accommodate changes to the conservation management plan, tasks shall be prioritized (section 5.2.2).

5.1.4 Notices

Any notices regarding this long-term management plan shall be directed as follows:

Conservation Easement Holder
Wildlife Heritage Foundation
563 Second Street, Suite 120
Lincoln, CA 95648
Phone: (916) 434-2759
Fax: (916) 434-2764

Preserve Manager
East Bay Regional Park District
2950 Peralta Oaks Court
Oakland, CA 94605
Phone: 1-888-EBPARKS

Property Owner
Ponderosa Homes II, Inc.
6130 Stoneridge Mall Road, Suite 185
Pleasanton, CA 94588
Phone: (925) 460-8900
Fax: (925) 734-9141

Permitting Agencies:

U.S. Army Corps of Engineers
San Francisco District
Regulatory Division
1455 Market Street, 16th Floor
San Francisco, CA 94103
Attn: Division Chief
Telephone: (415) 503-6795
Fax: (415) 503-6690

U.S. Fish and Wildlife Service

Sacramento Office
2800 Cottage Way, Suite W-2605
Sacramento, CA 95825
Attn: Field Supervisor
Telephone: (916) 414-6600
Fax: (916) 414-6710

Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: Bruce Wolfe
Telephone: (510) 622-2300
Fax: (510) 622-2460

California Department of Fish and Wildlife
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
Attn: Regional Manager
Telephone: (707) 944-5500

5.2 FUNDING AND TASK PRIORITIZATION

5.2.1 Funding

All elements of this LTMP considered to be normal park operations by the EBRPD (e.g., ranger and police patrol, and vandalism repair) will be funded by the EBRPD.

All other elements of the LTMP will be funded via endowments that will be established by Ponderosa Homes. The conservation lands will be protected by a conservation easement. The easement holder (i.e., Wildlife Heritage Foundation) and preserve manager (i.e., EBRPD) will each hold two endowments: a three-year wasting endowment and a non-wasting endowment for long-term management. Funds for the first three years of management of the conservation lands will come from the wasting endowment to allow a sufficient amount of time for interest to accumulate in the non-wasting endowments. Beginning with the fourth year of monitoring, management funds will come from the non-wasting endowments.

Ponderosa Homes will be responsible for implementation of the MMP, which includes two areas of channel creation occurring on the conservation lands and ten years of monitoring these two areas. Ponderosa Homes will fund the management and monitoring of those specific mitigation areas of channel creation until the mitigation effort has been signed off by the relevant permitting agencies (LOA 2016a). Once agency sign-off has been obtained (i.e., from the USACE and RWQCB), the preserve manager and the easement holder will be formally notified in writing by Ponderosa Homes. At that point, management of the mitigation areas will be folded into the overall management of the conservation lands as described in this LTMP.

5.2.2 Task Prioritization

Due to unforeseen circumstances, prioritization of tasks, including tasks resulting from new requirements, may be necessary if insufficient funding is available to accomplish all tasks. The easement holder, preserve manager, and permitting agencies shall discuss task priorities and funding availability to determine which tasks will be implemented. In general, tasks are prioritized in this order: 1) those required by a local, state, or federal agency; 2) tasks necessary to maintain or remediate habitat quality; and 3) tasks that monitor resources, particularly if past monitoring has not shown downward trends. Equipment and materials necessary to implement priority tasks will also be considered priorities. Final determination of task priorities in any given year of insufficient funding will be determined in consultation with the permitting agencies.

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APPENDIX A: CONSERVATION LANDS PHOTOS

Annual grasslands, seasonal wetland, and riparian woodland.

Upper stock pond with adjacent grasslands and coyote brush scrub.

Lower stock pond and downstream woodland.