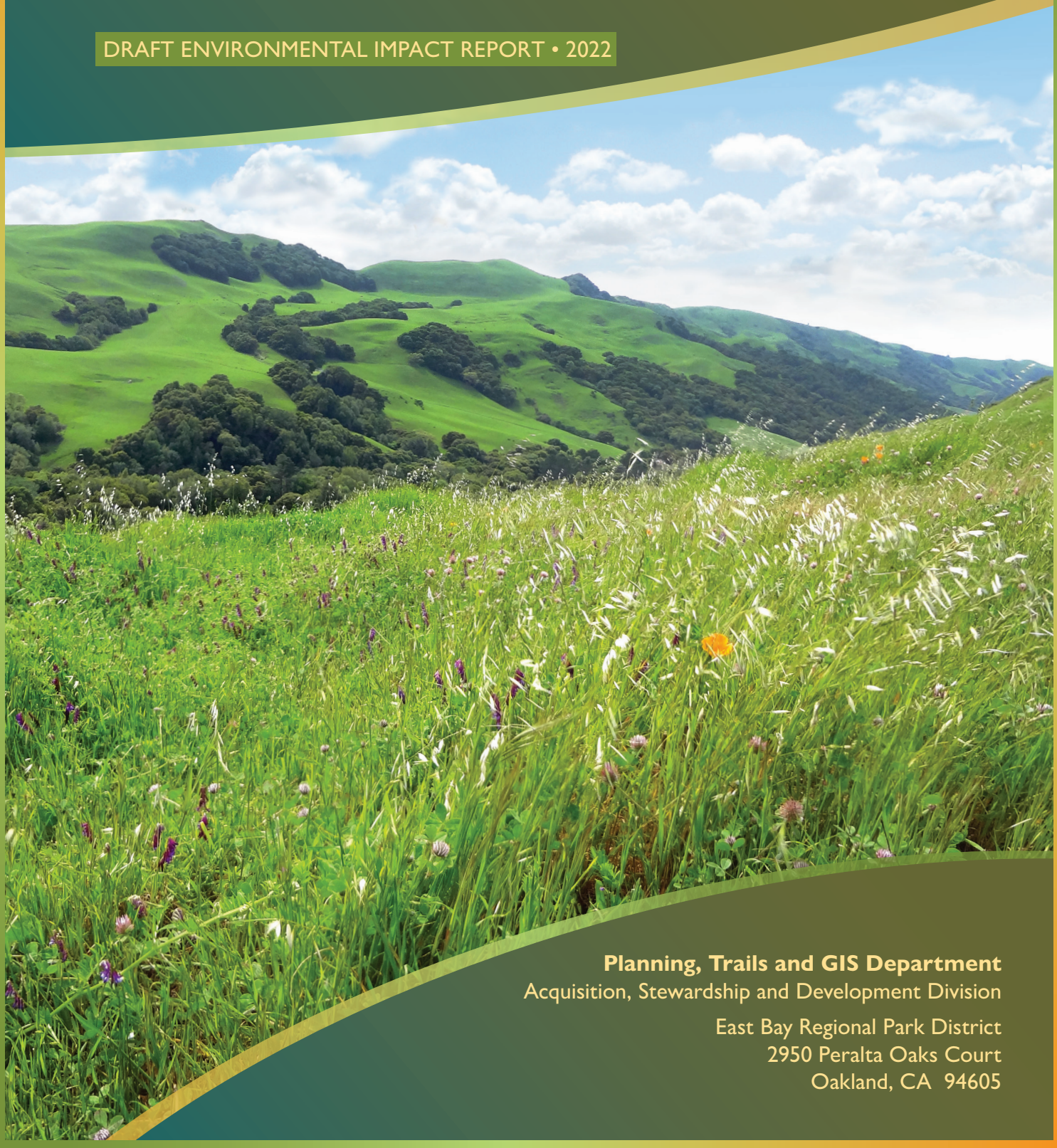
Southern Las Trampas Wilderness Regional Preserve

East Bay Regional Park District
Healthy Parks Healthy People

DRAFT ENVIRONMENTAL IMPACT REPORT • 2022



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

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

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East Bay Regional Park District

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NOTICE OF AVAILABILITY

Draft Environmental Impact Report for the Southern Las Trampas Wilderness Regional Preserve Land Use Plan Amendment

Date:	October 31, 2022
Subject:	Notice of Availability (NOA) of the Draft Environmental Impact Report (EIR) for the Southern Las Trampas Wilderness Regional Preserve Land Use Plan Amendment
Lead Agency:	East Bay Regional Park District
Project Title:	Southern Las Trampas Wilderness Regional Preserve Land Use Plan Amendment
Project Location:	South-central portion of Contra Costa County, on the western periphery of the Town of Danville and City of San Ramon, and unincorporated Contra Costa County
State Clearinghouse #	2019071058

Notice is hereby given that the East Bay Regional Park District, as the Lead Agency, has completed a Draft Environmental Impact Report (Draft EIR) for the Land Use Plan Amendment for the southern portion of Las Trampas Wilderness Regional Preserve (Project).

A copy of the Draft EIR was sent to the State Clearinghouse on October 31, 2022. The Draft EIR is available for public review and comment and this notice is provided pursuant to Section 21092 of the State Public Resources Code.

Draft EIR Viewing Locations: Hard copies of the Draft EIR can be reviewed at the locations listed below and an electronic version can be viewed online at the Park District website:
https://www.ebparks.org/projects/southern-las-trampas-land-use-plan-amendment-lupa

East Bay Regional Park District
Administration Office
2950 Peralta Oaks Court
Oakland, California 94605-0381

Danville Library
400 Front Street
Danville, CA 94526

San Ramon Library
100 Montgomery Street
San Ramon, CA 94583

Public Review and Comment Period: A 45-day public review period for the Draft EIR will start on Monday, October 31, 2022 and will end on Wednesday, December 14, 2022. **Please submit comments by 5:00 PM on Wednesday, December 14, 2022.**

Public Meeting: One public meeting on this Draft EIR will be held during the review period to receive comments on the document. The meeting will be held online by the Park District Park Advisory Committee, on **Monday, November 28, 2022, starting at 4:00PM.** It is preferred that those requesting to speak during the meeting contact Government Affairs at GovAffairs@ebparks.org on or before **Friday, November 25, 2022** via email or voicemail (510) 544-2024 to provide name and the subject of the public comment or item to be addressed.

Commenting on the Draft EIR: Comments on the Draft EIR may be made either in writing before the end of the comment period or orally at the aforementioned public meeting. Written comments should be mailed or e-mailed to:

East Bay Regional Park District
ATTN: Kim Thai, Senior Planner
2950 Peralta Oaks Court
Oakland, California 94605-0381

Written email comments on the Draft EIR should be addressed to: kthai@ebparks.org.

After the close of the public comment period, responses to the comments received on the Draft EIR will be prepared and published, and together with this Draft EIR will constitute the Final Environmental Impact Report (FEIR).

Public Hearing: Following the close of the Draft EIR comment period and preparation of a FEIR, the Park District's Board of Directors will hold a public hearing to consider certification of the EIR, adoption of findings, and project approval. A separate notice of this meeting will be provided to those who comment on the Draft EIR and posted on the Park District's website when the date is determined. Board meetings are held at 2950 Peralta Oaks Court, Oakland, CA.

Project Location and Project Description: The Project is located in the southern portion of Las Trampas in Contra Costa County, adjacent to the City of San Ramon and Town of Danville. Proposed project components consist of appending 756 acres of land into Las Trampas Regional Wilderness; construction and operation of new trail connections, one new 25-car staging area along Bollinger Canyon Road, and two walk-in entrances.

Probable Environmental Effects of the Project: The Draft EIR analyzed each of the subject areas identified in the California Environmental Quality Act (CEQA) Guidelines. Pursuant to CEQA, the Park District determined that the following environmental issue areas will have less than significant effects resulting from the implementation of the Project: Aesthetics, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Population and Housing, Public Services and Recreation, Transportation, and Wildfire. The Draft EIR identifies the following categories as potentially significant: Aesthetics, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Geology and Soils, Noise, Transportation, and Wildfire, but finds all impacts in these categories could be mitigated to below the threshold of significance.

For more information, please check the Park District's website, listed above. Please contact Kim Thai at 510-544-2320 or kthai@ebparks.org with questions or if translation is needed.

PUBLIC REVIEW DRAFT

ENVIRONMENTAL IMPACT REPORT

EAST BAY REGIONAL PARK DISTRICT

SOUTHERN LAS TRAMPAS WILDERNESS
REGIONAL PRESERVE LAND USE PLAN AMENDMENT

CONTRA COSTA COUNTY, CALIFORNIA

Submitted to:

East Bay Regional Park District
2950 Peralta Oaks Court
P.O. Box 5381
Oakland, California 94605-0381

Prepared by:

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Project No. EBR1801

LSA

October 2022

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FIGURES AND TABLES

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LIST OF ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	Average Daily Trips
AL	Agricultural Lands
AOU	American Ornithologists' Union
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BMPs	Best Management Practices
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CCTA	Contra Costa Transportation Authority
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CTC	California Transportation Commission
CTP	Countywide Transportation Plan
Draft EIR	Draft Environmental Impact Report
ESA	Endangered Species Act
EVMA	Emergency Vehicle and Maintenance Access
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHAD	Geological Hazard Abatement District
GHG	greenhouse gas
GPS	global positioning system
HCM	Highway Capacity Manual

HOA	Homeowner Association
I-580	Interstate 580
I-680	Interstate 680
ICU	intersection capacity utilization
IMBA	International Mountain Biking Association's
IPaC	Information for Planning and Consultation
IPM	Integrated Pest Management
ITE	Institute of Transportation Engineers
Las Trampas	Las Trampas Wilderness Regional Preserve
LOS	Level of Service
LTMP	Long-Term Management Plan
LTS	less-than-significant impact
LUDP	Las Trampas Land Use Development Plan
LUPA	Land Use Plan Amendment
MAST	Maintenance and Skilled Trades
mph	mile-per-hour
MPO	Metropolitan Planning Organization
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOC	Notice of Completion
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NWS	National Weather Service
NWSP	Northwest Specific Plan
OPR	Office of Planning and Research
Park District	East Bay Regional Park District
PFFP	Public Facilities Financing Plan
Podva Property	Redhawk Tract
PR	Parks and Recreation
project	Southern Las Trampas Land Use Plan Amendment

RWQCB	Regional Water Quality Control Board
S	significant impact
SB	Senate Bill
SCS	Sustainable Communities Strategy
SGMA	sustainable groundwater management plan
SOI	Sphere of Influence
SR	State Route
SRPA	Special Resource Protection Area
SU	significant and unavoidable impact
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TIA	Traffic Impact Analysis
TIMS	Transportation Injury Mapping System
USACE	U.S. Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
WDID	Waste Discharger Identification
WHF	Wildlife Heritage Foundation

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1.0 INTRODUCTION

This EIR has been prepared to assess the environmental consequences of the proposed Southern Las Trampas Land Use Plan Amendment (project). The proposed project consists of a Land Use Plan Amendment (LUPA) to the 1993 Las Trampas Land Use Development Plan (LUDP) for the southern region of Las Trampas Wilderness Regional Preserve (Southern Las Trampas or project area), which would incorporate approximately 756 acres of land, including five former private properties, into the LUDP; and provide the framework for creation of new trail connections and access points. The East Bay Regional Park District (Park District) is the lead agency for the proposed project pursuant to the California Environmental Quality Act (CEQA).

1.1 SITE AND HISTORICAL CONTEXT

The Park District is composed of regional parklands located throughout Alameda and Contra Costa counties. Las Trampas Wilderness Regional Preserve (Las Trampas) is one of 73 Park District parklands. The project area is within the southern region of Las Trampas, 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 of the County. The project area includes approximately 756 acres that straddle Las Trampas Ridge and consists of existing open Las Trampas parkland along with five parcels or former private properties: Peters Ranch, Chen, Elworthy, Podva, and Faria. For convenience of discussion, these property names are used to describe the individual characteristics of each of these parcels. Each of these properties is described below:

- **Peters Ranch Property:** The Peters Ranch property encompasses an approximately 59-acre area within unincorporated Contra Costa County and borders the Town of Danville to the north and east, and the City of San Ramon to the south. Park District staff access the property from Fountain Springs Drive off San Ramon Valley Boulevard.

- **Chen Property:** The Chen property encompasses an approximately 228-acre area within unincorporated Contra Costa County, bordering the Town of Danville to the northeast, and is within the City of San Ramon's Sphere of Influence (SOI). Park District staff access the property from Bollinger Canyon Road, which makes up the southern border, and from Las Trampas Regional Wilderness to the north through the Calaveras Ridge Trail. A previously disturbed cattle corral area (referred to herein as the Old Time Corral Staging Area) exists along the frontage of Bollinger Canyon Road.

- **Elworthy Property:** The Elworthy property encompasses an approximately 232-acre area within unincorporated Contra Costa County and the Town of Danville. Park District staff and park users access the property from Elworthy Ranch Road off San Ramon Valley Boulevard. At the terminus of Elworthy Ranch Road, an existing staging area and trail connector to the Calaveras Ridge Trail provide access to the parkland property through an easement across private property.

- **Podva Property:** The Podva property encompasses an approximately 96-acre area within the Town of Danville. To the west of the property is Las Trampas. The property includes an access

point and trail with public on-street parking from Wingfield Court and Midland Way, off San Ramon Valley Boulevard.

- **Faria Property:** The Faria property encompasses an approximately 141-acre area within unincorporated Contra Costa County. The property borders the City of San Ramon to the southeast. Bollinger Canyon Road splits the Faria property and runs from the northwest to southeast. This property will remain in landbank status until future acquisitions and/or regional trail connections to Park District property in San Ramon can be made.

1.2 PROPOSED PROJECT

The proposed LUPA to the 1993 LUDP would formally incorporate approximately 756 acres into Southern Las Trampas. This addition would expand the amount of parkland in Las Trampas to a total of approximately 6,000 acres.

The LUPA provides a formal planning review for the expansion of the existing Las Trampas boundaries; outlines proposed public access connections, trails, and staging areas; and catalogs and plans for important natural and cultural resources for five parcels in the project area. The five parcels include four that the Park District currently owns: Chen, Elworthy, Peters Ranch, and Podva. The Faria parcel is anticipated to be dedicated to the Park District as mitigation for a proposed development project.

Each parcel represents separate access and natural resource opportunities and constraints. The LUPA describes and outlines recommendations for each parcel. On the Chen parcel, the LUPA recommends a staging area and Emergency Vehicle and Maintenance Access (EVMA) road and recreational trail connection. The LUPA also evaluates public access to Las Trampas and along the Calaveras Ridge Trail via Peters Ranch, as well as trail connections to the Podva parcel. Furthermore, the LUPA serves as a resource for park operations and maintenance, summarizing long-term management plans for the Podva and Faria conservation easements, detailing the grazing plan for all parcels, and outlining roles and responsibilities for park staff on all five subject parcels.

While the LUPA summarizes the long-term management plans for the Faria parcel, the Faria parcel is proposed to be closed to the public in landbank status once the Faria parcel is dedicated to the Park District.

1.3 EIR SCOPE

A Notice of Preparation (NOP) of the EIR and an Initial Study were circulated on July 29, 2019, to identify the types of environmental impacts that could result from implementation of the proposed project, as well as potential areas of controversy. The NOP and Initial Study are included in Appendix A of this EIR. A public Community Meeting, held on June 7, 2017, served as a public scoping meeting for this project, and property owners within 300 feet of the project area were notified by mail of the meeting. Comments on the NOP in 2019 provided in writing and verbally at the 2017 public scoping meeting were received by the Park District and considered during preparation of the EIR. A total of 21 comment letters regarding the NOP were received, in addition to the verbal comments provided at the 2017 scoping meeting. Copies of the comment letters are included in Appendix B.

The following environmental resource topics were addressed in the Initial Study:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

These environmental resource topic areas were analyzed, and it was determined that, except for Aesthetics, Biological Resources, and Transportation, the proposed project would result in no impacts, less-than-significant impacts, or impacts that would be reduced to less-than-significant levels with implementation of standard mitigation measures identified in the Initial Study. The environmental resource topics that resulted in impacts that would be reduced to less-than-significant levels with implementation of standard mitigation measures are also included in this EIR and include Air Quality, Cultural Resources and Tribal Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, and Wildfire. For additional information regarding the mitigation measures included in the Initial Study, please refer to Chapter 2.0, Executive Summary, and Appendix A, Notice of Preparation and Initial Study. The mitigation measures included in the Initial Study are considered to be standard mitigation measures that primarily function as implementation of regulatory requirements. Each mitigation measure identified in the Initial Study will be included in the final Mitigation Monitoring and Report Program that will be adopted upon certification of this EIR.

The evaluation of Aesthetics, Biological Resources, and Transportation in the Initial Study determined that additional analysis beyond implementation of standard mitigation measures was needed to adequately determine the significance of potential environmental impacts. In addition, subsequent to completion of the Initial Study, and in light of the recent increase in number and severity of wildfire events that have occurred throughout the State, the topic of Wildfire was identified as a potential area of concern, and was added to the EIR analysis to ensure that this impact is thoroughly addressed. Air Quality, Cultural Resources and Tribal Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Noise are also included in this EIR to thoroughly address the potential impacts that would be reduced to less-than-significant levels with implementation of standard mitigation measures. Each of these environmental resource topic areas is included in the EIR and is evaluated in a separate section of Chapter 4.0. Each section discusses the relative regulatory settings, impacts, and mitigation measures for each environmental resource topic area.

1.4 REPORT ORGANIZATION

This EIR is organized into the following chapters:

- **Chapter 1.0 – Introduction:** Discusses the overall EIR purpose, provides a summary of the proposed project, describes the EIR scope, and summarizes the organization of the EIR.

- **Chapter 2.0 – Summary:** Provides a summary of the impacts that would result from implementation of the proposed project, describes mitigation measures recommended to reduce or avoid significant impacts, and describes the alternatives to the proposed project.

- **Chapter 3.0 – Project Description:** Provides a description of the project site, the project objectives, the proposed project, and uses of this EIR.

- **Chapter 4.0 – Environmental Evaluation:** Describes the following for each environmental technical topic: existing conditions (setting), potential environmental impacts and their level of significance, and mitigation measures recommended to mitigate identified impacts. Potential adverse impacts are identified by levels of significance, as follows: less-than-significant impact (LTS), significant impact (S), and significant and unavoidable impact (SU). The significance of each impact is categorized before and after implementation of any recommended mitigation measures(s). Cumulative impacts are also addressed.

- **Chapter 5.0 – Other CEQA Considerations:** Provides an analysis of effects found not to be significant, growth-inducing impacts, unavoidable significant environmental impacts, and significant irreversible changes.

- **Chapter 6.0 - Alternatives:** Provides an evaluation of three alternatives to the proposed project in addition to the CEQA-required No Project alternative.

- **Chapter 7.0 - Report Preparation:** Identifies preparers of the EIR, references used, and the persons and organizations contacted.

- **Appendices:** The appendices contain the NOP and Initial Study (Appendix A), comment letters on the NOP (Appendix B), and technical reports prepared in conjunction with this EIR.

2.0 EXECUTIVE SUMMARY

2.1 PURPOSE

This Draft Environmental Impact Report (Draft EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with implementation of the Southern Las Trampas Land Use Plan Amendment (referred to as the proposed project). This EIR has been prepared in conformance with CEQA, California Public Resources Code Section 21000 et seq; the California CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq); and the rules, regulations, and procedures for implementing CEQA as adopted by the East Bay Regional Park District (herein referred to as the Park District).

This EIR is intended to serve as an informational document for the public agency decision-makers and the public regarding the potential environmental impacts associated with the construction and operation of the proposed project. In addition to identifying potential environmental impacts, this EIR also identifies potential mitigation measures and alternatives to avoid or reduce potential environmental impacts.

2.2 PROJECT SUMMARY

The following provides a summary of the project location, project description, project objectives, and potential significant and unavoidable impacts that could result from the proposed project, as well as a list of the agencies responsible for implementation of the proposed project.

2.2.1 Project Location

The project site is in the southern portion of Las Trampas 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 of Contra Costa County.

The project area incorporates approximately 756 acres that straddle Las Trampas Ridge. The project area appears on the Las Trampas Ridge and Diablo 7.5-minute U.S. Geological Survey quadrangle maps. The boundaries of the project area include existing Las Trampas parkland to the north, private residences and San Ramon Valley Boulevard to the east, private residences to the south, and Bollinger Canyon Road and private residences to the southwest.

2.2.2 Project Description

Proposed project components consist of appending 756 acres of land into Las Trampas Regional Wilderness to a total of approximately 6,000 acres; construction and operation of new trail connections, staging area, and two walk-in entrances and access points. In addition, the project would restore and enhance creeks, ponds, and wetlands. These activities would be implemented through the LUPA as an update to the 1993 LUDP.

The LUPA provides a formal planning review for the expansion of Las Trampas, outlines public access connections, and catalogs and plans for important natural and cultural resources for five parcels in

the project area. The five parcels include four that the Park District currently owns: Chen, Elworthy, Peters Ranch, and Podva. The Faria parcel is anticipated to be dedicated to the Park District as mitigation for a proposed development project. Each parcel represents separate access and natural resource opportunities and constraints. The LUPA describes and outlines recommendations for each parcel. On the Chen parcel, the LUPA recommends a staging area and Emergency Vehicle and Maintenance Access (EVMA) road and recreational trail connection. The LUPA also evaluates public access to Las Trampas and along the Calaveras Ridge Trail via Peters Ranch, as well as trail connections to the Podva parcel. Furthermore, the LUPA serves as a resource for park operations and maintenance, summarizing long-term management plans for the Podva and Faria conservation easements, detailing the grazing plan for all parcels, and outlining roles and responsibilities for park staff on all five subject parcels. For a detailed explanation of project components, see Chapter 3.0, Project Description.

2.2.3 Key Plan Recommendations

The following key plan recommendations have been identified to support the proposed project goals:

- 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.
- Develop a staging area off Bollinger Canyon Road on the Chen property, at the site of an existing cattle corral, 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. The plan proposes to name the staging area “Old Time Corral Staging Area”. Construction would also include a new corral within the grading footprint of the Old Time Corral Staging Area.
- Provide public access into Las Trampas from a walk-in entrance on the Podva property off Wingfield Court and Midland Way. The plan proposes to name this walk-in entrance “Podva Walk-in Entrance”.
- Provide public access into Las Trampas from a walk-in entrance on the Peters Ranch property from the City of San Ramon trail system on the Geological Hazard Abatement District (GHAD) open space lands around the Faria Preserve subdivision. The plan proposes to name this walk-in entrance “Saudade Walk-in Entrance”.
- Close and abandon 0.6 miles of an existing over steep and eroded service road within the Chen property.
- Construct and develop 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 service road. The plan proposes to name this trail “Sabertooth Trail”.
- Design and develop one new 0.8-mile loop trail on the Chen property from the proposed staging area. The plan proposes to name this trail “Warbler Loop 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 service road.
- Close and restore 0.4 miles of an existing service road within the Peters Ranch property.
- 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 from the Podva property. The plan proposes to name this trail "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 designated as part of the "Heritage Pear Trail".
- Designate 99 percent of the project area as a natural unit, with less than one percent as a recreation/staging unit.
- Designate 201 acres as Special Resource Protection Areas, which would include three Special Protection Features: a 35-acre wetland complex area and two areas encumbered with a conservation easement.

2.2.4 Lead Agency, Responsible and Trustee Agencies

The lead agency for the proposed project is the Park District. The Park District is the public agency that has the principal responsibility for certifying the EIR, approving or carrying out the project, or disapproving the project.

The responsible agencies are State and local public agencies other than the lead agency that have authority to carry out or approve a project or that are required to approve a portion of a project for which the lead agency is preparing or has prepared an EIR or Negative Declaration. There are no agencies other than the Park District that have approval or permitting authority for the adoption of the proposed project.

In addition, implementation of the proposed project would involve many responsible agencies depending upon the specifics of the project components. The following are some of the agencies that could be required to act as responsible agencies for project components:

- U.S. Army Corps of Engineers (Corps)
- California Department of Fish and Wildlife (CDFW)
- U.S. Fish and Wildlife Service (USFWS)
- San Francisco Bay Regional Water Quality Control Board (RWQCB)
- East Bay Municipal Utility District (EBMUD)
- Contra Costa County

- City of San Ramon
- Town of Danville

2.3 SUMMARY OF PROJECT ALTERNATIVES

Below is a summary of the alternatives that were considered and evaluated in Chapter 6.0, Alternatives.

2.3.1 No Project Alternative

The No Project Alternative includes no improvements identified for the proposed project, and the project site would continue to be used for minimal agricultural grazing. Access within the project site would be limited to those areas already open to the public. Under this alternative no construction activities or long-term operations associated with the proposed project would occur.

2.3.2 Relocated Staging Area Alternative

The Relocated Staging Area Alternative would relocate the proposed Old Time Corral Staging Area approximately 300 feet north of the location proposed by the proposed project. Relocation of the staging area would limit views of the staging area from Bollinger Canyon Road, but would require a longer access road and site grading. All other components of the proposed project would remain the same under this alternative.

2.3.3 No Staging Area Alternative

The No Staging Area Alternative would include all components of the proposed project except no staging area would be constructed along Bollinger Canyon Road. The existing cattle corral located at the site of the Old Time Corral Staging would continue to operate, and a public access gate, similar to the Podva Walk-in Entrance would be located along Bollinger Canyon Road to provide access to the Sabertooth Trail. Under this alternative, all other construction activities and long-term operations associated with the proposed project would occur.

2.4 AREAS OF CONTROVERSY

Pursuant to CEQA Guidelines Section 15123(b), a summary section includes a discussion of areas of controversy known to the lead agency, including issues raised by agencies and the public. In response to the Notice of Preparation of an EIR, the Park District received seven comment letters regarding the following areas of controversy. Comments in these letters expressed the following concerns:

- **Aesthetics:** Visual degradation of the proposed staging area site;
- **Biological Resources:** Impacts on sensitive plant and wildlife species within project site; and
- **Transportation:** Vehicle safety on Bollinger Canyon Road.

2.5 PUBLIC REVIEW OF THE DRAFT EIR

Upon completion of this Draft EIR, the Park District prepared and filed a Notice of Completion (NOC) with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, the Park District

distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice to comply with Public Resources Code Section 21092(b)(3). The NOA was also published on the Park District website and in the Danville San Ramon News, a local news publication, to comply with Section 15087(a) of the State CEQA Guidelines. This Draft EIR was distributed to the California Office of Planning and Research/State Clearinghouse in accordance with Section 15206 of the CEQA Guidelines. This Draft EIR was distributed to affected agencies, surrounding cities and municipalities, and all interested parties. During the public review period, this Draft EIR, including the appendices, is available for review at the following locations:

East Bay Regional Park District
Administration Office
2950 Peralta Oaks Court
Oakland, CA 94605-0381

Danville Library
400 Front Street
Danville, CA 94526

San Ramon Library
100 Montgomery Street
San Ramon, CA 94583

In addition, the Draft EIR, including the appendices, is available for review at the following Park District website: www.ebparks.org/parks/las_trampas/.

Agencies, organizations, individuals, and all other interested parties not previously contacted, or who did not respond to the Notice of Preparation/Initial Study, or attended the scoping meeting, currently have the opportunity to comment on this Draft EIR during the 45-day public review period. Written comments on this Draft EIR should be addressed to:

Kim Thai, Senior Planner
East Bay Regional Park District
2950 Peralta Oaks Court
Oakland, CA 94605
kthai@ebparks.org

Upon completion of the public review period, written responses to all substantive environmental issues raised will be prepared and made available for review at least 10 days prior to the public hearing on the project before the Park District Board of Directors, at which the certification of the EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

2.6 EXECUTIVE SUMMARY MATRIX

Table 2.A below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. Table 2.A is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding sections of this Draft EIR. Table 2.A is included in the Draft EIR pursuant to CEQA Guidelines Section 15123(b)(1).

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Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
ENVIRONMENTAL IMPACT REPORT			
4.1 AESTHETICS			
Impact AES-1: The project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from publicly accessible vantage point).	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact AES-2: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to aesthetics.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.2 AIR QUALITY			
Impact AIR-1: The project would violate an air quality standard or contribute substantially to an existing or project air quality violation.	Potentially significant impact.	**Mitigation Measure AIR-1:** Consistent with the Basic Construction Mitigation Measures required by the BAAQMD and City of San Ramon General Plan Implementing Policy 12.6-I-3, the following actions shall be incorporated into construction contracts and specifications for the project: ● All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ● All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ● All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ● All vehicle speeds on unpaved roads shall be limited to 15 mph. ● All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ● Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the Park District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.	
Impact AIR-2: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to air quality.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.3 BIOLOGICAL RESOURCES			
Impact BIO-1: Construction of the proposed Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to seven special-status plant species, if present on or near to the project area.	Potentially significant impact.	**Mitigation Measure BIO-1:** The following measures shall be implemented to avoid, minimize, and/or mitigate potential impacts on special-status plants. Preconstruction botanical surveys of the project site shall be completed by a qualified botanist according to the CDFW's 2018 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. Surveys shall be floristic in nature, include areas of potential direct impacts and a minimum 50 feet surrounding area, be conducted at the time of year when species are both evident and identifiable, and be replicable. The purpose of these surveys shall be to identify the locations of special-status plants that could be affected during project construction. If special-status plants are not found in the survey area, then no further mitigation is required. If special-status plants are found in the survey area, then the below mitigation measures shall also be implemented. • Locations of identified special-status plants shall be recorded by the qualified botanist using a global positioning system (GPS) unit or equivalent and flagged in the field. The GPS data shall be used to create digital and hardcopy maps for distribution to construction inspectors and contractors to inform them of areas where disturbance is prohibited, or where activities are restricted. • Special-status plant species identified during surveys shall be submitted to the CNDDB. • Where possible, identified special-status plants will be avoided. This may include making small adjustments to the trail alignment (within the 50 feet	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		buffer around the trail alignments evaluated in this EIR), as well as the following: 1. The qualified botanist shall establish an adequate buffer area to exclude activities that could harm an identified special-status plant population that is near the construction area. 2. Access during construction may be restricted around special-status plant populations through appropriate field direction by the qualified botanist. This access restriction may include signage, buffers, seasonal restrictions, and design or no access, depending on the location and special-status species in question. 3. The Park District and its construction contractors shall install a temporary, plastic mesh-type construction fence (Tensor Polygrid or equivalent) at least 4 feet tall around any established buffer areas to prevent encroachment by construction equipment and personnel. The qualified botanist shall determine the exact location of the fencing. The fencing shall be strung tightly on posts set at maximum intervals of 10 feet (3 meters) and shall be checked and maintained weekly until all construction is complete in the area where special-status plant species occur. 4. No grading, clearing, storage of equipment or machinery, or other disturbance or construction activity shall occur until all temporary construction fencing has been installed by the Park District, and its construction contractor, and inspected and approved by the qualified botanist. ● If avoidance of special-status populations is not possible, then a Rare Plant Mitigation Plan shall be designed and implemented. CDFW approval of the Rare Plant Mitigation Plan is required before implementation of an activity that could directly or indirectly impact a federally or state listed or CNPS Rare Plant Rank 1A, 1B, 2A, or 2B species, and under no circumstances will state or federally listed plants be impacted without additional consultation with appropriate regulatory agencies. At a minimum, the plan shall include the following elements: 1. For annual species, seed shall be collected from plants that will be impacted, seed stored in an appropriate seed banking facility, and a portion of the seeds shall be redistributed in the project vicinity, as directed by the qualified botanist. Individual plants may also be transplanted. For perennial species, seed collection	

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		and seed banking may be augmented by transplanting entire plants or cuttings, as directed by the qualified botanist. 2. Suitable sites shall be identified in Las Trampas (or other nearby suitable location) and prepared for redistribution of seeds (or transplants) at mitigation ratios that are appropriate for the species lifeform (e.g., annual or perennial) and success based on performance standards calibrated by established reference populations. The plan shall outline the site preparation activities. 3. Monitoring surveys of the seeded or transplanted areas shall be conducted for a minimum of three years. The Park District shall prepare monitoring reports that document the monitoring results and the success of the rare plant mitigation program. 4. Mitigation will be deemed successful when the mitigation population provides the same ecological functions as the impacted population, after taking into account natural fluctuations in population size, health, etc. This will include each of the relocated species establishes at least one stable population of approximately the same size of the impacted population, defined as species presence and population size over a 3-year period, taking into account fluctuations in local reference populations. If this goal is not achieved in 4 years, then contingency measures shall be implemented. Such measures will include evaluating the environmental or other characteristics affecting plant survival and implementing corrective measures, which may include additional seeding and planting; altering or implementing a weed control regime; or introducing or altering other management activities. Efforts shall continue until the mitigation site meets the success criteria for two consecutive years.	
Impact BIO-2: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to California tiger salamander and California red-legged frog.	Potentially Significant Impact.	**Mitigation Measure BIO-2a:** The following general avoidance measures shall be implemented to avoid potential direct and indirect impacts to special-status wildlife species during all construction activities: ● A qualified biologist or biological monitor shall be present to observe construction activities and shall have the authority to halt work as necessary if special-status species are in harm's way or permit conditions or mitigation measures are being violated. ● Preconstruction biological surveys appropriate to special-status wildlife species potentially present shall be conducted by the qualified biologist immediately prior to initiation of construction.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Before any construction activities begin on the project, the qualified biologist shall conduct a training session for construction workers and other personnel present during construction. The training shall include a description of each special-status species that might occur and their respective habitats, the general measures that are being implemented to protect each of the species as they relate to the project, and the physical boundaries within the project shall be accomplished. The training shall also provide instruction in the appropriate protocol to follow in the event that a special-status species is found onsite, including contact telephone numbers. • Before starting ground disturbing activities within construction areas, the Park District and its construction contractors shall clearly delineate the boundaries of the construction area with fencing, stakes, or flags. Contractors shall be required to restrict construction-related activities to within the fenced, staked, or flagged areas. Contractors shall maintain fencing, stakes, and flags until the completion of construction-related activities in that area. Fencing stakes and flags shall be removed upon completion of construction work. Sensitive habitat areas, including special-status wildlife species habitat and known populations, and jurisdictional wetlands, shall be clearly indicated on the project construction plans. • The Park District or its construction contractors shall install temporary wildlife exclusion fencing along the perimeter of the proposed staging area that borders open space habitat (fencing does not need to be installed along Bollinger Canyon Road). Temporary exclusion fencing near sensitive habitats, such as riparian habitat and along the tributaries and wetlands, shall be installed at the discretion of the qualified biologist. All construction areas not fenced, such as trails, shall be clearly marked with flagging and monitored during initial ground disturbance as described above. Final fence design, including appropriate animal escape structures within the fencing and fence location, shall comply with permit conditions, as appropriate for each species being protected. Any construction-related disturbance outside of these boundaries, including parking, temporary access, construction staging, or areas used for storage of materials, shall be prohibited without approval of the qualified biologist. New trails and other project features shall not extend beyond the delineated construction work area boundary. Construction vehicles shall pass and turn around only within the delineated construction work area boundary or existing local road network. Where new access is required outside	

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		of existing roads or the construction work area, the route shall be clearly marked (i.e., flagged and/or staked) prior to being used, subject to review and approval of the qualified biologist. ● Where wildlife exclusion fencing is not installed and ground disturbing activity is occurring, the qualified biologist shall approve the proposed disturbance in advance and clear the area prior to the start of ground disturbing activity. ● A qualified biological monitor shall be on-site during installation of the exclusion fencing. The fencing shall be inspected by the qualified biological monitor on a daily basis during construction activities to ensure fence integrity. Any needed repairs to the fence shall be performed on the day of their discovery. After construction has been completed, the exclusion fencing shall be removed within 72 hours. ● Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, the qualified biologist or a biological monitor working under their direction shall survey within the exclusion area to ensure that no special-status species are present. The qualified biologist or a biological monitor working under their direction shall also monitor vegetation removal or grading activities inside fenced exclusion areas for the presence of special-status species. ● Excavated soils shall be stockpiled in disturbed areas lacking native vegetation, and/or as shown on the construction plans, or approved by the qualified biologist. ● All detected erosion caused by project-related impacts (i.e., grading or clearing for new trails) and other improvements shall be remedied immediately upon discovery. ● The introduction of exotic plant species shall be avoided first through prevention, followed by physical methods. Construction equipment shall arrive at the project area free of soil, seed, and vegetative debris to reduce the likelihood of introducing new weed species. Weed-free rice straw or other certified weed free straw shall be used for erosion control. Earth-moving equipment, gravel, fill, or other materials shall be weed-free. Mechanical seeding equipment shall be inspected for residual seeds and cleaned prior to use onsite. Construction operators shall ensure that clothing, footwear, and equipment used during construction is free of soil, seeds, vegetative matter or	

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		other debris or seed-bearing material before entering the Park or from an area with known infestations of invasive plants and noxious weeds. Weed populations introduced into the site during construction shall be eliminated by mechanical means approved by the qualified biologist. ● If special-status wildlife species are found within or near construction areas during project construction work, construction activities shall cease in the vicinity of the animal until the animal moves on its own outside of the project area (if possible). The wildlife resource agency(ies) with jurisdiction over the species shall be contacted if permits issued for the project do not address relocation of the species regarding any additional avoidance, minimization, or mitigation measures that may be necessary if the animal does not move on its own. The daily monitoring report prepared by the qualified biologist shall document the activities of the animal within the site; exclusion fence construction, modification, and repair efforts; and movements of the animal once again outside the of the construction area. This report shall be submitted to the Park District and the appropriate regulatory agency with jurisdiction over the wildlife species. ● All special-status wildlife species observed during surveys shall be reported to the CNDDB. ● Whenever possible, steep-walled holes or trenches shall be covered each evening to prevent animal entry. If this is not possible and the steep-walled holes or trenches must be left open overnight, escape ramps or structures shall be installed. Steep-walled holes or trenches shall be inspected for trapped animals on a daily basis until they are back-filled. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed or other special-status species are trapped, the USFWS and/or CDFW, as appropriate, shall be contacted immediately to determine the appropriate method for relocation, or the species may be relocated according to the conditions of the permits issued for the project. The qualified biologist may elect to order a stop work requirement if they determine it to be necessary, and upon consultation with the appropriate regulatory agency.	

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• Construction pipes, culverts, or other structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more shall be inspected for special-status species before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status species is discovered inside a pipe, and does not move of its own accord, that section of pipe shall not be moved until the appropriate resource agency, with jurisdiction over that species, has been consulted to determine the appropriate method for relocation, or the species may be relocated according to the conditions of the permits issued for the project. If necessary, under the direct supervision of the qualified biologist, the pipe may be moved once to remove it from the path of construction activity until the animal has escaped. • Vehicles and equipment shall be in proper working condition to ensure that there is no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Contractor equipment shall be checked for leaks daily prior to operation and repaired when leaks are detected. Fuel containers shall be stored within appropriately sized secondary containment barriers. The qualified biologist shall be immediately informed of any hazardous spills and not more than 24 hours of the incident occurrence. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly disposed of at an appropriate facility. If vehicle or equipment maintenance is necessary, it may be performed in the designated staging areas, as shown on the construction plans or approved by the qualified biologist. • Temporarily disturbed areas shall be returned to pre-project conditions or better. • Project-related vehicles shall observe a 15-mile-per-hour speed limit on unpaved access roads within the limits of construction. **Mitigation Measure BIO-2b:** The Park District shall implement the following measures before, during, and after all ground-disturbing construction activities within the project site to minimize impacts to individual and California red-legged frogs and California tiger salamanders. Additional measures may be required by the USFWS and/or CDFW per their permitting authority. Although USFWS and/or CDFW permits will be obtained by the Park District, they have not yet been issued, and therefore, at a minimum the following measures shall be implemented:	

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• The qualified biologist shall survey all work areas within 48 hours before the initiation of construction activities. If California red-legged frog or California tiger salamander are found, the Park District biologist shall contact the USFWS and/or CDFW to determine if moving them is appropriate. If the agencies approve relocation, the qualified biologist shall move them to an approved site in the Project area prior to the initiation of construction. The qualified biologist shall maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photos) to assist him or her in determining whether translocated animals are returning to their original point of capture. A final clearance survey shall be conducted immediately before construction commencement. • A qualified biologist, experienced with California red-legged frog, California tiger salamander, Alameda whipsnake, and other locally occurring special-status species shall be present onsite during all ground disturbing activities to search for individuals that may be unearthed or harmed during excavation/construction. The qualified biologist shall have the authority to halt work, if a California red-legged frog, California tiger salamander, Alameda whipsnake, or other special-status species is found onsite. Individuals of species shall be allowed to move away from the project area on their own or removed from the construction area following the procedures specified in the USFWS or CDFW permits. The Park District shall report all discoveries of California red-legged frogs, California tiger salamanders, and Alameda whipsnake in the construction areas to resource agencies according to the procedures specified in the State and federal listed species permits. • Construction activities shall be limited to periods of low rainfall (less than 0.25 inch per 24-hour period and less than 40 percent chance of rain). The project biologist shall consult the 72-hour weather forecasts from the National Weather Service (NWS) prior to the startup of any ground disturbing activities on the project site. Construction activities shall cease 24 hours prior to a 40 percent or greater forecast of rain from the NWS. Construction may continue 24 hours after the rain ceases provided that there is no precipitation (less than 20 percent chance) in the 24-hour forecast. • Contractor specifications shall include the following worker restrictions and guidelines, at a minimum:	

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		○ Construction personnel and vehicles shall stay within designated work areas. Entry into adjacent Las Trampas lands or established exclusion zones shall be strictly prohibited. ○ In the event a California red-legged frog, California tiger salamander, or Alameda whipsnake is inadvertently killed, injured or entrapped, the contractor shall immediately notify the onsite monitor/biologist and Park District's construction inspector, who will stop work and notify the USFWS and/or CDFW. ● Instream disturbances shall be performed during the dry season when drainage channels have flows that are minimal (e.g., May 15 to October 15). ● As part of the project's Stormwater Pollution Prevention Plan (SWPPP) implementation, the Park District shall include in the specifications a requirement to use tightly woven fiber of natural materials (e.g., coir rolls or mats) or similar material for erosion control to ensure that special-status species do not get trapped. Plastic mono-filament netting (erosion control matting) or similar material shall be prohibited. ● Upon completion of construction, temporarily impacted areas shall be restored to pre-project grades and contours and stabilized to prevent erosion. If the areas do not naturally revegetate, a seed mix of native and naturalized grass and forb species shall be applied to all of the grassland areas disturbed by the project. The seed shall be from sources that are regionally appropriate for the site.	
Impact BIO-3: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to Alameda whipsnake.	Potentially Significant Impact.	**Mitigation Measure BIO-3:** In addition to the special-status species measures provided in Mitigation Measures BIO-2a and the relevant measures in BIO-2b, the following measures shall be implemented to further avoid or minimize impacts to Alameda whipsnakes: ● Ground disturbing work shall be performed during the period April 1 to October 31, when Alameda whipsnakes are more active and capable of moving away from construction activities. ● If scrub vegetation is removed, only hand tools shall be used, or a qualified biologist shall survey the area immediately prior to equipment clearing.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-4: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to western pond turtle.	Potentially Significant Impact.	**Mitigation Measure BIO-4:** The Park District shall implement the following measures before, during, and after all ground-disturbing construction activities within the project site to avoid significant impacts to individual western pond turtles: ● The Park District shall require a qualified biologist to conduct surveys for western pond turtles and nesting areas prior to initiating any ground-disturbing activities within 0.25-mile of potential western pond turtle aquatic habitat. If a western pond turtle is observed in aquatic habitat during the nesting season (May to July), a subsequent survey of the surrounding upland habitats shall be conducted to determine the suitability of the upland habitats for nesting and to examine the area for any evidence of turtle nesting activity. If a nesting area is detected or suspected, the Park District shall install temporary exclusion fencing around the nesting area, designed to not prevent movement of turtles between the nesting site and nearby aquatic habitat, but to exclude the movement of turtles into the construction area.	Less than Significant Impact.
Impact BIO-5: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to nesting golden eagles.	Potentially Significant Impact.	**Mitigation Measure BIO-5:** Within 15 days prior to the initiation of ground-disturbing activities during the nesting season (February 1 to August 31), a qualified biologist shall conduct a preconstruction survey for nesting golden eagles within 0.5-mile of construction locations. If nesting eagles are present, a buffer free from new construction disturbance shall be established within a 0.5-mile radius of the nest. No new project-related construction activities (i.e., activities that were not already ongoing when the nest was established, or that are of a substantially greater intensity than when the nest was established) shall be undertaken within the buffer. In some cases (e.g., if the activity is not visible from the nest site), it is possible that a lesser buffer would be adequate to avoid disturbance of the nesting eagles, but such a variance would be set by a qualified biologist in consultation with the CDFW and USFWS. In such a case, the biologist shall monitor the behavior of the nesting birds during the first full day of construction activity immediately surrounding the buffer. The biologist shall look for signs of stress such as repeated alarm calls, agitated behavior, or departure of the birds from the nest. If the birds do not show signs of habituation to the new disturbance by resuming their normal nesting activities, work within the vicinity of the nest shall stop and the CDFW and USFWS shall be consulted to refine the buffer determination. If the birds continue their normal activities, the biologist shall inspect the nest site every 1 to 2 days (the frequency determined in consultation with the CDFW and USFWS) for as long as the nest is active and work is ongoing	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		within the reduced buffer to confirm that the birds are tolerant of the construction activities. Any required buffer shall remain in place until young are no longer dependent on the nest, or until the nesting attempt fails (for reasons other than project activities) and it is determined that the birds will not attempt to re-nest. A qualified biologist shall determine through direct observation when the nest is no longer in use. Before construction activities occur within the buffer area, the biologist must confirm that the nest is no longer active.	
Impact BIO-6: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to burrowing owl.	Potentially Significant Impact.	**Mitigation Measure BIO-6:** Preconstruction activity surveys for burrowing owls shall be performed by a qualified biologist no more than 15 days before initial ground disturbance activities within a construction area. A survey to determine presence or absence may be performed at any time to facilitate passive relocation efforts (which can only occur outside of the nesting season of February 1 to August 31). In addition, a preconstruction activity survey by a qualified biologist must be conducted no more than 15 days prior to the commencement of grading, to confirm the absence of burrowing owls. This survey shall be conducted in all areas on and within 500 feet of the impact area and shall be conducted in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation (e.g., the surveys shall be conducted during weather conditions suitable for owl detection as recommended in the Staff Report. Surveys shall be conducted within 2 hours of dawn or sunset to maximize the detection of owls). If burrowing owls are present during the breeding season (generally February 1 to August 31), a 250-foot buffer, within which no new activity will be permissible, shall be maintained between project activities and occupied burrows. Owls present on the site after February 1 will be assumed to be nesting unless evidence indicates otherwise as confirmed by a qualified biologist. This protected buffer area shall remain in effect until August 31, or based upon monitoring evidence, until the young owls are foraging independently or a qualified biologist has determined that the nest is no longer active. In some cases (e.g., if an activity is not visible from the nest site), it is possible that a breeding-season buffer less than 250 feet would be adequate to avoid disturbance of nesting burrowing owls, but such a variance would be set by a qualified biologist in consultation with the CDFW. In such a case, the biologist shall monitor the behavior of the nesting birds during the first full day of construction activity immediately surrounding the buffer. The biologist shall look for signs of stress such as repeated alarm calls, agitated behavior, or departure of the birds from the nest. If the birds do not show signs of habituation to the new	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		disturbance by resuming their normal nesting activities, work within the vicinity of the nest shall stop and the CDFW shall be consulted to refine the buffer determination. If the birds continue their normal activities, the biologist shall inspect the nest site every 1 to 2 days (the frequency determined in consultation with the CDFW) for as long as the nest is active and work is ongoing within the reduced buffer to confirm that the birds are tolerant of the construction activities. If burrowing owls are present during the nonbreeding season (generally September 1 to January 31), a 150-foot buffer zone shall be maintained around the occupied burrow(s) if practicable. If such a buffer is not practicable, then a buffer adequate to avoid injury or mortality of owls (based on the determination of a qualified biologist) shall be maintained. If an adequate buffer (as determined by a qualified biologist) cannot be maintained, or if destruction of the burrow is required, the non-nesting birds may be passively relocated subject to CDFW approval of a Burrowing Owl Exclusion Plan.	
Impact BIO-7: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to nesting special-status or otherwise protected bird species.	Potentially Significant Impact.	**Mitigation Measure BIO-7:** Prior to construction activities occurring during the nesting bird season (February 1 through August 31), a preconstruction activity surveys for nesting birds will be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. Surveys will be conducted no more than seven days prior to the initiation of construction activities. During this survey, the biologist shall inspect all trees and other potential nesting habitats (e.g., shrubs, ground and structures) in the impact area plus a surrounding 300-foot buffer for nests. If removal of potential nesting substrate or project grading will occur during more than one nesting season, or in different parts of the site in phases over the course of a single season, then additional pre-activity surveys must be performed within seven days prior to initiation of work in any particular area. If the preconstruction activity survey does not identify the presence of any active nests on or within 300 feet of the site, construction activities may proceed. If nests known to have eggs or young, or that cannot be confirmed to be inactive or to lack eggs or young , are found, a qualified biologist shall establish an appropriate construction-free buffer around each nest in consultation with the CDFW . Generally, a buffer of 300 feet for raptors and 100 feet for songbirds are adequate to avoid causing nest abandonment. The buffer shall remain in place until the qualified biologist has confirmed that the nest is no longer active. If less than a 100-foot nest buffer is necessary and determined to be appropriate for a particular nest or nests, a qualified biologist shall monitor the nest(s) before construction to document baseline nesting behavior and monitor the nest during	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		construction to ensure nesting birds are not exhibiting signs of stress and territorial behavior. If signs of stress are observed during the monitoring, construction activities shall cease or buffer shall increase, as determined by a qualified biologist, the to a sufficient distance where the nesting birds are longer exhibiting signs of stress. To prevent encroachment, the buffer shall be clearly marked for avoidance. The established buffer shall remain in effect until the young have fledged or the nest is no longer active as confirmed by the biologist.	
Impact BIO-8: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to San Joaquin kit fox.	Potentially Significant Impact.	**Mitigation Measure BIO-8:** Prior to any ground disturbance related to construction activities, a qualified biologist shall conduct a preconstruction survey in suitable habitat located within 300 feet of the proposed construction areas. The survey shall establish the presence or absence of kit fox and/or suitable dens, and shall evaluate use by kit fox consistent with USFWS survey guidelines (USFWS 1999). Preconstruction surveys shall be conducted no more than 30 days before ground disturbance. The biologist shall survey the proposed disturbance footprint and a 100-foot buffer to identify kit fox and/or suitable dens. If kit fox and/or suitable dens are identified in the survey area during preconstruction surveys, the following measures shall be implemented: ● If a suitable San Joaquin kit fox den is discovered within the proposed disturbance footprint or 100-foot buffer that could be potentially active, the den shall be monitored for three days by a qualified biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used. ● Unoccupied dens within the proposed trail alignments or staging area shall be destroyed immediately to prevent subsequent use. ● If a natal or pupping den is found, the Park District shall be notified immediately. The den shall not be destroyed until the pups and adults have vacated and then only after consultation with USFWS and CDFW. ● If San Joaquin kit fox activity is observed at the den during the initial monitoring period, the den shall be monitored for an additional five consecutive days. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. ● If suitable dens are identified in the survey area, exclusion zones around each den entrance or cluster of entrances shall be demarcated. The configuration of	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		exclusion zones shall be circular, with a radius measured outward from the den entrance(s). No activities shall occur within the exclusion zones. Exclusion zone radii for potential dens shall be at least 50 feet. Exclusion zone radii for known dens will be at least 100 feet.	
Impact BIO-9: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to American badger.	Potentially Significant Impact.	**Mitigation Measure BIO-9:** To address potential impacts to the American badger, the Park District shall implement the following measures: ● Preconstruction activity surveys for badger dens shall be performed within 15 days prior to commencement of grading or other ground-disturbing activities. These surveys shall be conducted by a qualified biologist familiar with the characteristics of badger burrows. If active badger burrows are identified within the proposed development area, they should be avoided to the maximum extent practicable. If avoidance is not feasible, a qualified biologist should determine if the burrow is being used as a maternity den. If young are determined to be present, a buffer free from new construction-related disturbance shall be established around the den; the dimensions of this buffer shall be determined by the biologist in consultation with the CDFW. The buffer shall be maintained until young vacate the den, as determined by a qualified biologist. ● If the occupied burrow is simply being used as a refugium by a single badger, or after young have been weaned from a maternity den, one of the following measures may be implemented upon CDFW-approval to avoid potential impacts on individual badgers: o Active trapping and relocation of badgers to suitable off-site habitat by a qualified biologist. o An on-site passive relocation program, through which badgers are excluded from occupied burrows by installation of a one-way door in burrow entrances, monitoring of the burrow for one week to confirm badger usage has been discontinued, and hand- excavation and collapse of the burrow to prevent reoccupation. ● If relocation of badgers is necessary, the biologist shall conduct a follow-up survey of the impact areas the day that grading or construction is to commence to determine whether any relocated badgers have returned to the construction site. If badgers have returned to the construction site, they shall be relocated again using one of the measures described above.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-10: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to San Francisco dusky-footed woodrat.	Potentially Significant Impact.	**Mitigation Measure BIO-10:** A qualified biologist shall conduct a preconstruction survey for San Francisco dusky-footed woodrat nests prior to the start of project activities. Surveys will be conducted in the immediate work area and a 25-foot buffer around those areas. If woodrat nests are present, the nests will be flagged in the field and delineated on project site maps in order to avoid potential impacts to woodrat nests during construction activities. For any woodrat nests that cannot be avoided, a woodrat nest relocation plan shall be prepared and submitted to CDFW for approval. At a minimum, the plan shall include the phased dismantling and relocation of the nest materials to a suitable location, and the installation of artificial shelters at a ratio of 1:1 per dismantled nest to provide readily accessible refugia for dispersing individuals. If breeding woodrats are present, relocation of houses shall be delayed until the breeding season is over or the qualified biologist otherwise determines that young are no longer present.	Less than Significant Impact.
Impact BIO-11: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to roosting special-status bat species.	Potentially Significant Impact.	**Mitigation Measure BIO-11:** Prior to any tree removal during the maternity roosting period (April 15 to August 31) or hibernation period (October 15 to February 28), a focused tree habitat assessment shall be conducted by a qualified bat biologist of all trees that will be removed or impacted by construction activities. Trees containing suitable potential bat roost habitat features would then be clearly marked. The habitat assessments should be conducted enough in advance to allow preparation of a report with specific recommendations, and to ensure tree removal can be scheduled during seasonal periods of bat activity if required. If it is determined that day roosting bats are unlikely to occur, the tree may be removed as described below. If the absence of roosting bats cannot be confirmed, then the removal of trees providing suitable maternity or hibernation roosting habitat should only be conducted during seasonal periods of bat activity, including: 1) Between March 1 (or after evening temperatures rise above 45F and/or no more than 1/2" of rainfall within 24 hours occurs) and April 15; or 2) Between September 1 and about October 15 (or before evening temperatures fall below 45F and/or more than 1/2" of rainfall within 24 hours occurs). Appropriate methods will be used to minimize the potential of harm to bats during tree removal. Such methods may include but are not limited to using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on Day 1. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed, to not	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		return to the roost that night. The remainder of the tree is removed on Day 2. A bat biologist qualified in two-step tree removal is required on Day 1 to supervise and instruct the tree-cutters who will be on the site conducting the work, but only for a sufficient length of time to train all tree cutters who will conduct two-step removal of habitat trees. The bat biologist is generally not required on Day 2, unless a very large cavity is present and a large colony is suspected.	
Impact BIO-12: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to Crotch bumble bee and western bumble bee.	Potentially Significant Impact.	**Mitigation Measure BIO-12:** To address potential impacts to the Crotch bubble bee and western bubble bee, the Park District shall implement the following measures: ● A minimum of two preconstruction surveys conducted within 30 days during appropriate activity periods (i.e., March through September) prior to the start of ground disturbing activities to identify bumble bee activity. The preconstruction surveys shall occur when temperatures are above 60° Fahrenheit (15.5°Celsius) and not during wet conditions (e.g., foggy, raining, or drizzling). The survey shall be conducted at least 2 hours after sunrise and 3 hours before sunset and shall occur at least 1 hour after rain subsides. Preferably, the survey should be conducted during sunny days with low wind speeds (less than 8 miles per hour), but surveying during partially cloudy days or overcast conditions are permissible if the surveyors can still see their own shadow. ● If Crotch or western bumble bees, or potential Crotch or western bumble bees (since bumble bees can be difficult to identify in the field) are observed within the project site, a plan to protect Crotch and/or western bumble bee nests and individuals shall be developed and implemented in consultation with CDFW and USFWS. The plan shall include, but not be limited to, the following measures: o Specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queen bumble bees); o o Establishment of appropriate no-disturbance buffers for bumble bee nest sites to avoid impacts to the bees and construction monitoring by a qualified biologist to ensure compliance if bumble bee nests are identified; o Restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, BMPs to minimize the spread of invasive plant species);	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		o Provisions to avoid Crotch or western bumble bees, or potential Crotch or western bumble bees if observed away from a bumble bee nest during project activity (e.g., ceasing of project activities until the animal has left the active work area on its own volition); and o Prescription of an appropriate restoration seed mix targeted for the Crotch and western bumble bee, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season of the Crotch and western bumble bee (March through September).	
Impact BIO-13: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact creeping wild rye grassland.	Potentially Significant Impact.	**Mitigation Measure BIO-13:** If feasible, the proposed trail alignments shall be re-routed to a suitable trail alignment within the 50-ft buffer study area to avoid/minimize impacts to the creeping rye grass turf. The stands of creeping rye grass near the final alignment shall be flagged and avoided during construction to the degree feasible. If creeping rye grass cannot be avoided, the loss of creeping rye grass turf shall be mitigated by restoring an equivalent amount of creeping rye grass turf onsite. The Park District shall reseed temporarily disturbed areas of creeping rye grass turf habitat that are disturbed by trail construction with an appropriate weed-free native seed mix that contains creeping rye grass seed and/or plugs. The restored rye grass areas shall be monitored and reported on according to the HMMP described in Mitigation Measure BIO-2c.	Less than Significant Impact.
Impact BIO-14: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to riparian plant communities.	Potentially Significant Impact.	**Mitigation Measure BIO-14a:** To minimize disturbance to riparian habitat for trail construction occurring adjacent to riparian habitat, riparian areas shall be clearly delineated with flagging by a qualified biologist. Riparian areas shall be separated and protected from the work area through silt fencing, amphibian/reptile-friendly fiber rolls (i.e., no mono-filament), or other appropriate erosion control material. Material staging, and all other project-related activity shall be located as far as possible from riparian areas with no driving or parking of vehicles or equipment within the dripline of a riparian tree. **Mitigation Measure BIO-14b:** If impacts to riparian habitat within the project area cannot be avoided, the Habitat Mitigation and Monitoring Plan (HMMP) discussed in Mitigation Measure BIO-15 shall be implemented for all impacted riparian habitat.	Less than Significant Impact.

Impact BIO-15: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to jurisdictional waters of the United States and of the State.	Potentially Significant Impact.	**Mitigation Measure BIO-15:** The permanent impacts of approximately 1,123 square feet and temporary impacts of approximately 578 square feet at seven tributary crossings, two seasonal wetlands, and one ditch, and any additional riparian habitat (see Impact BIO-14) would be mitigated by restoration/enhancement at onsite tributaries and/or wetlands or other suitable nearby locations. These activities may include the removal of invasive plants (enhancement) and/or the planting of native riparian plants (restoration/creation), or other appropriate activities. To achieve this, the Park District shall prepare and implement a project-wide Habitat Mitigation and Monitoring Plan (HMMP) to mitigate temporary and permanent impacts to sensitive/jurisdictional habitat. The HMMP shall be subject to approval by the USACE, RWQCB, and/or CDFW prior to any disturbance of jurisdictional features. Additionally, all required permits and certifications shall be obtained from the USACE, RWQCB, and/or CDFW prior to any disturbance of jurisdictional features and all permit conditions shall be implemented. At a minimum, the HMMP shall include the following: ● Permanently impacted wetlands, streams, riparian, and other sensitive habitat shall be compensated at a minimum 1:1 ratio through restoration/creation or a minimum 2:1 ratio through enhancement. The permitting agencies may require higher mitigation ratios. ● Any native riparian trees that are removed shall be replaced at a minimum 3:1 ratio. ● All temporarily disturbed areas, including wetlands, streams, riparian, other sensitive areas, shall be returned to pre-project conditions or better. Methods may include erosion control, seeding, replanting, and weed control. ● Documentation of the preconstruction habitat conditions within jurisdictional area to be impacted, including wetlands, streams, riparian, and other sensitive habitat. ● Location of habitat restoration, creation, and/or enhancement sites. ● Procedures for procuring plants, such as transplanting or collecting cuttings from plants, including storage locations and methods to preserve the plants. ● Quantity and species of plants to be planted or transplanted. ● Planting procedures, including the use of soil preparation and irrigation. ● Schedule and action plan to maintain and monitor the mitigation site(s) for a minimum 5-year period. ● Reporting procedures, including the contents of annual progress reports.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• List of criteria (e.g., growth, plant cover, survivorship) by which to measure success of the plantings and wetland creation/restoration/enhancement. • Contingency measures to implement if the wetland/stream/riparian creation/restoration/enhancement is not successful (i.e., weed removal, supplemental plantings, etc.). • Performance standards, monitoring, and reporting for a minimum of five years to ensure success of the mitigation and remedial measures if performance standards are not met.	
Impact BIO-16: The project would not have a substantial adverse cumulative effect on candidate, sensitive, or special status species, riparian habitats or other sensitive natural communities, or wetlands.	Less than Significant Impact.	See Mitigation Measures BIO-1 through Mitigation Measure BIO-15.	Less than Significant Impact.
4.4 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES			
Impact CUL-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5	Potentially Significant Impact.	**Mitigation Measure CUL-1a:** Due to the potential for buried archaeological resources to be encountered during earth-moving activities within the Faria Dedication property, if any prehistoric or historic material is encountered by equipment operators during earth-moving activities, work shall be halted within 50-feet of the discovery area until a qualified professional archaeologist is retained to inspect the material and provide further recommendations for appropriate treatment of the resource. To ensure that project supervisors, contractors, and equipment operators are familiarized with the types of artifacts that could be encountered and the procedures to follow if archaeological resources are unearthed during construction, it is recommended that a professional archaeologist shall conduct a preconstruction meeting prior to commencement of earth-moving activities to familiarize the team with the potential to encounter prehistoric artifacts or historic-era archaeological deposits, the types of archaeological material that could be encountered within the project area, and procedures to follow in the event that archaeological deposits and/or artifacts are observed during construction. **Mitigation Measure CUL-1b:** The measures below are provided in the event of an unanticipated discovery of cultural resources within the project area during construction. If any prehistoric or historic-period artifacts are encountered by equipment operators during earth-moving work shall be halted in the immediate vicinity (within 50 feet) of the discovery area and a qualified archaeologist shall be retained to inspect the material and provide further recommendations for	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		appropriate treatment of the resource pursuant to CEQA regulations and guidelines. ● In accordance with current Park District policies, the following recommendation also applies: In the event that prehistoric, archaeological or paleontological artifacts or remains are encountered during project construction, all ground disturbing activities shall be halted within at least 50 feet and artifacts shall be protected in place. In the event that prehistoric, archaeological or paleontological artifacts or remains are encountered during project construction, all ground disturbing activities shall be halted within at least 50 feet and artifacts shall be protected in place (in accordance with EBRPD Board Resolution No. 1989-4-124 and State and federal law) until the find is evaluated by a monitor/archaeological consultant, and appropriate mitigation, such as curation, preservation in place, etc., if necessary, is implemented. ● Historic-era resources potentially include all by-products of human land use greater than 50 years of age, including alignments of stone or brick, foundation elements from previous structures, minor earthworks, brick features, surface scatters of farming or domestic type material, and subsurface deposits of domestic type material (glass, ceramic, etc.). ● Artifacts that are typically found associated with prehistoric sites in the area include humanly modified stone, shell, bone or other materials such as charcoal, ash and burned rock that can be indicative of food procurement or processing activities. Prehistoric domestic features include hearths, fire pits, house floor depressions and mortuary features consisting of human skeletal remains.	
Impact CUL-2: The project could disturb human remains, including those interred outside of formal cemeteries.	Potentially Significant Impact.	**Mitigation Measure CUL-2**: If human remains are encountered within the project area during construction, all work shall stop in the immediate vicinity of the discovered remains and the County Coroner shall be notified immediately. If the remains are suspected to be those of a pre-contact Native American, then the Native American Heritage Commission shall be contacted by the Coroner so that a "Most Likely Descendant" can be designated to provide further recommendations regarding treatment of the remains. An archaeologist should also be retained to evaluate the historical significance of the discovery, the potential for additional remains, and to provide further recommendations for treatment of the site.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact CUL-3: The project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.	Potentially Significant Impact.	See Mitigation Measure CUL-1a, Mitigation Measure CUL-1b, and Mitigation Measure CUL-2.	Less than Significant Impact.
Impact CUL-4: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to cultural resources or tribal cultural resources.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.5 GEOLOGY AND SOILS			
Impact GEO-1: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Potentially Significant Impact.	**Mitigation Measure GEO-1:** A qualified paleontological monitor, or archaeologist with paleontological cross-training, as overseen by a qualified paleontologist, shall be present during earth-moving activities below the soil zone. If any potentially unique or scientifically important paleontological resources are identified during paleontological monitoring of earth-moving activities below the soil zone, the paleontologist shall evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (1996). The recovery plan may include, but shall not be limited to, sampling and data recovery, coordination of museum storage at a qualified curation facility, such as the SDNHM or UCMP for any specimens recovered, and a report of findings. All feasible recommendations contained in the recovery plan shall be implemented before construction activities resume at the site where the paleontological resources were discovered. If paleontological resources are discovered during earth-moving activities and a paleontological monitor is not present, the construction crew shall immediately cease work within 50 feet of the find and notify the appropriate Park District staff who shall notify a qualified paleontologist. A paleontologist shall be retained to inspect the resource, conduct an evaluation and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (1996). The recovery plan may include, but shall not be limited to, an intensive field survey in the vicinity of the find, sampling and data recovery, coordination of museum storage at a qualified curation facility, such as the SDNHM or UCMP for any specimens recovered, and a report of findings. All feasible recommendations contained in the recovery plan shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact GEO-2: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to geology and soils.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.6 HAZARDS AND HAZARDOUS MATERIALS			
Impact HAZ-1: The project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	Potentially Significant Impact.	**Mitigation Measure HAZ-1:** Sampling and analysis of soil in the area of the proposed Old Corral Staging Area and former barn on the Chen property shall be performed prior to the disturbance of soil in those areas. Sampling and analysis of sediment in ponds shall be performed prior to removal of sediments from ponds. The sampling and analysis shall be performed by a qualified environmental professional who shall provide recommendations for soil/sediment handling based on the analytical results. Park District shall implement any soil cleanup recommendations of qualified environmental professionals prior to initiating construction.	Less than Significant Impact.
Impact HAZ-2: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to hazards and hazardous materials.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.7 NOISE			
Impact NOI-1: The project would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Potentially Significant Impact.	**Mitigation Measure NOI-1:** The project contractor shall implement the following best management practice measures during construction of the project: ● Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. ● Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site. ● Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction. ● Prohibit extended idling time of internal combustion engines.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
		• The hours of work shall be any 8.5-hour block as mutually agreed upon between the Contractor and the Park District between 7:30 a.m. and 7:00 p.m., Monday through Friday. No night work shall be permitted. • Designate a "disturbance coordinator" at EBRPD who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.	
Impact NOI-2: The project, in combination with past, present, and reasonably foreseeable projects, would not contribute to a significant cumulative impact with respect to noise.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.8 TRANSPORTATION			
Impact TRA-1: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact TRA-2: The project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact TRA-3: The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact TRA-4: The project would not result in inadequate emergency access.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact TRA-5: The project would not contribute to a significant cumulative impact related to transportation.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
4.9 WILDFIRE			
Impact WF-1: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact WF-2: The project would not substantially impair an adopted emergency response plan or emergency evacuation plan.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact WF-3: The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact WF-4: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact WF-5: The project, due to slope, prevailing winds, and other factors, would not exacerbate wildfire risks, and thereby would not expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact WF-6: The project would not contribute to a significant cumulative impact related to wildfires.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
INITIAL STUDY			
3.1 AESTHETICS			
Impact 3.1.a: The project would not have a substantial adverse effect on a scenic vista.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.1.b: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.1.d: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
3.2 AGRICULTURE AND FORESTRY			
Impact 3.2.a: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use.	No impact.	No mitigation is required.	No impact.
Impact 3.2.b: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.2.c: The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).	No impact.	No mitigation is required.	No impact.
Impact 3.2.d: The project would not result in the loss of forest land or conversion of forest land to non-forest use.	No impact.	No mitigation is required.	No impact.
Impact 3.2.e: The project would not involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	No impact.	No mitigation is required.	No impact.
3.3 AIR QUALITY			
Impact 3.3.a: The project would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 3.3.c: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.3.d: The project would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.3.e: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.4 BIOLOGICAL RESOURCES			
Impact 3.4.e: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.4.f: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.5 CULTURAL RESOURCES			
Impact 3.5.b: The project could cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5 of the CEQA Guidelines.	Potentially Significant Impact.	Refer to Mitigation Measures CUL-1a and CUL-1b.	Less than Significant Impact.
3.6 ENERGY			
Impact 3.6.a: The project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	No impact.	No mitigation is required.	No impact.
Impact 3.6.b: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	No impact.	No mitigation is required.	No impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
3.7 GEOLOGY AND SOILS			
Impact 3.7.a: The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.); b. Strong seismic ground shaking; c. Seismic-related ground failure, including liquefaction; or d. Landslides.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.7.b: The project could not result in substantial soil erosion or the loss of topsoil.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.7.c: The project could be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.7.d: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.7.e: The project does not contain soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	No impact.	No mitigation is required.	No impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
3.8 GREENHOUSE GAS EMISSIONS			
Impact 3.8.a: The project could generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.8.b: The project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.9 HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.9.a: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.9.c: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.9.d: The project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.	No impact.	No mitigation is required.	No impact.
Impact 3.9.e: The project would not be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would not result in a safety hazard for people residing or working in the project area.	No impact.	No mitigation is required.	No impact.
Impact 3.9.f: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 3.9.g: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Less than Significant Impact as identified in the Initial Study.	No mitigation is required.	Less than Significant Impact as identified in the Initial Study, but reevaluated in the EIR (refer to Section 4.9, Wildfire).
3.10 HYDROLOGY AND WATER QUALITY			
Impact 3.10.a: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.10.b: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.	Less Than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.10.c: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in a substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) Impede or redirect flood flows.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 3.10.d: The project would not release pollutants in flood hazard, tsunami, or seiche zones.	Potentially Significant Impact.	**Mitigation Measure HYDRO-1:** Implement Mitigation Measure HAZ-1.	Less than Significant Impact.
Impact 3.10.e: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.11: LAND USE AND PLANNING			
Impact 3.11.a: The project would not physically divide an established community.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.11.b: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.12: MINERAL RESOURCES			
Impact 3.12.a: The project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.	No impact.	No mitigation is required.	No impact.
Impact 3.12.b: The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.	No impact.	No mitigation is required.	No impact.
3.13: NOISE			
Impact 3.13.b: The project would not generate excessive groundborne vibration or groundborne noise levels.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.13.c: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not expose people residing or working in the project area to excessive noise levels.	No impact.	No mitigation is required.	No impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
3.14: POPULATION AND HOUSING			
Impact 3.14.a: The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).	No impact.	No mitigation is required.	No impact.
Impact 3.14.b: The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	No impact.	No mitigation is required.	No impact.
3.15 PUBLIC SERVICES AND RECREATION			
Impact 3.15.a: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: i) Fire protection ii) Police protection iii) Schools iv) Parks v) Other Public Facilities	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.16 RECREATION			
Impact 3.16.a: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

Table 2.A: Executive Summary Matrix

Potential Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact 3.16.b: The project would not result in the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
3.19 UTILITIES			
Impact 3.19.a: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.19.b: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.19.c: The project would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.19.d: The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.
Impact 3.19.e: The project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less than Significant Impact.	No mitigation is required.	Less than Significant Impact.

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3.0 PROJECT DESCRIPTION

This chapter provides a description of the project location and existing conditions, the project's objectives, and the proposed actions. Phasing of project implementation and required approvals are summarized at the end of the chapter.

The proposed project consists of a Land Use Plan Amendment (LUPA) to the 1993 Las Trampas Land Use Development Plan (LUDP) for the southern region of Las Trampas Wilderness Regional Preserve (Southern Las Trampas or project area). The LUPA would incorporate approximately 756 acres of land, including five former private properties, into the LUDP; and provide the framework for creation of new trail connections and access points within the expanded boundaries; and restoration and enhancement of creeks, ponds, and wetlands.

3.1 PROJECT SITE

This section provides an overview of the project location and existing conditions.

3.1.1 Project Setting

3.1.1.1 Regional Context

The East Bay Regional Park District (Park District) is composed of regional parklands located throughout Alameda and Contra Costa counties. The park system includes over 125,316 acres of Park District lands comprising 73 regional parks, recreation areas, shorelines, preserves, wilderness, and land bank areas. These landholdings include 61 parks that are open and accessible to the public and 12 new parks in land bank status 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.

The project area is within California's Coast Ranges Geomorphic Province, a geologically young and seismically active region dominated by northwest to southeast 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.

A combination of interstate highways, local arterial and collector roads, and neighborhood streets serve the project area. The major highways that provide access to the project area are Interstate 680 (I-680) to the east and I-580 to the south. Local exits from I-680 include Bollinger Canyon Road, Crow Canyon Road, and Sycamore Valley Road. The local exit from I-580 is Crow Canyon Road.

The Contra Costa Transportation Authority (CCTA) County Connection bus service serves San Ramon. County Connection Route 36 has bus stops at the corner of Bollinger Canyon Road and Crow Canyon Road. Route 36 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 West Dublin/Pleasanton Bay Area Rapid Transit (BART) station, which is the closest BART station to the site. The West Dublin/Pleasanton station is located in Dublin near the intersection of Dublin Boulevard and Golden Gate Drive, approximately seven miles south of the project area via I-680.

The project area lies within lands that are currently owned by, or would be transferred to, the Park District. Major landowners adjacent to the project area include the Park District and private landowners.

3.1.1.2 General Plan Designation

The portions of the project site within Contra Costa County are designated as Parks and Recreation (PR) and Agricultural Lands (AL).

Portions of the project site within the City of San Ramon's sphere of influence (SOI) are designated as Rural Conservation and Parks. Portions of the project site within the Town of Danville's SOI are designated as General Open Space and Agricultural.

3.1.1.3 Project Location and Access

The project site is in the southern portion of Las Trampas 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 of Contra Costa County.

The project area incorporates approximately 756 acres that straddle Las Trampas Ridge. The project area appears on the Las Trampas Ridge and Diablo 7.5-minute U.S. Geological Survey quadrangle maps. The boundaries of the project area include existing Las Trampas parkland to the north, private residences and San Ramon Valley Boulevard to the east, private residences to the south, and Bollinger Canyon Road and private residences to the southwest. Figure 3-1 shows the project location and the regional vicinity.

The project area consists of existing open Las Trampas parkland along with five parcels or former properties: Peters Ranch, Chen, Elworthy, Podva, and Faria. For convenience of discussion, these property names are used to describe the individual characteristics of each of these parcels.

- **Peters Ranch Property.** The Peters Ranch property encompasses an approximately 58.84-acre area within unincorporated Contra Costa County and borders the Town of Danville to the north and east of the property, and City of San Ramon to the south of the property. Park District staff can access the property from Fountain Springs Drive off San Ramon Valley Boulevard.

- **Chen Property.** The Chen property encompasses an approximately 228-acre area within unincorporated Contra Costa County, bordering the Town of Danville to the northeast of the property, and is within the City of San Ramon's SOI. Park District staff access the property from Bollinger Canyon Road, which makes up the southern border of the property, and from Las Trampas Regional Wilderness to the north through the Calaveras Ridge Trail. A staging area in the location of an existing cattle corral along the frontage of Bollinger Canyon Road would provide public access to this property.

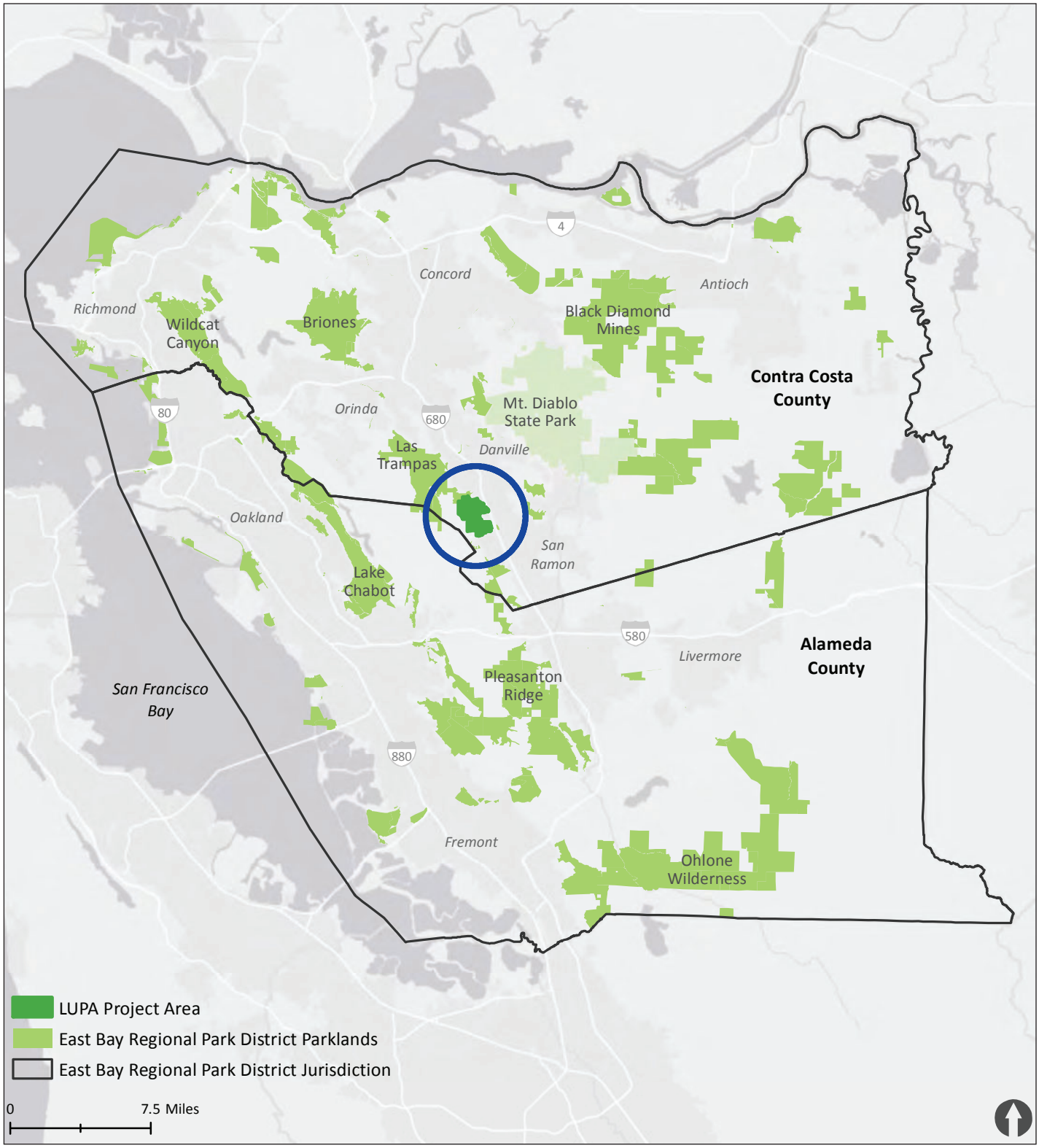

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FIGURE 3-1

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Southern Las Trampas LUPA EIR
Project Location

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- **Elworthy Property.** The Elworthy property encompasses an approximately 232-acre area within unincorporated Contra Costa County and the Town of Danville. Park District staff and park users can access the property from Elworthy Service Road off San Ramon Valley Boulevard. At the terminus of Elworthy Service Road, an existing staging area and trail connector to the Calaveras Ridge Trail provide access to the parkland property through an easement across private property.

- **Podva Property.** The Podva property encompasses an approximately 96-acre area within the Town of Danville. To the west of the property is the Las Trampas. The property includes an access point and trail with public on-street parking from Wingfield Court and Midland Way, off San Ramon Valley Boulevard.

- **Faria Property.** The Faria property encompasses an approximately 141-acre area within unincorporated Contra Costa County. The property borders the City of San Ramon to the southeast. Bollinger Canyon Road splits the Faria property and runs from the northwest to southeast. This property will remain in land bank status until future acquisitions and/or regional trail connections to Park District property in San Ramon can be made.

3.1.2 Existing Conditions

3.1.2.1 Parkland Designations

Park District parks are classified by their geographical location and the designated level of resource protection and recreational use.[1] The 1993 Las Trampas Land Use Development Plan (LUDP)[2] classifies Las Trampas as a Wilderness Regional Preserve because of its size, character, nature and special features. Lands incorporated into Las Trampas Wilderness Regional Preserve would maintain this classification. Consistent with the classification, the LUPA proposes minimal development focused on interpretation and public access, and a commitment to natural and cultural resource protection. Furthermore, the 2013 Park District Master Plan requires 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).

- 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 edge of parks. Within the project area, opportunities for active use areas are limited because of steep topography and sensitive habitat.

1 East Bay Regional Park District. 2013. Park District Master Plan.
2 East Bay Regional Park District. 1993. Las Trampas Land Use Development Plan.

While recreation/staging units provide parking within parkland, 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.

3.1.2.2 Staffing and Programs

Staff from the Park District's Operations Department provide for the management of natural resources and maintenance of park facilities. Stewardship staff also provide for the management of natural resources. Interpretive and Recreation Services Department staff offer educational and interpretive programs to the public. The Trails Program Unit and Roads and Trails Department staff offer programs directed at trail development and maintenance, respectively.

Park District staff serve as the primary presence in the Las Trampas on a day-to-day basis. One Park Supervisor and four full-time Park Ranger II staff provide on-site staffing for Las Trampas and are responsible for patrolling and maintaining the project area and the larger Las Trampas. Park District staff would also be responsible for Faria when this property is incorporated into Las Trampas planning area. As the primary interface with park visitors, Park District 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 consist of the following:

- 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 the implementation of the fuel management treatment areas identified in the Wildland Management Policies and Guidelines adopted in 2001.[3]

Routine staging area and trail maintenance tasks, which would make up the primary functions in the project area, would be 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

[3] East Bay Regional Park District. 2001. Wildland Management Policies and Guidelines.

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. The Trails Program Unit and Roads and Trails Department oversee this work performed by the Park District's Operations park staff, supplemented by the Park District's Maintenance and Skilled Trades (MAST) staff and trails crews.

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 cattle corral on the Chen property is currently used as part of the livestock grazing operations. The grazing units and leases for cattle grazing is shown on Figure 3-2.

The Park District's Interpretive and Recreation Services Department connects visitors to the natural environment with stimulating experiences that instill an appreciation of the region's resources and motivate participants to conserve and protect these resources. 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 from ten Park District Visitor Centers, while Outdoor Recreation staff operate 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.

The Park District's Southeast Sector at Sunol Visitor Center in Sunol serves the project area. The Park District offers a variety of naturalist hikes centered on topics that include 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.

In 2018, approximately 127,400 people visited Las Trampas. On average, Las Trampas receives from all the existing park entrances between 5,000 and 14,000 park visitors per month.[4] Visitors to Las Trampas access the park from several park entrances resulting in visitors being spread out throughout the park.

The Park District's Fire Department conducts wildfire response, prevention, and fuel management for Las Trampas per the policies and guidelines in the 2013 Park District Master Plan, Ordinance 38, Standard Technical Specifications and Supplementary Conditions, the *Wildfire Hazard Reduction and Resource Management Plan*, and the *East Bay Regional Parks Fire Danger Operating Plan and Procedures*, which is in the process of being updated and will apply to the project area.

[4] East Bay Regional Park District. 2017. Park Operations. November.

3.2 PROJECT BACKGROUND

The project area consists of land that the Park District has acquired between 1983 and 2018, as well as land that is scheduled to be transferred to the Park District. Table 3.A shows the acquisition history of the land comprising the project area.

Table 3.A: Acquisition History

Property	Date Acquired	APNs	Acreage	Conservation Easement Acreage
Peters Ranch	1983	208-580-013	58.8	N/A
Chen	2007	208-220-010	227.8	N/A
Elworthy	2015	208-230-046, 208-230-032, and 208-230-033	232	N/A
Podva	2018	208-016-014	96	30
Faria	2022 (anticipated)	208-240-054	141	136

Source: East Bay Regional Park District (2018).

The Park District acquired the approximately 59-acre Peters Ranch property in 1983, as a condition of approval for a residential development in the southern portion of the Town of Danville. Peters Ranch is referenced in the 1993 LUDP and 1991 Resource Analysis[5] as the Southern Parcel; however, as it was non-contiguous with the rest of Las Trampas at the time of preparation of the 1993 LUDP, it has remained in land bank status. Land bank status is land that remains closed to the public, potentially for several years or more, until it is made suitable (safe and accessible) for public access, consistent with Policy ACQ3 of the 2013 Master Plan.

The Park District purchased the approximately 228-acre Chen property in 2007 to preserve its rich natural resources and to provide potential public access and trail connections to the Calaveras Ridge Trail, which runs north and south through Las Trampas. The Chen property is currently in land bank.

In 2015, the approximately 232-acre Elworthy property was dedicated to the Park District as a condition of approval for a residential development, along with an approximately 1-mile segment of the Calaveras Ridge Trail on the parcel and a 0.5-mile trail connector through a 182-acre Elworthy private property scenic easement. The developer constructed a 12-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 pedestrian and emergency vehicle and maintenance access (EVMA) easement through the residential development from Elworthy Service Road provides public access to the 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.

[5] East Bay Regional Park District. 1991. Las Trampas Resource Analysis.

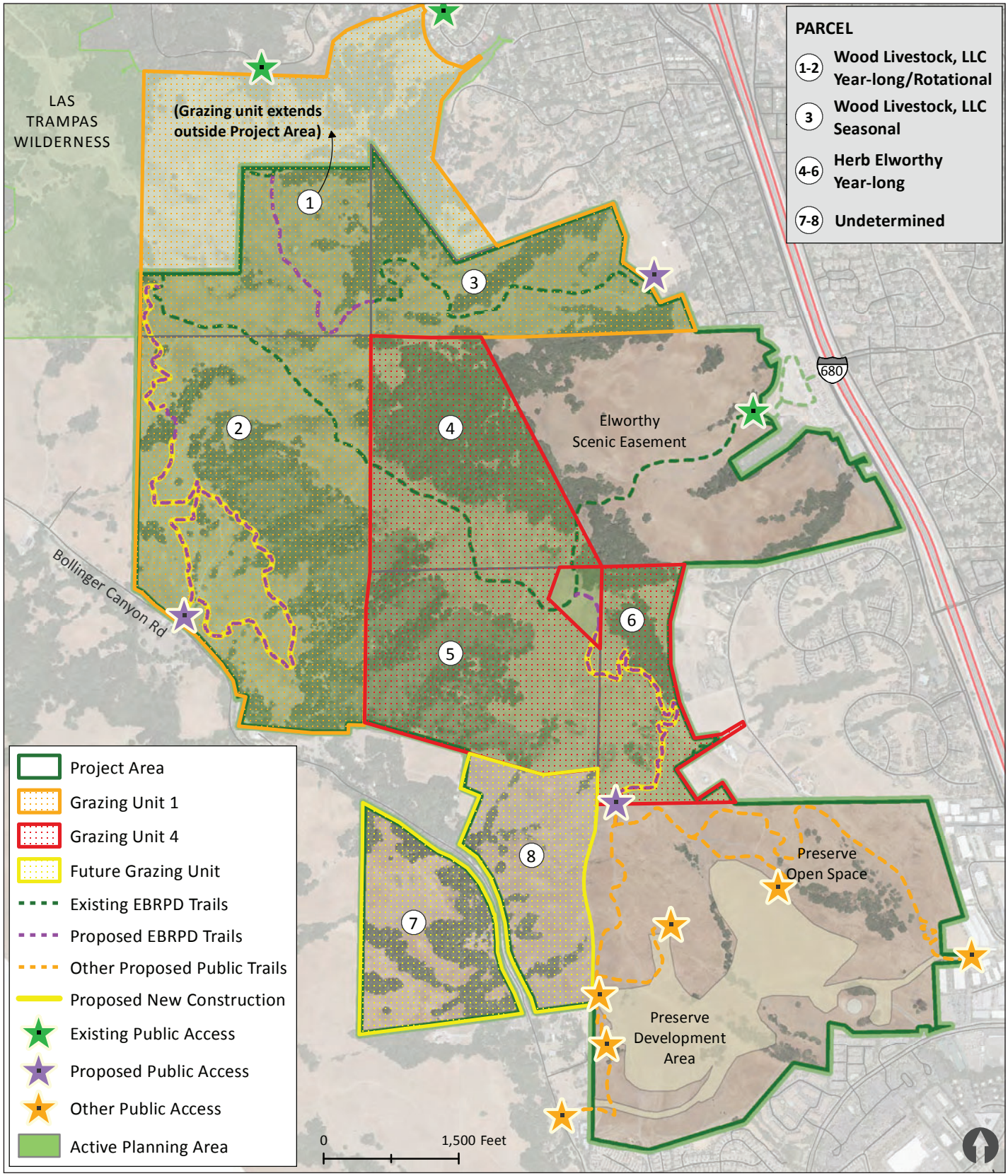

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FIGURE 3-2

Southern Las Trampas LUPA EIR
Grazing Units/Leases

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The Park District acquired the approximately 96-acre Podva property in 2018, as a City of Danville condition of approval for a residential development. Thirty of the 96 acres have been dedicated as a conservation easement and will continue to be managed according to the requirements of the conservation easement. The property includes an approximately 1-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.

The approximately 141-acre Faria property is scheduled for transfer to the Park District in 2022 as part of the 2008 settlement agreement between the developer, the Park District, and the Sierra Club as well as the Faria Preserve residential development project's conditions of approval. Much of the property (136 acres), would be managed under the provisions of a conservation easement. The property would be put in land bank status (closed to the public). 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. Much of the staging area would be in the same location as an existing cattle corral, which would be demolished. Design and construction of the staging area would follow the Park District's standard specifications and include park signage, gates, and standard park hours that vary seasonally. Other aesthetic features would be considered at the proposed staging area to maintain the visual character of the area, including planting trees and shrubs that match the plants of the surrounding area, and fencing that resembles the existing corral at the site. A new corral would be constructed within the grading footprint of the staging area. Existing easements are shown on Figure 3-3.

3.2.1 Project Components Previously Evaluated

The properties that have been acquired by the Park District or are scheduled to be transferred as conditions of approval for residential developments have been evaluated under separate environmental review processes. As such, this EIR incorporates and references those environmental documents. Long-term management plans associated with the conservation easements within the project area are also incorporated. The proposed project makes no changes to the project components that were previously evaluated, and there is no new information that would require additional review. This section provides an overview of the previously-completed environmental documents that address components of the proposed project.

3.2.1.1 Las Trampas Regional Wilderness Land Use Development Plan and EIR (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.[6] In 1993, the Park District completed a Land Use Development Plan (LUDP) and EIR[7] to provide policies and implementation measures for the resources and land planning recommendations identified within the Resource Analysis, covering approximately 3,600 acres. The Park District certified the EIR and adopted the LUDP on November 2, 1993, Resolution No: 1993-11-291.

6 East Bay Regional Park District. 1991. Las Trampas Resource Analysis.

7 East Bay Regional Park District. 1993, op. cit.

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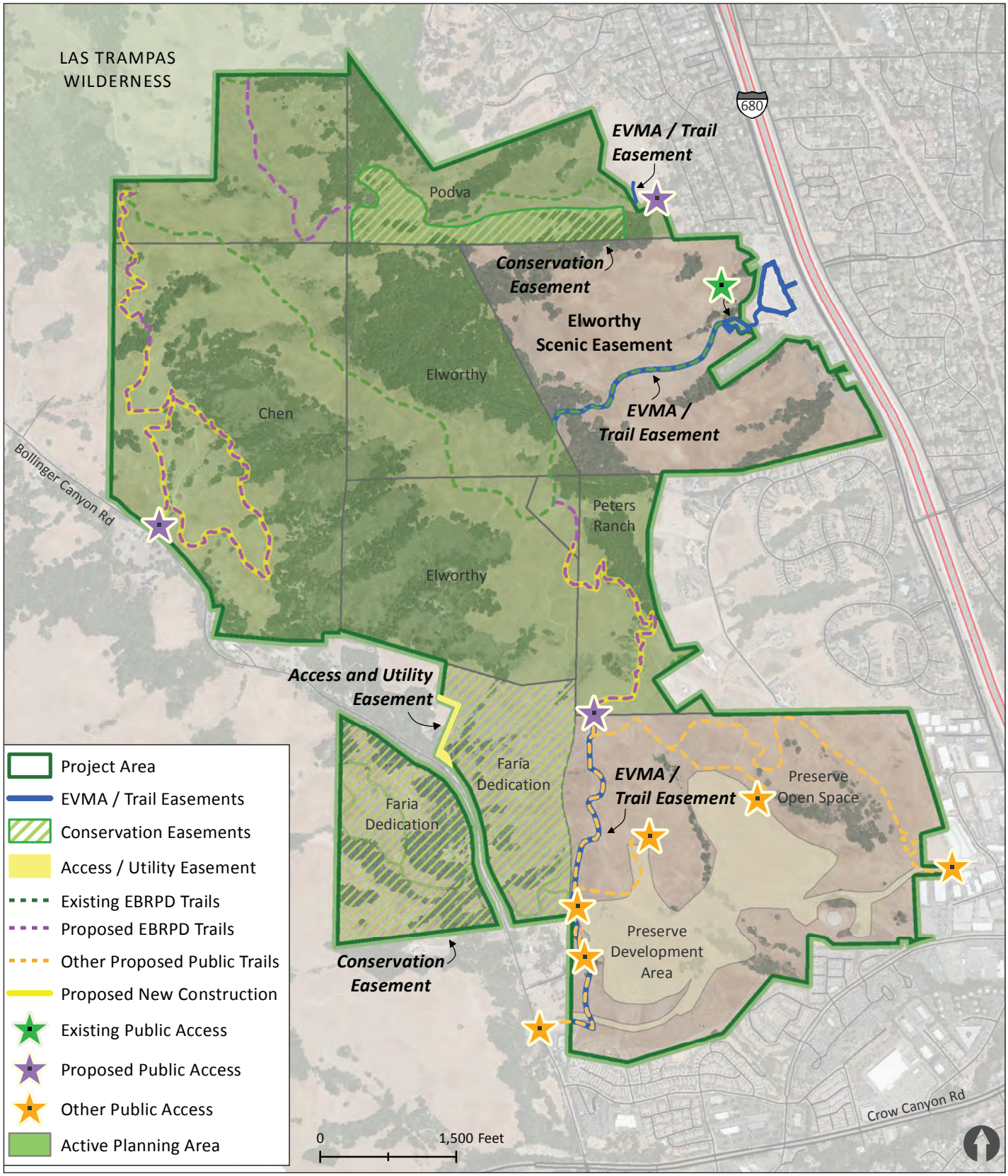

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FIGURE 3-3

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Southern Las Trampas LUPA EIR
Easements

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The 1993 LUDP/EIR identifies Peters Ranch as the non-contiguous Southern Parcel and indicates that a regional trail alignment to connect the parcel to Las Trampas would be evaluated as part of a future project.

3.2.1.2 City of San Ramon Northwest Specific Plan/Faria Preserve Community EIR (2006)

The City of San Ramon developed the Northwest Specific Plan (NWSP)[8] to establish land use goals and policies for approximately 354 acres located immediately northwest of the San Ramon city limits in unincorporated Contra Costa County. The NWSP area includes the 290-acre Faria Preserve Community development project. The City of San Ramon certified the EIR and adopted the NWSP on November 28, 2006 (NWSP/Faria EIR). An addendum to the NWSP EIR was prepared in June 2008 to evaluate minor modifications because of the settlement agreement between the Faria Preserve residential developer, the Park District, and the Sierra Club. A text amendment was issued in July 2017, addressing updates to the Faria Preserve Community project. The approximately 141-acre Faria property is not covered under this NWSP EIR; however, the open space within The Faria Preserve residential development, and the City-owned public trail connectors to the Calaveras Ridge Trail and portions of the Calaveras Ridge Trail, are covered in this NWSP EIR.

3.2.1.3 Elworthy Ranch EIR (2008)

The Town of Danville certified the EIR and approved the Elworthy Ranch project on July 1, 2008, through Danville's Resolution No. 81-2008 (2008 Elworthy Ranch EIR).[9] The Elworthy Ranch EIR includes the dedication of the approximately 232-acre Elworthy property to the Park District, a trail through a private property overlain with a scenic easement, and a trailhead parking (staging) area. While the Elworthy property is covered under the Elworthy Ranch EIR, it was not included in the development project's wildlife surveys.

3.2.1.4 Faria Preserve Community Project Initial Study/Mitigated Negative Declaration 2013

The Faria Preserve Community Project Initial Study/Mitigated Negative Declaration (2013 Faria Preserve IS/MND)[10] includes the dedication of the approximately 141-acre Faria property to the Park District, as well as the conditions of the settlement agreement between the Faria Preserve residential developer, the Park District, and the Sierra Club, for the residential developer to provide the Park District with a staging area. At the time that the IS/MND was prepared, the location for the staging area to be constructed by the developer for the Park District was still being assessed. The acreage for the Faria property was also stated as 144 acres; however, Park District staff surveyed the property following the IS/MND and found it to be approximately 141 acres. The Faria property is included as part of the project area for this project; however, no proposed trails are included in the IS/MND.

The City of San Ramon issued revised Conditions of Approval in 2013 to incorporate the Settlement Agreement conditions, including conveyance of the 141-acre Faria property to the Park District with a funding mechanism for on-going maintenance, trail easements for the Calaveras Ridge Trail, and

8 San Ramon, City of. 2006. Northwest Specific Plan.
9 Town of Danville. 2008. Elworthy Ranch EIR.
10 San Ramon, City of. 2013. Faria Preserve Community Project Initial Study/Mitigated Negative Declaration.

dedication of five parking stalls within the residential development to facilitate access to the Calaveras Ridge Trail.

3.2.1.5 Podva Property Residential Development EIR (2013)

The Town of Danville certified the Podva Property Residential Development EIR on April 1, 2014, through Resolution No. 28-2014 (Podva EIR).[11] The EIR includes the dedication of the approximately 96-acre Podva property to the Park District, public on-street parking, and a trail to Las Trampas provided by the developer, to mitigate impacts resulting from the residential development. Additional improvements, such as gates and fencing, are also included as conditions of approval of the development.

3.2.1.6 Redhawk Tract (Podva Property) Conservation Lands Long-Term Management Plan (2016)

The Redhawk Tract (Podva Property) Conservation Long-Term Resource Management Plan (Podva LTMP)[12] provides management and monitoring objectives and priorities for habitats and species within the Podva property. The resource management plan is a binding and enforceable instrument, implemented under the conservation easement covering the Podva property. While the Park District would be the landowner and land manager, Wildlife Heritage Foundation (WHF) would be the conservation easement holder, responsible for performing the conservation easement annual compliance monitoring inspections and reports.

3.2.1.7 Faria Long Term Resource Management Plan (2015)

The long-term resource management plan for the conservation easement on the Faria property is designed to conserve and protect lands in perpetuity for the federally threatened California red-legged frog (CRLF, *Rana draytonii*) and Alameda whipsnake (AWS, *Masticophis lateralis euryxanthus*). Requirements are set forth for biological assessments, vegetation management, including grazing and fire hazard reduction, and site security. Passive recreation is permitted.

3.3 PROJECT OBJECTIVES AND PURPOSE

3.3.1 Project Objectives

The proposed project would serve as an amendment to the 1993 Las Trampas LUDP. The objectives of the proposed 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 near Bollinger Canyon Road on property owned by the Park District that would accommodate at least 25 vehicles, benches, restroom,

[11] Town of Danville. 2014. Podva Property Residential Development EIR. April.
[12] East Bay Regional Park District. 2016. Redhawk Tract Conservation Long-Term Resource Management Plan.

trail connections, a cattle corral for use by the grazing tenant, 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 resource and provide open space, trails, and safe and healthful recreation and environmental education.

3.3.2 Purpose

The primary purpose of the proposed LUPA is to provide a framework for natural resource management for the project area and associated public staging/access and trails in the southern portion of Las Trampas.

3.3.3 Key Plan Recommendations

The following key plan recommendations have been identified to support the proposed project goals:

- 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.

- Develop a staging area off Bollinger Canyon Road on the Chen property, at the site of an existing cattle corral, 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. The plan proposes to name the staging area "Old Time Corral Staging Area". Construction would include a new corral within the grading footprint of the staging area.

- Provide public access into Las Trampas from a walk-in entrance on the Podva property off Wingfield Court and Midland Way. The plan proposes to name this walk-in entrance "Podva Walk-in Entrance".

- Provide public access into Las Trampas from a walk-in entrance on the Peters Ranch property from the City of San Ramon trail system on the Geological Hazard Abatement District (GHAD) open space lands around the Faria Preserve subdivision. The plan proposes to name this walk-in entrance "Saudade Walk-in Entrance".

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

- Construct a new 1.1-mile access road on the Chen property for recreation 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 service road. The plan proposes to name this trail "Sabertooth Trail".

- Construct a new 0.8-mile loop trail on the Chen property from the proposed staging area. The plan proposes to name this trail "Warbler Loop 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 service road.

- Close and abandon 0.4 miles of an existing service road within the Peters Ranch property.

- Designate an existing 0.9-mile access road on the Podva property as a natural surface, multi-use trail for recreation and maintenance and emergency vehicle access into Las Trampas from the Podva property. The plan proposes to name this trail "Heritage Pear Trail".

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

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

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

3.4 PROPOSED PROJECT

Proposed project components consist of appending 756 acres of land into Las Trampas; new trail connections, a staging area and cattle corral, and two walk-in entrances; and creeks, ponds, and wetlands restoration and enhancement. These activities would be implemented through the LUPA as an update to the 1993 LUDP. Table 3.B includes a summary of the proposed project components. Figure 3-4 shows the proposed site plan, the proposed trail alignments and location of the proposed staging area and cattle corral. Figure 3-5 shows the site plan for a proposed new staging area at the trailheads of the proposed new Sabertooth Trail and Warbler Loop Trail, referred to as the Old Time Corral Staging Area.

Table 3.B: Proposed Project Components

Existing Conditions Within Project Area	Potential New Conditions Within Project Area
Total Acreage	
232 acres open for public use ● 5,964 total acres for all of Las Trampas	756 acres incorporated 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 Resource Protection Area 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 would be multi-use access road with EVMA ● 1.7 miles of this would be multi-use trail Approximately 1 mile of existing service roads that are not open to the public would be decommissioned and abandoned
Access Points	
12-car Elworthy Staging Area	3 additional access points: ● 25-car staging area on the Chen property (Old Time Corral) ● Walk-in entrance with on-street parking off of Wingfield Court ● Walk-in entrance on Peters Ranch from Faria Preserve residential development

Source: East Bay Regional Park District (2020).
EVMA = emergency vehicle and maintenance access

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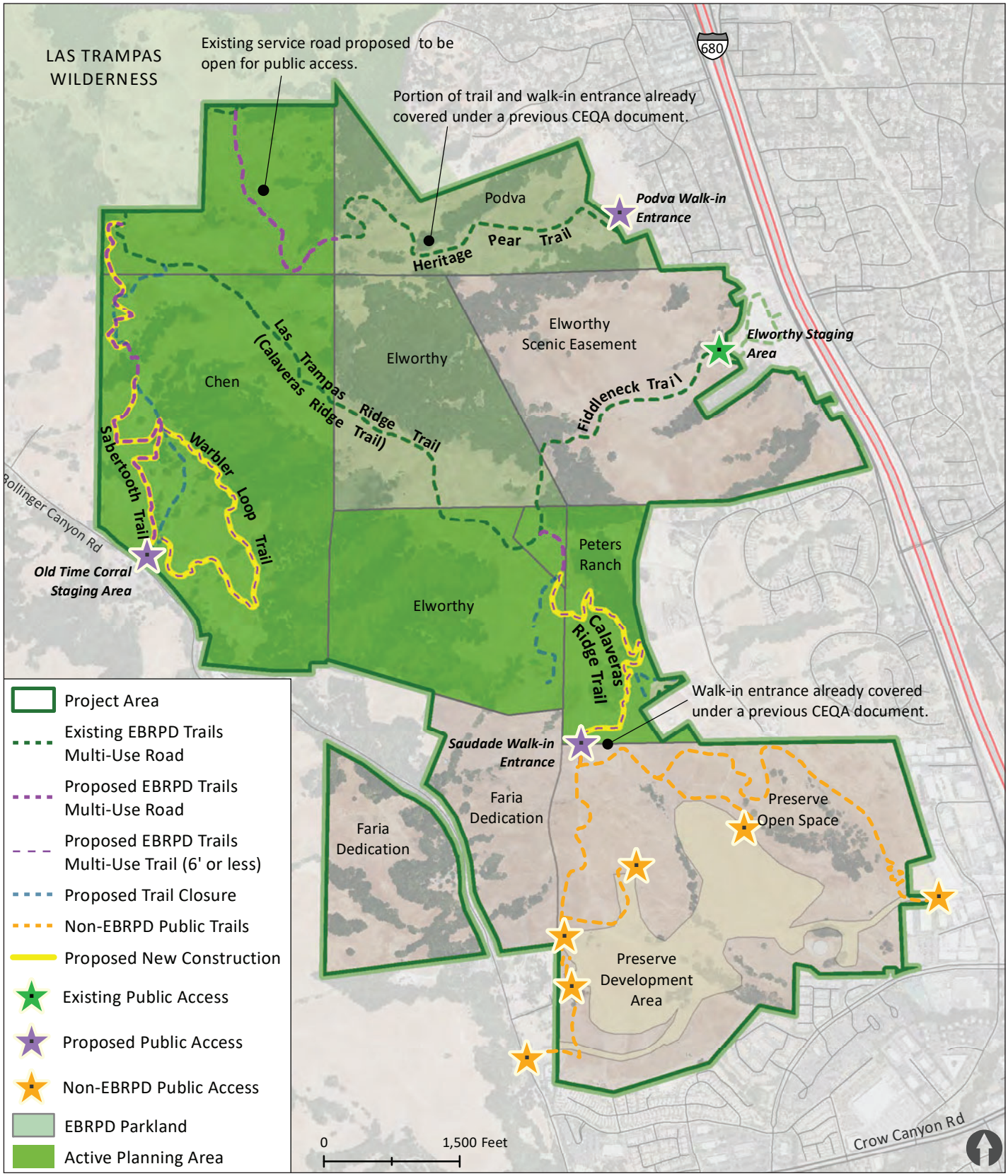

FIGURE 3-4

Southern Las Trampas LUPA EIR
Project Overview

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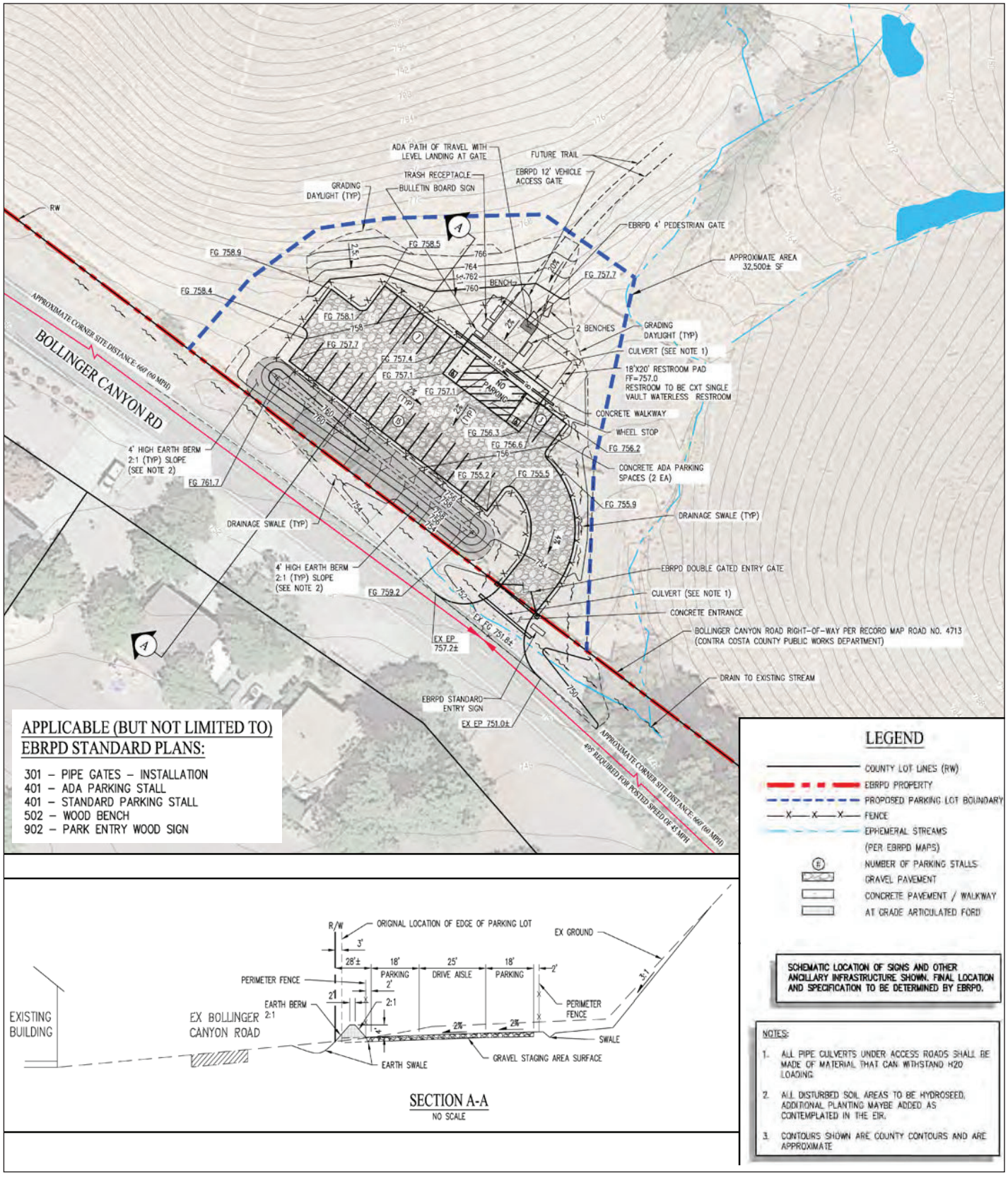

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FIGURE 3-5

NOT TO SCALE

Southern Las Trampas LUPA EIR

Old TIme Corral Staging Area Site Plan

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3.4.1 Incorporated Open Space Lands into Las Trampas

The project area consists of: 1) land banked property that would be opened to the public; 2) property that is currently open to the public; and 3) land that would be conveyed to the Park District, to be placed in land bank until it is safe and suitable for public use. The Peters Ranch, Chen, and Podva properties are currently in land bank and would be opened to the public with implementation of the LUPA. The Elworthy property, which is already opened to the public, would formally be incorporated into Las Trampas. This project component is included in the LUPA, but does not need to be covered in this EIR because CEQA environmental review was previously completed by the 2008 Elworthy Ranch EIR.

The conveyance of the Faria property is covered under CEQA through the 2013 Faria Preserve Community Project Initial Study/Mitigated Negative Declaration. Under the provisions of the Faria Long-term Resource Management Plan, the property will be preserved under a conservation easement, in perpetuity, as part of Las Trampas. The conservation easement does allow passive recreational uses, but the approximately 141-acre Faria property would be placed in land bank for now.

3.4.2 Public Access and Trail Improvements

The project consists of a total of 4.2 miles of new trails that would be open to the public and 1.9 miles of trail that is already open to the public. Approximately 2.5 miles of this trail system would be multi-use for recreation and provide emergency vehicle and maintenance access (EVMA). Approximately 1.7 miles would be multi-use trails for recreation. For the purposes of a thorough environmental analysis under this EIR, the proposed trails analyzed for multi-use is analyzed for 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, including the Elworthy Ranch EIR (Fiddleneck Trail), Podva EIR (Heritage Pear Trail) and the Faria Preserve IS/MND. Table 3.C includes a summary of the trails that are included as part of the project. Proposed access points and trails are shown on Figure 3-6.

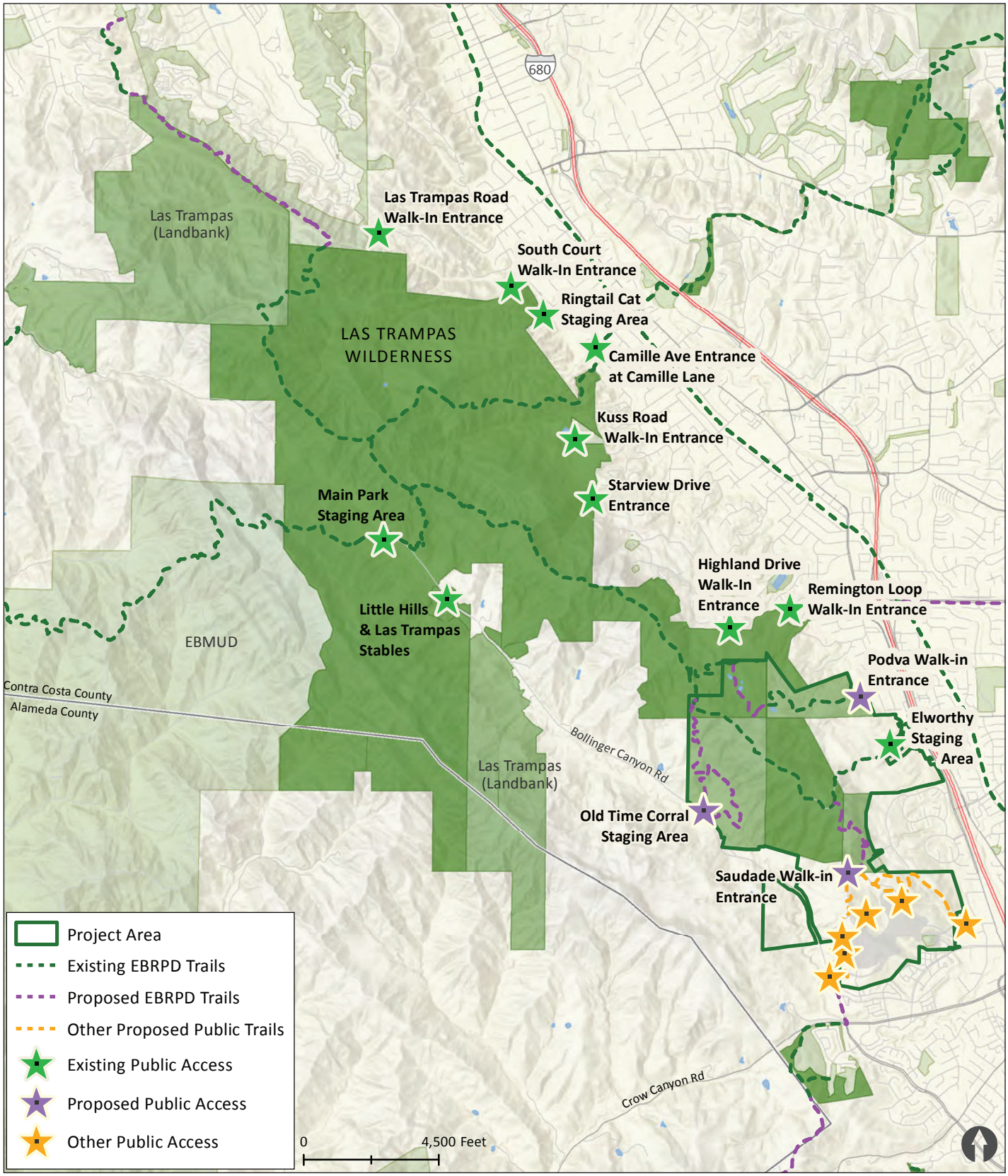

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FIGURE 3-6

N

0 2,250 4,500

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Southern Las Trampas LUPA EIR

Access Points and Trails

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Table 3.C: Proposed Project Trails

Trail	Status	Type	Use	Width (ft)	Length (mi)
Calaveras Ridge Trail through Chen and Elworthy properties	Open	EVMA/Multi-use Road	● Recreation ● EVMA	12	1.3
Fiddleneck Trail	Open	EVMA/Multi-use Road	● Recreation ● EVMA	12	0.6
Sabertooth Trail	Proposed	EVMA/Multi-use Road	● Recreation ● EVMA	12	1.1
Extension of the Calaveras Ridge Trail	Proposed	Multi-use Trail	● Recreation	4-6	0.9
Heritage Pear Trail (no physical improvements; to be opened to the public)	Existing/ Proposed Access	EVMA/Multi-use Road	● Recreation ● EVMA	12	1.4
Warbler Loop Trail	Proposed	Multi-use Trail	● Recreation	4-6	0.8

Source: East Bay Regional Park District (2022).

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.

As required by the Park District's Trail Construction and Trail Modification Best Management Practices (BMPs), the following standard BMPs would 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". 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.
- Close and abandon 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 signs reading “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.

3.4.2.1 Public Access and Staging

This section describes the public access points and staging area that would be constructed as part of implementation of the proposed project.

Old Time Corral Staging Area. Per the terms of the settlement agreement between the Park District, the Sierra Club, and the developer of the Faria Preserve residential project, and amendments made to the settlement agreement, the developers of the Faria Preserve residential project would build a staging area along Bollinger Canyon Road on the Park District's Chen property. The approximately 0.75-acre staging area would have a capacity of approximately 25 vehicles and be designed and constructed to Park District standards, which include standard park curfew hours (approximately 8:00 a.m. to dusk) and installation of gates and park signage. Park District standard practices for construction of all staging areas 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 Old Time Corral Staging Area would be opened in conjunction with the completed construction of the proposed Sabertooth Trail.

The 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, gates and fencing, park benches, and an informational bulletin board panel. As part of improvements, Park District staff would remove the remnants of the collapsed barn located further in the Chen property. 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 a staging area, and amount of required grading.

A corral would be constructed within the footprint of the staging area. Grazing is an important land management tool used by the Park District to control fuel loads, and the corral is an important piece of infrastructure to accomplish this goal. The corral would primarily be used only twice a year in December and July. In December, the corral would be used to vaccinate and doctor calves and cows. In June, it would be used to separate mother/calf pairings, perform pregnancy checks, and remove cattle from the property. The corral would also be used sporadically to isolate and contain injured cattle on the property. The corral would be approximately 1,200 square feet. Corral construction would be part of the staging area construction. The corral would be constructed with both 16 foot and 12 foot Powder River 1600 series panels with 12 foot bow gates all pinned and attached to pounded pipe. The corral will be 5 ½ feet tall and the surface would be dirt.

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).

Construction activities would typically be restricted to August 1 to October 31. Construction activities would include minor grading for the parking area, with soil materials largely balanced on site. Installation of the vault toilet would involve soil excavation to accommodate the toilet, and preparation of the site for maintenance and ADA-compliant access. On-site 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 Faria Preserve developer would be responsible for these construction activities.

Podva Walk-in Entrance. A walk-in entrance from Wingfield Court in Danville with dedicated on-street parking for public park users is recommended to be opened to the public. The walk-in entrance would provide public access into Las Trampas through the Heritage Pear Trail, which allows for recreation. This park entrance has been analyzed under CEQA in the 2013 Podva EIR and was constructed by the Podva Redhawk Residential developer. The Park District owns and maintains the walk-in entrance.

Saudade Walk-in Entrance. A walk-in entrance would provide public access from the Faria Preserve Homeowner Association (HOA) area through the 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 Faria Preserve project residential developer has completed the construction of the Calaveras Ridge Trail extension within the HOA area. The entrance would allow for visitors to continue on the Calaveras Ridge Trail that extends from Las Trampas into the Faria Preserve HOA area. The public access is covered within the 2013 Faria Preserve IS/MND.

3.4.2.2 Trail Connections

Sabertooth Trail. A proposed 1.1-mile multi-use road with EVMA would connect the Old Time Corral Staging Area on the Chen property to the Calaveras Ridge Trail along Las Trampas Ridge. The multi-use road would be open to recreation. The trail would have an approximate elevation gain of over 570 feet. While the trail would provide emergency vehicle and maintenance access, it would 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 would use the 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.

Extension of the Calaveras Ridge Trail. The project includes a proposed 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 would be approximately four to six feet

wide, with an approximate elevation gain of over 300 feet. The trail would be multi-use for 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 Faria Preserve's open space property. The Calaveras Ridge Trail and connector trail within the Faria Preserve open space would be owned and maintained by the GHAD.

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

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

Heritage Pear Trail. The LUPA includes incorporation of the existing 1.4-mile Heritage Pear Trail, which is 12 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. Approximately 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 located on the Podva property. 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 would be restricted to a leash that is 6 feet or less. The existing 0.9-mile portion of the trail that goes through the Podva property is covered under CEQA by the 2013 Podva EIR. No new construction is proposed for the existing 0.5-mile portion of the trail, which is not on the Podva property, but on already open parklands.

> ***Use and Management of Special Resource Protection Area.*** The Heritage Pear Trail traverses through the proposed Special Resource Protection Area (SRPA). The federally threatened CRLF has been documented in two ponds in this area and could occur in other nearby ponds. Although the proposed trail would be open to recreation, the ponds in the SRPA are not anticipated to be affected by these uses.
>
> An individual California tiger salamander (*Ambystoma californiense*), a State and federally threatened species, was documented in a pond in this area in 2018 and 2021; this occurrence is noteworthy because the species was not previously known to occur in Las Trampas, and the closest known extant population of the species was greater than 6 miles from the site.
>
> 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.[13] One important factor is that livestock ponds have become crucial breeding habitats for both animals (Fellers 2005; Holland et al. 1990).[14,15] 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.[16] Therefore, cattle grazing would 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 would be posted year-round identifying the area as a SRPA 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 would be regularly monitored, and adaptive management actions would be implemented as required. Qualified staff would 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 would 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 would prepare an annual summary report that includes the results of observations of use and resource conditions and response or remedial actions recommended to resolve observed issues. Potential remedial actions may include, but are not limited to:

- Removal of unplanned user-created trails
- Temporary closures of areas
- Revegetation or supplemental plantings of areas

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13 Ford, L.D., P.A. Van Hoorn, D.R. Rao, N.J. Scott, P.C. Trenham, and J.W. Bartolome. 2013. *Managing Rangelands to Benefit California Red-legged Frogs and California Tiger Salamanders*. Livermore, California: Alameda County Resource Conservation District.

14 Fellers, G.M. 2005. *Rana draytonii* Baird and Girard 1852, California red-legged frog. In: M. Lannoo (Ed.), Amphibian Declines: The Conservation Status of United States Species; Volume 2: Species Accounts. University of California Press, Berkeley, California. 1094 p.

15 Holland, D.C., M.P. Hayes, and E. McMillan. 1990. Late summer movement and mass mortality in the California tiger salamander (Ambystoma californiense). Southwestern Naturalist 35:217-220.

16 Ford, L.D., P.A. Van Hoorn, D.R. Rao, N.J. Scott, P.C. Trenham, and J.W. Bartolome. 2013, op. cit.

- 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.

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 for recreation. The trail would be constructed as a natural surface trail with armored ford crossings, drain lenses, and bridge crossings where applicable, to allow drainage crossings with erosion and water quality protection. Final design of each crossing has not been finalized, but preliminary estimates of disturbance area for crossing four natural tributaries and wetland areas is assumed in this EIR.

3.4.2.3 Trail Signage

Trail system signage would include: wayfinding, interpretive and regulatory signs to encourage responsible trail use, and identification of 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 would be relocated, the former trail area under restoration 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.

3.5 PROJECT PHASING

The project would be implemented in phases. Key considerations to the implementation schedule and project phasing include the timing of adjacent projects including the Faria Preserve and the construction of associated open space and trail connections; the provisions of the 2008 settlement agreement between the Park District, the Faria Preserve residential developer, and the Sierra Club; securing necessary permits; and the Park District’s financial resources. Table 3.D summarizes the implementation plan and considerations for each of the LUPA recommendations.

Table 3.D: 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 2021/2022. Once under Park District management and ownership, the Park District will make safety and security updates and manage the land according to the Faria long-term management plan (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 would be restricted to a 6-foot or less leash to comply with the Podva LTMP.
Heritage Pear Trail	Open the existing Heritage Pear Trail alignment to recreation. Dogs would 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.
Old Time Corral Staging Area	The Park District will apply for permits for the Old Time Corral Staging Area and corral. The Faria Preserve residential developer will construct the staging area per Park District standards, and the Park District will fund the construction of the corral.
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 Faria 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 (5+ years)	
Warbler Loop Trail	Permit and construct the Warbler Loop Trail as park user demand dictates.

Source: Compiled by LSA (2020).

3.6 PROJECT APPROVALS

In compliance with CEQA, this EIR describes the environmental consequences of implementation of the proposed LUPA. The EIR is intended to fully inform Park District officials, in addition to other responsible agencies, organizations, and the general public, of the potential effects of the proposed project. A list of the permits and approvals that may be required with implementation of the proposed LUPA are provided in Table 3.E.

Table 3.E: Anticipated Permits and Approvals for LUPA Implementation

Lead Agency	Permit/Approval
East Bay Regional Park District (Park District)	● Certification of the EIR ● LUPA approval; Schematic Plans; and others as necessary
Other Agencies	
U.S. Army Corps of Engineers	● Section 404 permit

Table 3.E: Anticipated Permits and Approvals for LUPA Implementation

Lead Agency	Permit/Approval
California Department of Fish and Wildlife (CDFW)	● Section 1600 Streambed Alteration Agreement ● Incidental Take Permits
U.S. Fish and Wildlife Service	● Biological Opinion
San Francisco Bay Regional Water Quality Control Board (RWQCB)	● National Pollutant Discharge Elimination System (NPDES) permit for storm water discharge ● Approval of new outfall ● Possible Section 401 water quality certification
East Bay Municipal Utility District	● Utility/service connections
Contra Costa County	● Utility/service connections and ROW
City of San Ramon	● Utility/service connections
Town of Danville	● Utility/service connections

Source: Compiled by LSA (2022).

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4.0 ENVIRONMENTAL EVALUATION

This chapter discusses the environmental and regulatory setting, impacts, and mitigation measures for each of the following environmental resource topic areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources and Tribal Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Noise
- Transportation
- Wildfire

These sections were included in the EIR because when the Initial Study was completed, additional analysis was needed to determine the level of significance for each of these resource topic areas, or it was determined that the proposed project would result in less-than-significant impact with standard mitigation measures for the environmental resource topics. The environmental resource topic areas listed below were analyzed in the Initial Study, and it was determined that the proposed project would result in no impacts. For additional information regarding the Initial Study, please refer to Appendix A, Notice of Preparation and Initial Study. As a result of the analysis included in the Initial Study, the following environmental resource topic area are not included in this chapter of the EIR.

- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emission
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems

4.1 FORMAT OF THE ENVIRONMENTAL EVALUATION

Each section in Chapter 4.0 follows the same format and consists of the following subsections:

- **Setting:** This subsection contains an overview of the regulatory setting, which includes federal, State, and local laws and regulations applicable to each environmental review topic. This subsection also includes an overview of the existing conditions and the current physical conditions with regard to the respective environmental resource topic area.

- **Research Methodologies:** This subsection describes the methodologies and evaluations of the existing setting that were used for each respective environmental resource topic area.

- **Significance Thresholds:** This subsection describes how an impact is determined to be significant in this EIR. Where noted, these standards are based on the current CEQA Guidelines and other regulatory criteria.

- **Impact Analysis:** This subsection numbers and lists identified impacts and recommended measures that would mitigate each impact, where such measures are available.

4.2 TERMINOLOGY USED IN THE ENVIRONMENTAL IMPACT REPORT

This EIR uses the following terminology to describe the environmental effects associated with implementing the proposed LUPA recommendations:

- **Less-than-Significant Impact:** A impact is less than significant when it does not exceed the threshold of significance and, therefore, would not cause a substantial adverse change to the physical environment. (No mitigation is required).

- **Potentially Significant Impact:** A potentially significant impact is an environmental effect that may cause a substantial adverse change in the environment; however, additional information is needed regarding the extent of the impact to make the determination of significance or there is uncertainty about the occurrence of the impact. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.

- **Significant Impact:** A impact is significant if it results in a substantial adverse change in the physical environment. Significant impacts are identified by the evaluation of project effects in the context of specified significance criteria. Mitigation measures and/or project alternatives are identified to reduce these effects to the environment when feasible.

- **Significant and Unavoidable Impact:** A impact is significant and unavoidable if it would result in a substantial adverse change in the physical environment that cannot be feasibly avoided or mitigated to a less-than-significant level. If a lead agency decides to approve a project with significant unavoidable impacts, it must adopt a statement of overriding considerations to explain its actions (CEQA Guidelines, Section 10593[b]).

- **Cumulative Impacts:** According to CEQA, "cumulative impacts refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). CEQA requires that cumulative impacts be discussed when the "project's incremental effect is cumulatively considerable… [or] … provide a basis for concluding that the incremental effect is not a considerable contribution to a cumulatively significant effect (CEQA Guidelines, Section 15130 [a])."

- **Mitigation Measures:** The CEQA Guidelines (Section 15370) define mitigation as:

    - Avoiding the impact altogether by not taking a certain action or parts of an action;

    - Minimizing impacts by limiting the degree of magnitude of the action and its implementation;

- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
- Compensating for the impact by replacing or providing substitute resources or environments.

4.3 CUMULATIVE IMPACT ANALYSIS

The CEQA Guidelines require consideration of the potential cumulative impacts that could result from a proposed project in conjunction with other projects. A cumulative impact consists of an impact created as a result of the combination of the proposed project evaluated in this EIR together with other current and reasonably foreseeable future projects causing related impacts. Cumulative impacts are considered for each environmental topic discussed in this EIR. The following projects in the vicinity of the project site are considered in the EIR's cumulative impact analysis.

Present and reasonably foreseeable projects include the Faria Preserve residential project and the Chang Property Development (Chang project).

- **The Faria Preserve:** The Faria Preserve residential project is within the San Ramon city limits, west of I-680 and south of the Danville town limit, and would include 740 residential units, a 1.5-acre house of worship site, a 2.6-acre educational facility site, a 12.9-acre community park, and a 0.7-acre rose garden.
- **Chang Property Development:** The Chang project site is at the northwest corner of the intersection of Bollinger Canyon Road and Crow Canyon Road, within the San Ramon city limit. The project would include 43 single-family, large-lot homes and 18 accessory dwelling units.

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4.1 AESTHETICS

This section describes existing site characteristics that could be affected by implementation of the proposed project. Laws, regulations, plans, and policies related to aesthetic resources that may be relevant to the proposed project are also described. Impacts associated with the land alterations resulting from the proposed construction activities are also discussed in Section 4.3, Biological Resources, along with applicable regulations, standard Best Management Practices, and mitigations that would reduce the potential impacts of project activities to below the level of significance.

4.1.1 Setting

4.1.1.1 Regulatory Setting

The following regulatory framework discussion sets the context for the range of issues related to aesthetics that the District considered in the evaluation of the potential for the proposed project to have a significant effect on aesthetics resources.

Federal Regulations. There are no federal laws or regulations regarding aesthetic and visual resources that are applicable to the proposed project.

State Regulations. California's Scenic Highway Program is the primary State mechanism for defining aesthetic resources in the project area. The California Department of Transportation's (Caltrans) Landscape Architecture Program administers the Scenic Highway Program, contained in the State Streets and Highways Code, Sections 260–263. State highways are classified as either Eligible for Scenic Designation, Officially Designated, or Connecting Federal Highway.

Local Resource Protection Policies. The Project area shares its boundary with other District parklands, EBMUD properties, a Geological Hazard Abatement District (GHAD) associated with the Faria Preserve residential development in the City of San Ramon, and several private properties. Most of the Project area is in unincorporated Contra Costa County, with smaller areas lying within the communities of San Ramon and Danville.

City and County General Plan Policies. City and county general plan policies provide guidance on District parklands from the planning phases through project implementation. Relevant city and county general plan policies pertaining to visual resources in the Project area are described in Table 4.1.A, City and County Visual Resources Goals and Policies.

East Bay Regional Park District. The Park District has three policy documents that would apply to the proposed project as it relates to visual resources: the 2013 District Master Plan, Ordinance 38, and the Standard Technical Specifications and Supplementary Conditions. Each are summarized below.

Table 4.1.A: City and County Visual Resources Goals and Policies

Goal/Policy Item Number	Goal/Policy
Contra Costa County General Plan – Open Space Element	
Goal 9-A	To preserve and protect the ecological, scenic, cultural/historic, and recreational resource lands of the county.
Goal 9-B	To conserve the open space and natural resources of the county through control of the direction, extent, and timing of urban growth.
Goal 9-C	To achieve a balance of open space and urban areas to meet the social, environmental, and economic needs of the county now and for the future.
Goal 9-E	To protect major scenic ridges, to the extent practical, from structures, roadways, and other activities which would harm their scenic qualities.
Policy 9-1	Permanent open space shall be provided within the county for a variety of open space uses.
Policy 9-2	Historic and scenic features, watersheds, natural waterways, and areas important for the maintenance of natural vegetation and wildlife populations shall be preserved and enhanced.
Policy 9-3	Areas designated for open space shall not be considered as a reserve for urban land uses. In accordance with Measure C-1990, at least 65 percent of all land in the county shall be preserved for agriculture, open space, wetlands, parks, and non-urban uses.
Policy 9-4	Where feasible and desirable, major open space components shall be combined and linked to form a visual and physical system in the county.
Policy 9-5	The visual identities of urban communities shall be preserved through the maintenance of existing open space areas between cities and/or communities.
Policy 9-6	Open space acquisition shall be planned and funded, in concert with the region's staged transportation, landfill, and water and sewage plant programs.
Policy 9-7	Open space shall be utilized for public safety, resource conservation, and appropriate recreation activities for all segments of the community.
Policy 9-8	Development project environmental review will consider the effect of the project on the county's open space resources, whenever the project proposes to convert substantial amounts of land from an open space designation to an urban development designation.
Policy 9-9	The County shall preserve open space lands located outside the ULL by declining to authorize requests for General Plan Amendment studies which would result in redesignation of such lands to urban land use designations. The County shall not designate any open space land located outside the ULL for an urban use. A substantial portion of land developed within the ULL shall be retained for open space, parks, and recreational uses.
Town of Danville 2030 General Plan – Resources and Hazards Element	
Policy 21.01	Preserve and enhance natural habitat areas that support wildlife, including large continuous areas of open space and wetland and riparian habitat.
Policy 21.02	Maintain open space in appropriate areas, including areas of scenic beauty, areas of economically viable agriculture, and areas where natural hazards such as flooding, and land instability preclude safe development.
Policy 21.03	Utilize the development review process to preserve adequate open space for scenic, active, and passive purposes. Require private open space areas where appropriate.
Policy 21.06	Discourage activities that would harm the health of existing trees. Prevent the unnecessary removal and alteration of such trees, including “protected” trees as defined by the Town’s Tree Preservation Ordinance and other trees that contribute to the scenic beauty of the town. Public and private improvements should be designed to minimize the removal of mature trees, regardless of species. If removal is necessary, trees should be replaced with an appropriate number and species.
Policy 23.04	Support efforts to incorporate Danville’s scenic ridgelines into a larger, regional open space framework that connects parts of the Tri-Valley area.
City of San Ramon General Plan 2035 – Open Space and Conservation Element	
Policy 8.5-I-5	Designate land for rural conservation along the west side of Bollinger Canyon Road near the Las Trampas Regional Wilderness in order to preserve visual open space, to provide opportunities for horse-keeping and part-time ranching, and to maintain compatibility with adjoining agricultural uses.

Source: Contra Costa County General Plan (2005), Town of Danville 2030 General Plan (2013), San Ramon General Plan 2035 (2015)

2013 Park District Master Plan. The 2013 District Master Plan defines the long-term vision for lands managed by the District. The long-term vision for lands managed by the District as set forth in the 2013 District Master Plan states,

> "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 express nature nearby."

To achieve the District Master Plan vision for the community to experience nature nearby the District will:

- Acquire and preserve significant biological, geologic, scenic and historic resources within Alameda and Contra Costa counties
- Manage, maintain and restore the parklands so they retain their important scenic, natural and cultural values
- Monitor the effects of climate change on District resources and utilize adaptive management techniques to adjust stewardship methods and priorities to preserve the natural cultural and scenic values of the parks and trails.

The Master Plan provides a decision-making framework and identifies policies that will achieve District-wide objectives. Development objectives, land use classifications, and planning and management guidelines are established by the Master Plan. The Master Plan includes policies for addressing visual resources as described in Table 4.1.B, below.

Ordinance 38. District Ordinance 38 sections directed at maintaining the visual character of District parklands are summarized in Table 4.1.C below.

Standard Technical Specifications and Supplementary Conditions .The Park District's Standard Technical Specifications and Supplementary Conditions contain provisions that are intended to ensure, among other things, the safety of construction workers, staff and the public, and the protection of wildlife, site resources, and water quality during construction and operation of site amenities. Relevant sections are summarized below.

Project Cleanliness.

- The Contractor shall keep the project site and the surrounding areas free from accumulations of waste material and rubbish generated by employees and subcontractors. The Contractor shall remove daily all rubbish, tools, equipment and surplus materials leaving the work "broom clean" at the completion of each day, unless a different nature of cleanup or repair is specified elsewhere in the Contract Documents.

Table 4.1.B: 2013 District Master Plan Goals and Policies Related to Aesthetic Resources

Goal Item Number	Goal/Policy
KEP4	The District will participate in efforts to protect scenic or cultural resources, develop larger, multi-agency open space preserves, provide recreational opportunities, protect agricultural use, avoid hazards and plan for appropriate urban grown boundaries.
PRPT24	The District will see seek to locate facilities in a manner that preserves open space whenever possible. The 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.
PRPT28	New utility lines will be placed underground on land owned, operated, or managed by the District to retain the optimal visual qualities of the area... and will work with other agencies and neighbors to reduce visual impacts on adjacent lands. The District will seek to avoid the construction of high voltage power lines within the parklands, particularly in areas of sensitive or aesthetically important resources and in preserve areas.
PRPT29	The District will keep its lands, including all ridges and peaks, free of additional communication facilities in order to maintain open viewshed, natural conditions and public use as well as to limit vehicular and service activities…. The District will work to reduce the detrimental visual impact of buildings, towers and access roads at existing sites and will work with other agencies and neighbors to reduce this impact on adjacent lands.

Source: East Bay Regional Park District Master Plan (2013)

Table 4.1.C: Ordinance 38 Section Relevant to Aesthetic Resources

Section Number	Goal/Policy
Section 804	Plants. No person shall damage, injure, collect or remove any plant or tree or portion thereof, whether living or dead, including but not limited to flowers, mushrooms, bushes, vines, grass, turf, cones and dead wood located on District parklands. In addition, any person who willfully or negligently cuts, destroys or mutilates vegetation shall be arrested or issued a citation pursuant to Penal Code Section 384a.
Section 805	Geological Features. No person shall damage, injure, collect or remove earth, rocks, sand, gravel, fossils, minerals, features of caves, or any article or artifact of geological interest or value located on District parklands.
Section 806	Archaeological Features. No person shall damage, injure, collect or remove any object of paleontological, archaeological or historical interest or value located on District parklands. In addition, any person who willfully alters, damages, or defaces any object of archaeological or historical interest or value or enters a fenced and posted archaeological or historical site shall be arrested or issued a citation pursuant to Penal Code Section 622-1/2.
Section 900.2	Littering or Dumping. No person shall litter or cause to be littered any District parkland, or cause to be dumped any waste matter in or upon any District parkland. It shall be unlawful to place, deposit, or dump, or cause to be placed, deposited or dumped, any rocks or dirt in or upon any District parkland without the prior written consent of the General Manager. Any person littering or dumping any waste material upon District parkland shall be arrested or issued a citation pursuant to Penal Code Sections 374.4 and 374.3.
Section 900.3	Household or Industrial Materials. No person, firm, or business shall bring household or industrial garbage, trash or waste materials into any lands owned or operated by the District for the purpose of placing such materials into any trash can, dumpster, or receptacle provided by the District.
Section 904.3	Abandonment. Whenever a District Public Safety Officer has reasonable grounds to believe that a vehicle has been abandoned within the District, the vehicle may be removed as authorized by Vehicle Code Section 22669(a)

Source: East Bay Regional Park District, Ordinance 38 (Revised 2019)

Work Hours.

- The hours of work shall be any 8.5-hour block as mutually agreed upon between the Contractor and the District between 7:00 a.m. and 5:00 p.m., Monday through Friday.

- No night work shall be permitted.

Environmental Protection Training.

- All workers shall complete an approximately one-hour long on-site training session conducted by a District Biologist at the start of construction and the Contractor shall provide a list of workers for on-site training by the District Biologist.

- All site supervisors and workers of the contractor and subcontractors shall attend the training.

- Workers who do not attend the training at the start of construction shall attend a subsequent training session. The Contractor shall notify the District Inspector one week prior to the anticipated arrival of new workers, to schedule a training session.

- Only workers who have completed the training shall be allowed to work on site. At the discretion of the Biological Monitor, untrained workers may perform one-time deliveries and similar minor construction support activities where there is no ground disturbance, provided that they are supervised by a trained member of the Contractor's supervisory staff.

- The District Inspector or Biological Monitor may stop construction until untrained workers are either off site or trained.

- The Biological Monitor is on site to observe construction activities, so the Contractor may not work on site while the Biological Monitor is training workers.

The purpose of the training is to:

- Familiarize personnel with rare, threatened and endangered species which may be present at the work site.

- Provide an overview of the laws, regulations and violation penalties governing protection of the species.

- Provide directions and information on how to avoid and minimize contact with the species, and what to do if they are encountered.

Site Set-up – Execution.

- Work on site shall only take place between June 15 and October 31.
- Confine work activities to approved construction work areas, staging areas and access routes.
- Excavations shall not be left open overnight. Where not backfilled, excavations shall be tightly covered. Perimeters of plywood panels or other covers shall be edged with dirt to prevent intrusion of small animals.
- Excavations shall include a ramp with a maximum slope of 1:1 to allow animals to escape the excavation when not covered.
- Storage of equipment and vehicles shall be a minimum of 100 feet from the top of the creek bank.
- Fueling of equipment and vehicles shall take place a minimum of 200 feet from the top of the creek bank.

Erosion Control Storm Water Pollution Prevention Plan (SWPPP) Requirements.

- In addition to the requirements of the CASQA or Caltrans standard, the SWPPP shall contain an Erosion Control Plan that includes the following provisions:
    - Fiber rolls and erosion control blankets shall not contain netting that could trap small animals.
    - Photodegradable products are not acceptable.
    - All erosion control products shall be weed and seed free.
    - All temporary erosion control measures shall be immediately removed when no longer needed.
    - All temporary erosion control measures shall be removed and legally disposed of prior to project completion.

Clearing and Grubbing.

- All cut and fill areas: Strip topsoil to 2-inches minimum below existing grade where vegetation occurs. Additional depth may be required to remove organic materials.
- Stripped material shall be disposed of off-site and in a legal manner or stockpiled for reuse as directed by the District.

- Upon completion of clearing and grubbing, areas shall be left in a neat, clean condition ready to receive subsequent work.

Excavated Material.

- All excavated material shall be piled in a manner which will not endanger the work and which will avoid completely obstructing access. Culverts, swales, and natural drainage patterns shall be kept clear.

- The excavations and support system shall comply in all respects with the requirements of Article 6, of the Construction Safety Orders of the Division of Industrial Safety.

- At no time shall trenches be left open during the Contractor's non-working hours. Trenches shall be backfilled to grade and/or covered with plywood or traffic-rated metal plates and pipe ends securely closed with a tight-fitting plug or cover at the end of each workday.

- All open excavations 5 feet or greater in depth shall be constructed with bracing, sheeting, shoring, or other equivalent method designed for the protection of life and limb in accordance to Section 6705 of the State Labor Code.

- The trench excavations and support system shall comply in all respects with the requirements of Article 6, of the Construction Safety Orders of the Division of Industrial Safety.

Protection of Existing Trees and Shrubs.

- Contractor shall protect all trees in work areas, staging areas and along construction access.

- No construction vehicle may be parked or driven within the drip line of a tree unless approved by the District Inspector.

- Snow fencing or equal barriers shall be placed around drip line of trees to be protected in place.

- When it is necessary to excavate adjacent to existing trees and shrubs, Contractor shall use all possible care to avoid injury to these plants and their roots. No roots three (3) inches or larger in diameter shall be cut without the prior approval of the District.

- In no case shall any limbs be cut, or trees and shrubs removed without first obtaining approval from the District.

Supplementary Conditions. The California State Water Resources Control Board, San Francisco Bay Region, Oakland, California has jurisdiction over the project storm water discharges within the project area. Accordingly, the following actions would be required prior to initiating implementation of the project: 1) the Park District would submit a Notice of Intent (NOI) and obtain a waste discharger identification (WDID) number from the above agency; 2) a Receipt of NOI would be obtained by the Park District from the State Water Resources Control Board (SWRCB) prior to the start of construction; and 3) the Contractor would be required to submit a Storm Water Pollution Prevention Plan (SWPPP) in conformance with SWRCB No. 92-08 DWQ for discharges of storm water runoff associated with construction activity.

4.1.1.2 Existing Visual Conditions

The project site serves as a visual amenity to the City of San Ramon and the Town of Danville by providing a visual break from urbanized areas. Las Trampas Ridge includes views of wooded hillsides, rolling grasslands and dramatic ridges. Interstate 680 (I-680) is located directly east of the project site, and a portion of the Elworthy Property is separated from I-680 by San Ramon Valley Boulevard. I-680 is a Caltrans officially designated State scenic highway from Interstate 580 (I-580) in Dublin to California State Route (SR) 24 in Walnut Creek. 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. Public access to the site and existing trails is currently provided by two existing walk-in entrances: the Podva Walk-in Entrance provides public access into Las Trampas through the Heritage Pear Trail, and the Saudade Walk-in Entrance provides public access into Las Trampas from the Faria Preserve Homeowner Association (HOA) area through the Faria Preserve Geological Hazard Abatement District (GHAD) open space area, and to the southern portion of the Peters Ranch property.

The project site includes natural visual character, generally characterized by rolling grassy hills, steep ridges, rocky outcrops and canyons with intermittent creeks along the western boundaries of San Ramon and Danville. Along 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 existing 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. Figure 4.1-1 shows a visual setting key, and Figure 4.1-2 provides views of the project area from various vantage points.

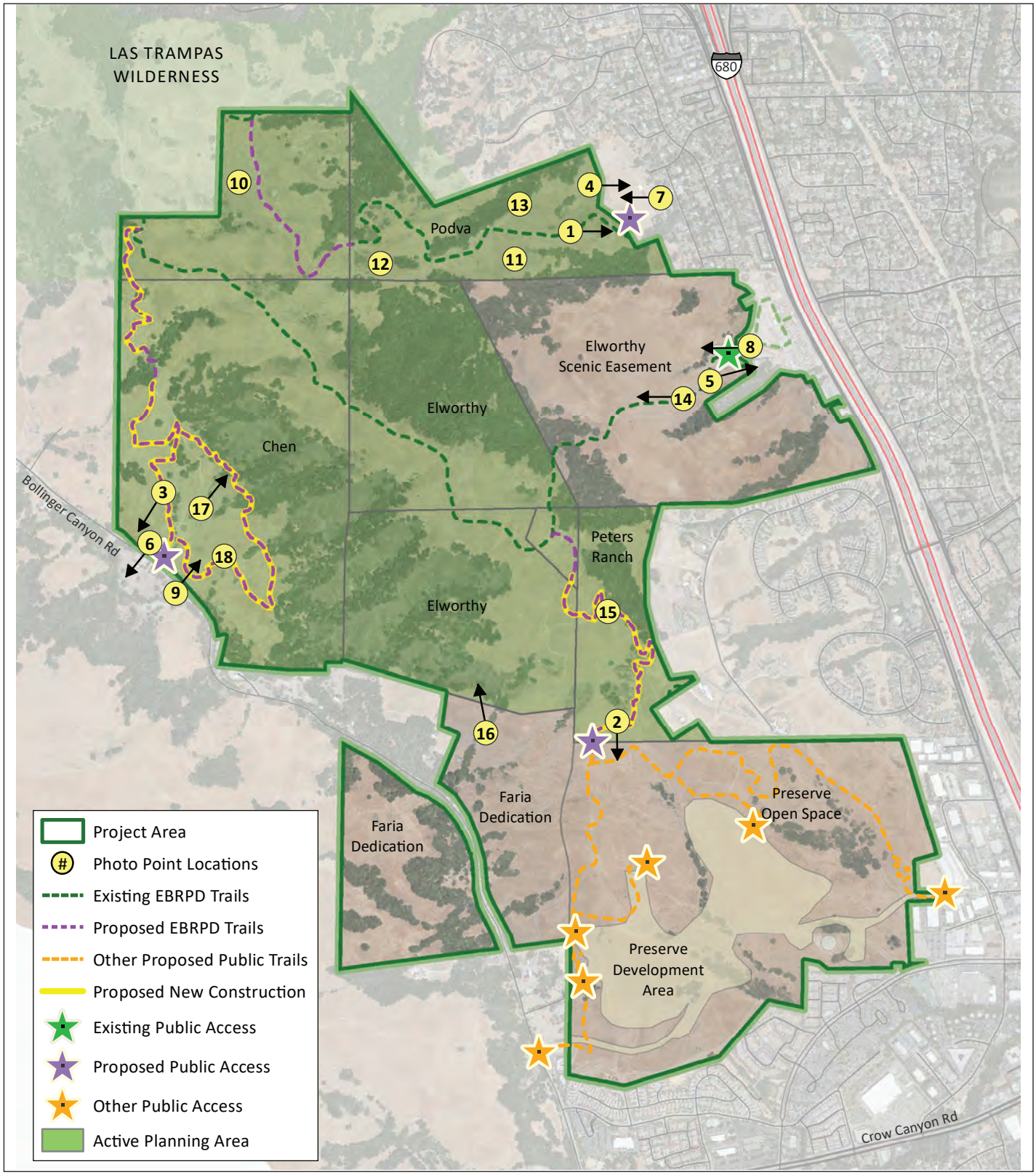

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FIGURE 4.1-1

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Southern Las Trampas LUPA EIR
Visual Setting Key

SOURCE: LSA, 2021

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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

LSA

FIGURE 4.1-2a

Southern Las Trampas LUPA EIR
Project Area Photos

SOURCE: EBRPD, 2021

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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 seasonal pond within conservation easement area in Podva property

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

LSA

FIGURE 4.1-2b

Southern Las Trampas LUPA EIR
Project Area Photos

SOURCE: EBRPD, 2021

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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 Las Trampas Ridge from Faria property

17. View within Chen property

18. View of drainage within Chen property

LSA

FIGURE 4.1-2c

Southern Las Trampas LUPA EIR
Project Area Photos

SOURCE: EBRPD, 2021

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4.1.2 Research Methodologies

In accordance with CEQA, this visual resource analysis included a review of: historical information relating to existing site conditions, site-specific information determined through site reconnaissance visits, and a review of conceptual design information. Sensitive receptors would include park visitors, travelers along the access roads, and those with views into the Project area. Wildlife may be considered a sensitive receptor to night lighting.

4.1.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact on aesthetics if it would:

a. Result in a substantial adverse effect on a scenic vista;

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

c. Substantially degrade the existing visual character or quality of the site and its surroundings; or

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

a. Result in a substantial adverse effect on a scenic vista. Many of the proposed improvements would be at-grade and would not obstruct views of Las Trampas. Trail design would not include tall structures or landscaping that might obscure views of the surrounding open space environment and Las Trampas. The proposed trails would be unpaved and designed to follow the existing topography in order to minimize grading. Due to their relatively small scale and distance from existing public views, these improvements would not be visible to the general public or result in substantial adverse effects to scenic vistas. This impact would be less than significant and no mitigation measures would be required. This criterion is not further discussed in this EIR.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. As mentioned above, the nearest State highway to the project site is I-680 which is a Caltrans officially designated State scenic highway (from I-580) in Dublin to SR 24 in Walnut Creek. Bollinger Canyon Road is not identified as a scenic roadway by Contra Costa County or the City of San Ramon. The project site is west of I-680 and is visible from segments of portions of I-680. The proposed trails and other project improvements would not be visible from the scenic corridor and would be small scale and generally at-grade with the natural topography. There would be minimal excavation or grading and vegetation would be cleared and removed as needed. As a result, the project would not be noticeable from the scenic highway corridor. Implementation of the proposed project would not substantially damage scenic resources within view of the I-680 scenic highway corridor. This

impact would be less than significant and no mitigation measures would be required. This criterion is not further discussed in this EIR.

c. **Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.** Other than minimal safety lighting at the restroom building, no permanent sources of lighting or glare would be installed as part of the proposed project. The staging area would have a capacity of 25 vehicles and be designed and constructed to Park District standards, which includes standard park curfew hours, gates, and park signage. Curfew hours within the Las Trampas Wilderness Regional Preserve vary depending on the season, but generally gates are closed and access is not permitted after dusk. The parking area would not have lighting. As a result, new light sources, including light from vehicle headlights, would represent a less-than-significant impact. Temporary construction-related sources of light (if any) would be removed upon construction completion. Therefore, the proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area and no mitigation measures would be required because no light sources would be operational after dark. This criterion is not further discussed in this EIR.

4.1.4 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to aesthetics that would result from implementation of the proposed project.

4.1.4.1 Project Impacts

Potential impacts related to the visual character and quality of the project area and its surroundings are discussed below.

a. **Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

Old Time Corral Staging Area. The location of the proposed Old Time Corral Staging Area currently includes a corral area used for cattle. The site also includes a gate to allow access for Park District staff and cattle ranchers to an existing service trail for motorized vehicles. Proposed improvements to the Old Time Corral Staging Area would require minor grading and vegetation removal to construct a parking area for 25 vehicles. Other project features include a gate, park benches, a bulletin board sign (or informational panel), and a two-stall vault toilet. The design of the staging area would be consistent with the Park District's 2013 Master Plan Policy PRPT24, which requires that facilities are located in a manner that preserves open space whenever possible. Grading techniques would be employed to create natural appearing landforms. The Staging Area would be designed so that color, scale, style and materials of improvements would blend with the natural environment. The Staging Area would include native landscaping to blend with the surrounding area and fencing that would resemble the existing corral fencing. As part of the staging area construction, a new corral would be installed within the grading footprint of the staging area.

Figure 4.1-3a and Figure 4.1-3b provide representative photographs of other staging areas located within Park District facilities. Figure 4.1-3a shows the Lafayette Ridge Staging Area at Briones Regional Park. The Lafayette Ridge Staging Area is located on Pleasant Hill Road in Lafayette and

includes a 46-car parking area with vegetation providing visual screening of the staging area. Figure 4.1-3b shows the Foothill Staging Area at Pleasanton Ridge Regional Park. The Foothill Staging Area is located on Foothill Road near Sunol and includes a 50-car parking area designed to be consist with the rustic look of the surrounding area. These two examples show that the Park District facilities are designed to be compatible with the local surroundings.

As shown in Figure 3-3 in Chapter 3.0, Project Description (Site Plan for the Old Time Corral Staging Area), a berm four feet in height would be constructed between the parking area and Bollinger Canyon Road to prevent vehicle lights from shining into the residential property located across Bollinger Canyon Road from the parking area. This berm would also partially obstruct the proposed parking area from view from Bollinger Canyon Road.

Although the Old Time Corral Staging Area site would be modified, the construction and operation of a parking lot and other project improvements would not substantially degrade the existing visual character or quality of the site and its surroundings because the site has already been disturbed and because the Park District would ensure that the improvements would be designed in a manner that is consistent with the existing natural environment. This impact would be less-than-significant.

Trail Connections. The project area includes steep topography and diverse natural resources. The Las Trampas Ridge rises approximately 700 feet above Bollinger Canyon Road. In addition to the rugged topography, the project area includes numerous rock outcrops. The project area contains a wide range of natural communities that have been substantially altered over time by human activities such as road and trail construction, introduction of non-native species, and the suppression of wildfires.

Trail construction activities would include approximately 4.2 miles of new trails open to the public for hiking, bicycling, and equestrian uses. The extension of the multi-use Calaveras Ridge Trail, as well as the Warbler Loop Trail, would be 4-to-6 feet wide and would allow hiking, biking, equestrian and off-leash dogs. The Sabertooth Trail and Heritage Pear Trail would be multi-use and would be 12 feet wide to allow for emergency vehicle and maintenance access (EVMA). These trails would traverse a mix of California annual grassland, coyote brush scrub, coast live oak/bay laurel woodland, and seasonal seeps and wetlands.

For the widest EVMA/multi-use roads, trail construction work would consist of 12-foot-wide trail footprint (permanent impact area) plus 2 feet on each side of the trail for a temporary work area. Low water crossings would be installed to provide stability and minimize channel bed erosion of the drainage crossings. 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. Some brushing of shrubland habitat and disruption of grassland habitat would be involved, but no trees would be removed along trail routes in woodland or riparian habitat and disturbance to understory vegetation would be limited.

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LSA

FIGURE 4.1-3a

Southern Las Trampas LUPA EIR
Examples of Staging Areas

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LSA

FIGURE 4.1-3b

Southern Las Trampas LUPA EIR
Examples of Staging Areas

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As permanent disturbance to vegetation would be limited to existing trail corridors and an approximately one-acre area spread over the entirety of the 1,381-acre project area in a mix of vegetation types, these trails would not be highly visible from mid- to long-distance vantage points and would not result in an adverse effect on the visual character of the project area. Moreover, specific to trail construction and modification, the proposed project would be subject to the Park District's Standard Technical Specifications and Supplementary Conditions which describe in detail the technical specifications that would be implemented to minimize adverse impacts to the parkland environment during trail construction, modification, and restoration activities. These measures would minimize any visual effects associated with trail development. Thus, with the minimal amount of construction necessary for trail development combined with adherence to the Park District's Standard Technical Specifications during construction, the project would not result in a potentially significant impact to the visual quality of the site. No mitigation is required.

Significance without Mitigation: Less than significant.

4.1.4.2 Cumulative Impacts

The geographic scope for the analysis of cumulative aesthetic impacts includes the local and regional roadways and highways, surrounding viewsheds that would have an effect on the visual character of the Project area, and viewpoints into the Project area that could be affected by the Project improvements. The project area is bordered to the east by lands subject to the jurisdiction of the Town of Danville, to the south by San Ramon and to the west by Contra Costa County. The proposed Project does not include elements that would have a significant adverse effect on a scenic vista or a scenic resource on any of these lands or the neighboring private properties. Additionally, lands surrounding the project site are largely contiguous protected open space within Las Trampas.

Present and reasonably foreseeable projects include the Faria Preserve project and the Chang project. The Faria Preserve project is within the San Ramon city limits, west of I-680 and south of the Danville town limit, and would include 740 residential units, a 1.5-acre house of worship site, a 2.6-acre educational facility site, a 12.9-acre community park, and a 0.7-acre rose garden. The Chang project site is at the northwest corner of Bollinger Canyon Road/Crow Canyon Road, within the San Ramon city limit, and would include 43 single-family, large-lot homes and 18 accessory dwelling units. Implementation of these projects is not anticipated to have an adverse effect that would combine with the effects of the proposed Project because they are located within urban areas. Additionally, the implementation of the Project is not anticipated to have a cumulative adverse impact on scenic resources on other projects in the area. The protection of 756 acres of open space within Las Trampas would preserve open space containing a mix of woodland, shrub and grassland communities. Therefore, the proposed project impacts would not combine with reasonably foreseeable cumulative projects to create a cumulatively considerable impact related to aesthetics and this impact would be less than significant.

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4.2 AIR QUALITY

This section describes the regulatory framework and existing conditions on the project site related to air quality, and the potential impacts of the project on air quality, including the effects of construction and operational traffic associated with the project on regional pollutant levels and health risk. Standard mitigation measures to reduce potentially significant air quality impacts are identified, where appropriate.

It should be noted that after completion of the Initial Study (included in Appendix A), it was determined that the analysis of potential impacts related to air quality, particularly the potential impacts that were determined to be less than significant with mitigation measures, be included in this Draft EIR.

The project site is in the San Francisco Bay Area Air Basin. Land use is subject to the rules and regulations imposed by the Bay Area Air Quality Management District (BAAQMD), the California Ambient Air Quality Standards (AAQS) that have been adopted and are periodically updated by the California Air Resources Board (CARB), and National AAQS adopted by the United States Environmental Protection Agency (EPA). Air pollutants for which the State and federal government have identified AAQS are known as criteria air pollutants. In addition to criteria air pollutants, both the State and federal governments regulate the release of toxic air contaminants (TACs). An Air Quality Impact Analysis was prepared for the project and is included in Appendix C of this Draft EIR.

4.2.1 Setting

4.2.1.1 Regulatory Setting

The following discussion provides an overview of existing air quality conditions in the region and in the project area. Ambient air quality standards and the regulatory framework are summarized, and climate, air quality conditions, and typical air pollutant types and sources are also described.

Air Pollutants and Health Effects. Both State and federal governments have established health-based AAQS for six criteria air pollutants: carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Two criteria pollutants, O_3 and NO_2, are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO_2, and Pb are considered local pollutants that tend to accumulate in the air locally.

The primary pollutants of concern in the Project area are O_3, CO, and PM. Significance thresholds established by an air district are used to manage total regional and local emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual development projects that would contribute to regional and local emissions and could adversely affect or delay the air basin's projected attainment target goals for nonattainment criteria pollutants.

Because of the conservative nature of the significance thresholds, and the basin-wide context of individual development project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_x) and reactive organic gases (ROG).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Air pollutants and their health effects, and other air pollution-related considerations are summarized in *Table 4.2.A, Sources and Health Effects of Air Pollutants* and are described in more detail below.

Table 4.2.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	• Precursor sources[a]: motor vehicles, industrial emissions, and consumer products.	• Respiratory symptoms. • Worsening of lung disease leading to premature death. • Damage to lung tissue. • Crop, forest, and ecosystem damage. • Damage to a variety of materials, including rubber, plastics, fabrics, paints, and metals.
Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter ($PM_{2.5}$)	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death. • Hospitalization for worsening of cardiovascular disease. • Hospitalization for respiratory disease. • Asthma-related emergency room visits. • Increased symptoms, increased inhaler usage.
Particulate Matter Less than 10 Microns in Aerodynamic Diameter (PM_{10})	• Cars and trucks (especially diesels). • Fireplaces, woodstoves. • Windblown dust from roadways, agriculture, and construction.	• Premature death and hospitalization, primarily for worsening of respiratory disease. • Reduced visibility and material soiling.
Nitrogen Oxides (NO_x)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Lung irritation. • Enhanced allergic responses.
Carbon Monoxide (CO)	• Any source that burns fuels such as cars, trucks, construction and farming equipment, and residential heaters and stoves.	• Chest pain in patients with heart disease. • Headache. • Light-headedness. • Reduced mental alertness.

Table 4.2.A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Sulfur Oxides (SO_x)	● Combustion of sulfur-containing fossil fuels. ● Smelting of sulfur-bearing metal ores. ● Industrial processes.	● Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits.
Lead (Pb)	● Contaminated soil.	● Impaired mental functioning in children. ● Learning disabilities in children. ● Brain and kidney damage.
Toxic Air Contaminants	● Cars and trucks (especially diesels). ● Industrial sources, such as chrome platers. ● Neighborhood businesses, such as dry cleaners and service stations. ● Building materials and products.	● Cancer. ● Reproductive and developmental effects. ● Neurological effects.

SOURCE: California Air Resources Board (CARB), 2022.
a Ozone is not generated directly by these sources. Ratr, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

Ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NOx. The main sources of ROG and NOx, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide. CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. CO transport is limited - it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10} for particles less than 10 microns in diameter and $PM_{2.5}$ for

particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates, through tailpipe emissions as well as brake pad, tire wear, and entrained road dust. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (CARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children. The CARB also reports that Statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.[1]

Nitrogen Dioxide. NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide. SO_2 is a colorless acidic gas with a strong odor. It is produced by the combustion of sulfur-containing fuels such as oil, coal, and diesel. SO_2 has the potential to damage materials and can cause health effects at high concentrations. It can irritate lung tissue and increase the risk of acute and chronic respiratory disease. SO_2 also reduces visibility and the level of sunlight at the ground surface.

Lead. Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery factories.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U. S. Environmental Protection Agency (USEPA) established national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The USEPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the USEPAs regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Odors.Odors are also an important element of local air quality conditions. Specific activities can raise concerns related to odors on the part of nearby neighbors. Major sources of odors include

[1] California Air Resources Board, 2009. *Air Pollution – Particulate Matter Brochures*. Website: www.arb.ca.gov/html/brochure/pm10.htm (accessed April 20, 2018). October.

restaurants and manufacturing plants. Other odor producers include the industrial facilities within the region. While sources that generate objectionable odors must comply with air quality regulations, the public's sensitivity to locally-produced odors often exceeds regulatory thresholds.

Toxic Air Contaminants. In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Some examples of TACs include: benzene, butadiene, formaldehyde, and hydrogen sulfide. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the USEPA and CARB. In 1998, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. CARB has completed a risk management process that identified potential cancer risks for a range of activities and land uses that are characterized by use of diesel-fueled engines.[2] High volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

The BAAQMD regulates TACs using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, in order to provide a quantitative estimate of health risks.[3] As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area. Monitoring data and emissions inventories of TACs help the BAAQMD determine health risk to Bay Area residents.

Ambient monitoring concentrations of TACs indicate that pollutants emitted primarily from motor vehicles (1,3-butadiene and benzene) account for slightly over 50 percent of the average

2 California Air Resources Board, 2000. *Fact Sheet – California's Plan to Reduce Diesel Particulate Matter Emissions*. Available online at: www.arb.ca.gov/diesel/factsheets/rrpfactsheet.pdf (accessed April 20, 2018). October.

3 In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

calculated cancer risk from ambient air in the Bay Area.[4] According to the BAAQMD, ambient benzene levels declined dramatically in 1996 with the advent of Phase 2 reformulated gasoline. Due to this reduction, the calculated average cancer risk based on monitoring results has been reduced to 143 in 1,000,000; however, this risk does not include the risk resulting from exposure to diesel particulate matter or other compounds not monitored.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources – primarily "off-road" sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as trucks and buses traveling on freeways and local roadways. Agricultural and mining equipment is not commonly used in urban parts of the Bay Area, while construction equipment typically operates for a limited time at various locations. As a result, the readily identifiable locations where diesel particulate matter is emitted in the Bay Area include high-traffic roadways and other areas with substantial truck traffic.

Although not specifically monitored, recent studies indicate that exposure to diesel particulate matter may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.[5] CARB's Diesel Risk Reduction Plan is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel – a step already implemented – and cleaner-burning diesel engines. The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. CARB anticipates that by 2020 average Statewide diesel particulate matter concentrations will decrease by 85 percent from levels in 2000 with full implementation of the Diesel Risk Reduction Plan, meaning that the Statewide health risk from diesel particulate matter is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. It is likely that the Bay Area cancer risk from diesel particulate matter will decrease by a similar factor by 2020.

High Volume Roadways. Air pollutant exposures and their associated health burdens vary considerably within places in relation to sources of air pollution. Motor vehicle traffic is perhaps the most important source of intra-urban spatial variation in air pollution concentrations. Air quality research consistently demonstrates that pollutant levels are substantially higher near freeways and busy roadways, and human health studies have consistently demonstrated that children living within 100 to 200 meters (328 to 656 feet) of freeways or busy roadways have reduced lung function and higher rates of respiratory disease. At present, it is not possible to attribute the effects of roadway proximity on non-cancer health effects to one or more specific vehicle types or vehicle pollutants. Engine exhaust, from diesel, gasoline, and other combustion engines, is a complex mixture of particles and gases, with collective and individual toxicological characteristics.

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4 Bay Area Air Quality Management District, 2015. *Toxic Air Contaminant Control Program Annual Report, Volume 1.* Website: www.baaqmd.gov/research-and-data/air-toxics/annual-report (accessed April 20, 2018). May.

5 Ibid.

Federal. The following federal regulations pertaining to air quality are applicable to the proposed project.

United States Environmental Protection Agency. At the federal level, the USEPA has been charged with implementing national air quality programs. USEPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required USEPA to establish primary and secondary National AAQS and required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. USEPA has responsibility to review all state SIPs to determine conformity with the mandates of the FCAA and determine if implementation will achieve air quality goals. If the USEPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area, which imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions on transportation funding and stationary air pollution sources in the air basin.

The USEPA is also required to develop National Emission Standards for Hazardous Air Pollutants, which are defined as those which may reasonably be anticipated to result in increased deaths or serious illness and which are not already regulated. An independent science advisory board reviews the health and exposure analyses conducted by the USEPA on suspected hazardous pollutants prior to regulatory development.

State. The following state regulations pertaining to air quality are applicable to the proposed project.

California Air Resources Board (ARB). CARB is the agency responsible for the coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), adopted in 1988. The CCAA requires that all air districts in the State achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CCAA specifies that districts should focus on reducing the emissions from transportation and air-wide emission sources and provides districts with the authority to regulate indirect sources.

CARB is also primarily responsible for developing and implementing air pollution control plans to achieve and maintain the NAAQS. CARB is primarily responsible for Statewide pollution sources and produces a major part of the SIP. Local air districts provide additional strategies for sources under their jurisdiction. CARB combines this data and submits the completed SIP to USEPA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which are more stringent than the NAAQS), determining and updating area designations and

maps, and setting emissions standards for mobile sources, consumer products, small utility engines, and off-road vehicles. CARB's Diesel Risk Reduction Plan[6] is intended to substantially reduce diesel particulate matter emissions and associated health risks through introduction of ultra-low-sulfur diesel fuel – a step already implemented – and cleaner-burning diesel engines.

Because of the robust evidence relating proximity to roadways and a range of non-cancer and cancer health effects, the CARB also created guidance for avoiding air quality conflicts in land use planning in its Air Quality and Land Use Handbook: A Community Health Perspective.[7] In its guidance, CARB advises that new sensitive uses (e.g., residences, schools, day care centers, playgrounds, and hospitals) not be located within 500 feet of a freeway or urban roads carrying 100,000 vehicles per day, or within 1,000 feet of a distribution center (warehouse) that accommodates more than 100 trucks or more than 90 refrigerator trucks per day.

CARB guidance suggests that the use of these guidelines be customized for individual land use decisions, and take into account the context of development projects. The Air Quality and Land Use Handbook specifically states that these recommendations are advisory and acknowledges that land use agencies must balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

National and State Ambient Air Quality Standards. Pursuant to the FCAA of 1970, the USEPA established NAAQS. The NAAQS were established for major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

Both the USEPA and the CARB have established ambient air quality standards for the following common pollutants: CO, O_3, NO_2, SO_2, Pb, and PM. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. These ambient air quality standards are levels of contaminants that avoid specific adverse health effects associated with each pollutant.

Federal standards include both primary and secondary standards. Primary standards establish limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, and damage to animals, crops, vegetation, and

6 California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. Prepared by the Stationary Source Division and Mobile Source Control Division. Available online at: www.arb.ca.gov/diesel/documents/rrpFinal.pdf (accessed April 20, 2018). October.

7 California Environmental Protection Agency and California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available online at: www.arb.ca.gov/ch/handbook.pdf (accessed April 20, 2018). April.

buildings.[8] State and federal standards for the criteria air pollutants are listed in *Table 4.2.B, Federal and State Ambient Air Quality Standards.*

Table 4.2.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard[a]	Federal Primary Standard[b]	Major Pollutant Sources
Ozone (O_3)[c]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20.0 ppm	35.0 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9.0 ppm	
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Particulate Matter (PM_{10})[d]	Annual Arithmetic Mean	20.0 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50.0 µg/m^3	150.0 µg/m^3	
Respirable Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12.0 µg/m^3	12.0 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35.0 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarterly	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[e]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility	8 hours	ExCo[f]=0.23/km	No Federal	Visibility-reducing particles consist of suspended

[8] U.S. Environmental Protection Agency, 2017. Website: www.epa.gov/criteria-air-pollutants (accessed April 20, 2018). October.

Table 4.2.B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard[a]	Federal Primary Standard[b]	Major Pollutant Sources
Reducing Particles		visibility of 10≥ miles	Standard	particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydro-carbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Notes: ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
a. California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
b. National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
c. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
d. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
e. On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual arithmetic mean standards were revoked.
Source: California Air Resources Board, 2015, Ambient Air Quality Standards, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed on April 20, 2017.

Local Ordinances and Policies. The following local regulations pertaining to air quality are applicable to the proposed project.

Bay Area Air Quality Management District (BAAQMD). BAAQMD is the agency responsible for ensuring that the National and California AAQS are attained and maintained in the San Francisco Bay Area Air Basin. BAAQMD is responsible for:

- Adopting and enforcing rules and regulations concerning air pollutant sources.
- Issuing permits for stationary sources of air pollutants.
- Inspecting stationary sources of air pollutants.
- Responding to citizen complaints.
- Monitoring ambient air quality and meteorological conditions.
- Awarding grants to reduce motor vehicle emissions.
- Conducting public education campaigns.
- Preparing the air quality management plan.

Air quality conditions in the Air Basin have improved significantly since the BAAQMD was created in 1955. The BAAQMD prepares air quality management plans (AQMPs) to attain ambient air quality standards in the SFBAAB. The BAAQMD prepares ozone attainment plans for the National O3 standard and clean air plans for the California O3 standard. The BAAQMD prepares these AQMPs in coordination with the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC). The most recent adopted comprehensive plan is the Bay Area 2017 Clean Air Plan, Spare the Air, Cool the Climate, which incorporates significant new scientific data, ambient measurements, new meteorological episodes, and new air quality modeling tools.

Regulation 7, Odorous Substances. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds.[9] This regulation limits the "discharge of any odorous substance which causes the ambient air at or beyond the property line…to be odorous and to remain odorous after dilution with four parts of odor-free air." The BAAQMD must receive odor complaints from ten or more complainants within a 90-day period in order for the limitations of this regulation to go into effect. If this criterion has been met, an odor violation can be issued by the BAAQMD if a test panel of people can detect an odor in samples collected periodically from the source.

Clean Air Plan. The Clean Air Plan[10] guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD 2017 Clean Air Plan, which was adopted on April 19, 2017, by the BAAQMD Board of Directors, is the current Clean Air Plan which contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_x), particulate matter and greenhouse gas emissions.

The Bay Area 2017 Clean Air Plan:

- Describes the BAAQMD's plan towards attaining all State and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities;

9 Bay Area Air Quality Management District, 1982. *Rules and Regulations, Regulation 7: Odorous Substances.* March.

10 Bay Area Air Quality Management District, 2017. *Final 2017 Clean Air Plan*. Available online at: www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en (accessed April 20, 2018). April 19.

- Defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas reduction targets for 2030 and 2050;

- Provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve greenhouse gas (GHG) reduction targets; and

- Includes a wide range of control measures designed to decrease emissions of air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "Super-GHGs" that are potent climate pollutants in the near term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

BAAQMD Community Air Risk Evaluation (CARE) Program. The Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that include an assessment of the sources of TAC emissions, modeling and measurement programs to estimate concentrations of TACs, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and a high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area.

For commercial and industrial sources, the BAAQMD regulates TACs using a risk-based approach that determines the sources and pollutants to control as well as the degree of control. A health risk assessment (HRA) is an analysis in which human health exposure to toxic substances is estimated and considered together with information regarding the toxic potency of the substances, to provide a quantitative estimate of health risks.[11] As part of ongoing efforts to identify and assess potential health risks to the public, the BAAQMD has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Bay Area. The BAAQMD has identified seven impacted communities; portions of Contra Costa County have been identified as an affected community.

Contra Costa County. Contra Costa County addresses air quality in the Conservation Element of the General Plan. Goals, policies, and implementation measures included in the Conservation

[11] In general, a health risk assessment is required if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggests a potential public health risk. Such an assessment generally evaluates chronic, long-term effects, including the increased risk of cancer as a result of exposure to one or more TACs.

Element are designed to achieve desired improvements to air quality through proper planning for land use and transportation. Policies relevant to this project include the following:

- Policy 8-101: A safe, convenient and effective bicycle and trail system shall be created and maintained to encourage increased bicycle use and walking as alternatives to driving.
- Policy 8-102: A safe and convenient pedestrian system shall be created and maintained in order to encourage walking as an alternative to driving.
- Policy 8-103: When there is a finding that a proposed project might significantly affect air quality, appropriate mitigation measures shall be imposed.
- Policy 8-104: Proposed projects shall be reviewed for their potential to generate hazardous air pollutants.
- Policy 8-105: Land uses which are sensitive to air pollution shall be separated from sources of air pollution.
- Implementation Measure 8-dl: Review major development applications for consistency with regional air quality plan assumptions.
- Implementation Measure 8-dp: Review proposed development to encourage maximum use of bicycle, pedestrian and transit modes of transportation.

City of San Ramon. The City of San Ramon addresses air quality in the Air Quality and Greenhouse Gas chapter of the General Plan.[19] Policies listed in the Air Quality and Greenhouse Gas Element are designed to cooperate with regional agencies and private companies, encourage smart growth, support transit oriented development, promote multimodal transit and complete streets, support pedestrian-oriented development, and provide facilities that encourage bicycling. Policies relevant to this project include the following:

- Implementing Policy 12.4-I-3: Analyze the air quality and climate change impacts of discretionary projects using applicable regulatory guidance; for example, the BAAQMD's CEQA Air Quality Guidelines.
- Implementing Policy 12.4-I-4: Use the City's environmental review process to impose appropriate mitigation measures on new development to reduce air quality and greenhouse gas emissions impacts.
- Implementing Policy 12.5-I-1: Minimize air quality and climate change impacts through project review, evaluation, and conditions of approval when planning the location and design of land use projects and transportation system projects needed to accommodate expected City population growth.
- Implementing Policy 12.6-I-3: Require construction and grading activities to incorporate particulate emissions reduction measures.

- Implementing Policy 12.7-I-4: Provide information to encourage the use of transportation modes that minimize motor vehicle use and the resulting air pollution and greenhouse gas emissions.

- Implementing Policy 12.7-I-5: Construct and promote infrastructure and facilities that support and encourages the use of low-emission transportation and alternative modes of travel, including a safe and comprehensive bicycle and pedestrian system that connects all parts of the City.

Town of Danville. The Town of Danville addresses air quality in the Resources and Hazards Element of the General Plan.[12] Goals, policies, and implementation measures contained in the Resources and Hazards Element aim to reduce local air pollution in an effort to limit health hazards, maintain a quality living environment, and achieve regional air quality improvements. Policies relevant to this project include the following:

- Policy 33.01: Make land use and transportation decisions which promote walking and bicycling, and help to sustain public transportation.

- Policy 33.04: During the development review process, impose appropriate mitigation measures on new development to reduce greenhouse gas emissions.

- Policy 34.02: Consider air pollution impacts during the local development review process. Development should be located and regulated to minimize the emission of direct and indirect air contaminants.

- Policy 34.03: Implement appropriate controls and "best practice" requirements on construction and grading activities to minimize airborne dust and other particulate matter.

- Policy 34.05: Ensure that future non-residential developments are evaluated through the CEQA process and/or the BAAQMD permit process to ensure that they do not result in a significant health risk.

East Bay Regional Park District.

District Master Plan Policies. The EBRPD's 2013 Master Plan contains policies for achieving the highest standards of service in resource conservation, management, interpretation, public access, and recreation. The goal of the Master Plan is to maintain a careful balance between the need to protect and conserve resources and the need to provide opportunities for recreational use of the parklands. The Master Plan also contains policies relating to providing parking and trailheads at convenient locations. In addition, the Master Plan contains policies that support the ability of visitors to use alternative modes of transportation. The Master Plan does not have specific policies related to air quality.

[12] Danville, Town of, 2013. *The Town of Danville 2030 General Plan*. March 19.

East Bay Regional Park District General Conditions. The Park District's General Conditions contains the following rule regarding dust control:

- **Article 22(b) Dust Control:** Dust resulting from the Contractor's performance of the work shall be controlled by the Contractor either by applying water or a dust palliative without additional costs to the District. The District Inspector has the full authority to suspend work wholly or in part should the Contractor fail to perform to the satisfaction of the District Inspector.

4.2.1.2 Existing Conditions

The following provides a discussion of the local and regional air quality and climate in the Project area.

Attainment Status. The CARB is required to designate areas of the State as attainment, nonattainment or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data does not support either an attainment or nonattainment status. The California Clean Air Act divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category. The USEPA also designates areas as attainment, nonattainment, or classified.

The attainment status for the SFBAAB is shown in Table 4.2.C. The SFBBAB is currently designated a nonattainment area for State and National O_3, State and National $PM_{2.5}$, and California PM_{10} AAQS.

Table 4.2.C: San Francisco Bay Area Air Basin Attainment Status

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Classification revoked (2005)
Ozone – 8-hour	Nonattainment (serious)	Nonattainment (marginal)[a]
PM_{10} – 24-hour	Nonattainment	Unclassified/Attainment[b]
$PM_{2.5}$ – 24-hour	Nonattainment	Nonattainment
CO – 8-hour and 1-hour	Attainment	Attainment
NO_2 – 1-hour	Attainment	Unclassified
SO_2 – 24-hour and 1-hour	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	Attainment	Unclassified/Attainment
All others	Unclassified/Attainment	Unclassified/Attainment

Source: California Air Resources Board. 2017, October 18. Area Designations Maps: State and National. Accessed July 31, 2019. http://www.arb.ca.gov/desig/adm/adm.htm. Bay Area Air Quality Management District. 2017. Air Quality Standards and Attainment Status. http://www.baaqmd.gov/about-air-quality/research-and-data/air-quality-standards-and-attainment-status Accessed July 31, 2019.

a. Severity classification current as of June 30, 2019 Environmental Protection Agency. 2019, June 30. California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. https://www3.epa.gov/airquality/greenbook/anayo_ca.html. Accessed July 31, 2019.)

b. In December 2014, US EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ National AAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Existing Climate and Air Quality. Contra Costa County lies east of the San Pablo Bay, bounded by Alameda County to the south, San Joaquin County to the east, and Solano and Sacramento counties to the north.

Temperatures in and around the San Ramon and Diablo Valleys are warm in the summer and cool in the winter, largely because of their distance from the moderating effect of water bodies and because the California Coast Range blocks marine air flow into the valleys. The Carquinez Strait region remains temperate due to its proximity to water and oceanic air flows. In winter, average daily temperatures are mild, with tule fog common at night. Average summer temperatures are typically mild overnight and warm during the day, with cooler temperatures and stronger winds more common along the western coast. Wind speeds are generally low throughout the region and winds typically blow from northwest to southwest. However, strong afternoon gusts are common in the northern portion of the county around the Carquinez Strait. Annual rainfall averages between 18 and 23 inches across the county.[13]

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. The San Francisco Bay keeps air temperatures above freezing in winter and well below 100 degrees on even the warmest summer days.[14]

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.[15]

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 levels, measured by peak concentrations and the number of days over the State 1-hour standard, have declined substantially as a result of aggressive programs by the BAAQMD and other regional, State and federal agencies. The reduction of peak concentrations represents progress in improving public health; however, the Bay Area still exceeds the State standard for 1-hour ozone as well as the State and federal 8-hour standards. Levels of PM_{10} have exceeded State standards two of the last three years, and the area is considered a nonattainment area for this pollutant relative to the State standards. The Bay Area is an unclassified area for the federal PM_{10} standard.

[13] Bay Area Air Quality Management District, 2016. *Contra Costa County Climate*. April 25.
[14] Ibid.
[15] Ibid.

No exceedances of the State or federal CO standards have been recorded at any of the region's monitoring stations since 1991. The Bay Area is currently considered a maintenance area for State and federal CO standards.

Air Quality Monitoring Results. Air quality monitoring stations are located throughout the nation and maintained by the local air pollution control district and state air quality regulating agencies. Ambient air data collected at permanent monitoring stations are used by the USEPA to identify regions as attainment or nonattainment depending on whether the regions met the requirements stated in the primary National Ambient Air Quality Standards (NAAQS). Attainment areas are required to maintain their status through moderate, yet effective air quality maintenance plans. Nonattainment areas are imposed with additional restrictions as required by the USEPA. In addition, different classifications of attainment such as marginal, moderate, serious, severe, and extreme are used to classify each air basin in the state on a pollutant-by-pollutant basis. Different classifications have different mandated attainment dates and are used as guidelines to create air quality management strategies to improve air quality and comply with the NAAQS by the attainment date. A region is determined to be unclassified when the data collected from the air quality monitoring stations do not support a designation of attainment or nonattainment, due to lack of information, or a conclusion cannot be made with the available data.

Pollutant monitoring results for the years 2014 to 2016 at the San Ramon 9885 Alcosta Boulevard ambient air quality monitoring station (the closest monitoring station to the project site) and where data were not available in San Ramon, the Concord 2975 Treat Boulevard are shown in Table 4.2.D. Based on the monitoring data, air quality in Contra Costa County has generally been good. As indicated in the monitoring results, one violation of the 1-hour State ozone standard was recorded in 2015 and 2016. The State 8-hour ozone standard was exceeded four times in 2014, six times in 2015, and twice in 2016. In addition, the federal 8-hour ozone standard was exceeded four times in 2014, six times in 2015, and once in 2016. The CO, PM_{10}, $PM_{2.5}$, NO_2, and SO_2 standards were not exceeded in this area during the 3-year period.

4.2.2 Research Methodologies

The BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. They also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines. These thresholds are designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA.

Table 4.2.D: Ambient Air Quality at the San Ramon 9885 Alcosta Boulevard Monitoring Station

Pollutant	Standard	2014	2015	2016
Carbon Monoxide (CO)[a]				
Maximum 1-hour concentration (ppm)		1.4	1.4	1.2
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.1	1.3	1.0
Number of days exceeded:	State: > 9 ppm	0	0	0
	Federal: > 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hour concentration (ppm)		0.086	0.106	0.101
Number of days exceeded:	State: > 0.09 ppm	0	1	1
Maximum 8-hour concentration (ppm)		0.077	0.085	0.083
Number of days exceeded:	State: > 0.07 ppm	4	6	2
	Federal: > 0.08 ppm	4	6	1
Coarse Particulates (PM_{10})[a]				
Maximum 24-hour concentration (µg/m^3)		42.5	24.0	19.0
Number of days exceeded:	State: > 50 µg/m^3	0	0	0
	Federal: > 150 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		14.1	13.1	11.5
Exceeded for the year:	State: > 20 µg/m^3	0	0	0
	Federal: > 50 µg/m^3	0	0	0
Fine Particulates ($PM_{2.5}$)[a]				
Maximum 24-hour concentration (µg/m^3)		30.6	31.0	20.7
Number of days exceeded:	Federal: > 35 µg/m^3	0	0	0
Annual arithmetic average concentration (µg/m^3)		6.7	8.8	6.1
Exceeded for the year:	State: > 12 µg/m^3	0	0	0
	Federal: > 12 µg/m^3	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-hour concentration (ppm)		0.037	0.037	0.026
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		ND	ND	ND
Exceeded for the year:	Federal: > 0.053 ppm	ND	ND	ND
Sulfur Dioxide (SO_2)[a]				
Maximum 1-hour concentration (ppm)		0.0029	0.00067	0.0011
Number of days exceeded:	State: > 0.25 ppm	0	0	0
Maximum 3-hour concentration (ppm)		ND	ND	ND
Number of days exceeded:	Federal: > 0.50 ppm	ND	ND	ND
Maximum 24-hour concentration (ppm)		0.00045	0.0002	0.00024
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.00045	0.000052	0.000077
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Source: USEPA, 2017.

[a] Data taken from the Concord – 2975 Treat Boulevard ambient air quality monitoring station

ND = No data. There was insufficient (or no) data to determine the value.

ppm = parts per million

µg/m3 = micrograms per cubic meter

In May 2011, the updated BAAQMD CEQA Air Quality Guidelines were amended to include a risk and hazards threshold for new receptors and modified procedures for assessing impacts related to risk and hazard impacts; however, this later amendment regarding risk and hazards was the subject of

the December 17, 2015, California Supreme Court decision (*California Building Industry Association v BAAQMD*), which clarified that CEQA does not require an evaluation of impacts of the environment on a project.[16] The supreme court also found that CEQA requires the analysis of exposing people to environmental hazards in specific circumstances, including the location of development near airports, schools near sources of toxic contamination, and certain exemptions for infill and workforce housing. The supreme court also held that public agencies remain free to conduct this analysis regardless of whether it is required by CEQA. To account for these updates, BAAQMD published a new version of the Guidelines, dated May 2017, which includes revisions made to address the supreme court's opinion.[17] This latest version of the BAAQMD CEQA Guidelines was used to prepare the analysis in this Draft EIR.

Operational Emissions. The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by mobile (indirect) sources associated with the proposed project. In addition, localized air quality impacts (i.e., higher carbon monoxide concentrations or "hot spots") near intersections or roadway segments in the project vicinity would potentially occur due to project generated vehicle trips.

Consistent with BAAQMD guidance for estimating emissions associated with land use development projects, the California Emission Estimator Model (CalEEMod v.2016.3.2) was used to calculate the long-term operational emissions associated with the project.

Construction Emissions. Construction activities can generate a substantial amount of air pollution. In some cases, the emissions from construction represent the largest air quality impact associated with a project. Construction activities are considered temporary; however, short term impacts can contribute to exceedances of air quality standards. Construction activities include site preparation, earthmoving and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips.

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16 On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. The court did not rule on the merits of the thresholds of significance, but found that the adoption of the thresholds was a project under CEQA. The court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the BAAQMD complied with CEQA. Following the court's order, the BAAQMD released revised CEQA Air Quality Guidelines in May of 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. The Alameda County Superior Court, in ordering BAAQMD to set aside the thresholds, did not address the merits of the science or evidence supporting the thresholds, and in light of the subsequent case history discussed below, the science and reasoning contained in the BAAQMD 2017 CEQA Air Quality Guidelines provide the latest state-of-the-art guidance available. On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA Guidelines. (California Building Industry Association v. BAAQMD, Case Nos. A135335 and A136212 [Court of Appeal, First District, August 13, 2013]).

17 Bay Area Air Quality Management District, 2017, California Environmental Quality Act Air Quality Guidelines, http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf, accessed on May 10, 2018.

CalEEMod was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site.

Greenhouse Gas Emissions. Greenhouse gas emissions associated with the proposed project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term greenhouse gas emissions associated with project-related vehicular trips. Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. CalEEMod was used to quantify greenhouse gas emissions generated by the proposed project.

4.2.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact on air quality if it would:

a. Conflict with or obstruct implementation of the applicable air quality plan;

b. Violate any air quality standard or contribute substantially to an existing or project air quality violation;

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

d. Expose sensitive receptors to substantial pollutant concentrations; or

e. Create objectionable odors affecting a substantial number of people.

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

a. Conflict with or obstruct implementation of the applicable air quality plan. The applicable air quality plan is the BAAQMD 2017 Clean Air Plan, which was adopted on April 19, 2017. The Clean Air Plan is a comprehensive plan to improve Bay Area air quality and protect public health. The Clean Air Plan defines a control strategy to reduce emissions and ambient concentrations of air pollutants; safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily affected by air pollution; and reduce greenhouse gas emissions to protect the climate. Consistency with the Clean Air Plan can be determined if the project does the following: 1) supports the goals of the Clean Air Plan; 2) includes applicable control measures from the Clean Air Plan; and 3) would not disrupt or hinder implementation of any control measures from the Clean Air Plan.

Transportation and Mobile Source Control Measures. The BAAQMD identifies control measures as part of the Clean Air Plan to reduce ozone precursor emissions from stationary, area, mobile, and transportation sources. The Transportation Control Measures are designed to reduce

emissions from motor vehicles by reducing vehicle trips and vehicle miles traveled (VMT) in addition to vehicle idling and traffic congestion. The proposed project is not expected to result in significant increase in the generation of vehicle trips or VMT. In addition, portions of the project site are located within walking or cycling distance from the surrounding residential areas, and therefore would support the ability of visitors to use alternative modes of transportation. Therefore, this proposed project would not conflict with the identified Transportation and Mobile Source Control Measures of the Clean Air Plan.

Land Use and Local Impact Measures. The Clean Air Plan includes Land Use and Local Impacts Measures (LUMs) to achieve the following: promote mixed-use, compact development to reduce motor vehicle travel and emissions; and ensure that planned growth is focused in a way that protects people from exposure to air pollution from stationary and mobile sources of emissions. The LUMs identified by the BAAQMD are not specifically applicable to the proposed project, as they relate to actions the BAAQMD will take to reduce impacts from goods movement and health risks in affected communities. The proposed project would include approximately 4.9 miles of new trails to be opened within an existing recreational area. Therefore, the proposed project would not conflict with any of the LUMs of the Clean Air Plan.

Energy Measures. The Clean Air Plan also includes Energy and Climate Control Measures, designed to reduce ambient concentrations of criteria pollutants and reduce emissions of CO_2. Implementation of these measures is intended to promote energy conservation and efficiency in buildings throughout the community, promote renewable forms of energy production, reduce the "urban heat island" effect by increasing reflectivity of roofs and parking lots, and promote the planting of (low-VOC-emitting) trees to reduce biogenic emissions, lower air temperatures, provide shade, and absorb air pollutants. The measures include voluntary approaches to reduce the heat island effect by increasing shading in urban and suburban areas through the planting of trees. The project would include a total of 4.9 miles of new trails that would be open to the public (3.5 miles of this would be newly constructed trails while 1.4 miles would be from existing roadbed). 1.1 miles of this trail system would incorporate EVMA, and 3.8 miles would be natural surface, multi-use trails for hikers, bicyclists, and equestrian. The proposed project would also include a staging area with all-weather parking to accommodate up to 25 vehicles. The proposed project would not increase ambient concentrations of criteria pollutants or emissions of CO_2. Therefore, the project would not conflict with the Energy and Climate Control Measures.

As discussed above, implementation of the proposed project would not disrupt or hinder implementation of the applicable measures outlined in the Clean Air Plan, including Transportation and Mobile Source Control Measures, Land Use and Local Impact Measures, and Energy Measures.

Clean Air Plan Implementation. As discussed above, implementation of the proposed project would generally implement the applicable measures outlined in the Clean Air Plan, including Transportation Control Measures. Therefore, the project would not disrupt or hinder implementation of a control measure from the Clean Air Plan and this impact would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. According to the BAAQMD, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself; result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Therefore, if daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a cumulatively significant impact.

As discussed below, implementation of the proposed project would generate less than significant operational emissions. As shown in the project-specific air quality impacts discussion below, the proposed project would not result in individually significant impacts and therefore would also not make a cumulatively considerable contribution to regional air quality impacts, and no mitigation measures would be required. This topic is not discussed further in this EIR.

d. Expose sensitive receptors to substantial pollutant concentrations. Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

According to the BAAQMD, a project would result in a significant impact if it would individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in one million, an increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 micrograms per cubic meter ($\mu g/m^3$). A significant cumulative impact would occur if the project, in combination with other projects located within a 1,000-foot radius of the project site, would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient $PM_{2.5}$ increase greater than 0.8 $\mu g/m^3$ on an annual average basis. Impacts from substantial pollutant concentrations are discussed below.

As described above, construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement Mitigation Measures described below. With implementation of these mitigation measures, project construction emissions would be below the BAAQMD significance thresholds and, once the project is constructed, the project would not be a source of substantial emissions. In addition, individuals using the trails would not be impacted by existing roadway emissions due to the short term use of the trails for recreation and distance of most trails from nearby roadways. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction or

operation. Potential impacts would be considered less than significant and no mitigation measures would be required. This topic is not discussed further in this EIR.

e. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people. Potential impacts would be considered less than significant and no mitigation measures would be required. This topic is not discussed further in this EIR.

4.2.4 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to air quality that would result from implementation of the proposed project.

4.2.4.1 Project Impacts

Potential project impacts related to the air quality of the project area and its surroundings are discussed below.

a. Would the project violate any air quality standard or contribute substantially to an existing or project air quality violation?

The following section describes the project's CO impacts and construction- and operation-related air quality impacts. The conclusions are summarized at the end of each subsection. As discussed below, impacts would be less than significant for localized CO emission and operational emissions. Impacts associated with construction-period emissions would be less than significant with implementation of recommended mitigation measures.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by excavation, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NOx, ROG, directly-emitted particulate matter (PM2.5 and PM10), and TACs such as diesel exhaust particulate matter.

Site preparation and project construction would involve grading, paving, and some building activities. Construction-related effects on air quality from the proposed project would be greatest during the grading phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near

the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROG and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

The trails would be constructed mostly with hand tools, which would only result in minimal amounts of pollutants. Construction emissions for the staging area and parking lots were estimated using CalEEMod, consistent with BAAQMD recommendations. Construction of the staging area and parking lots would include approximately 750 cubic yards of cut and approximately 100 cubic yards of fill, which were included as inputs to the CalEEMod analysis. Other specific construction details are not yet known; therefore, default assumptions (e.g., construction duration and fleet activities) from CalEEMod were used. The construction duration was assumed to occur for approximately 6 months.

Table 4.2.E: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Average Daily Emissions	0.7	6.9	0.4	0.4
BAAQMD Thresholds	54.0	54.0	82.0	54.0
Exceed Threshold?	**No**	**No**	**No**	**No**

Source: LSA, 2017.
BAAQMD = Bay Area Air Quality Management District
NO_x = nitrogen oxide
PM_{10} = Particulate Matter Less than 10 Microns in Aerodynamic Diameter
$PM_{2.5}$ = Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter
ROG = reactive organic gases

As shown in Table 4.2.E, construction emissions associated with the project would be less than significant for ROG, NO_x and $PM_{2.5}$ and PM_{10} exhaust emissions. The BAAQMD, City of San Ramon General Plan Implementing Policy 12.6-I-3, and Town of Danville General Plan Policy 34.03 require the implementation of Basic Construction Mitigation Measures to reduce construction dust (fugitive PM_{10} and $PM_{2.5}$) impacts to a less-than-significant level as follows:

Mitigation Measure AIR-1 Consistent with the Basic Construction Mitigation Measures required by the BAAQMD and City of San Ramon General Plan Implementing Policy 12.6-I-3, the following actions shall be incorporated into construction contracts and specifications for the project:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Park District regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

With implementation of Mitigation Measure AIR-1, project construction would have a less-than-significant impact on air quality.

Operational Air Quality Impacts. Long-term air emission impacts are those associated with area sources and mobile sources involving any change related to the proposed project. In addition to the short-term construction emissions, the project would also generate long-term air emissions, such as those associated with changes in permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as landscape equipment, would also result in pollutant emissions.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. Since much of the project traffic fleet would be made up of light-duty gasoline-powered vehicles, a majority of the PM_{10} emissions would result from entrainment of roadway dust from vehicle travel.

Typically, energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or cooking equipment. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. The proposed project would not include lighting at the staging area and would generate a minimal amount of energy source emissions.

Area source emissions associated with the project would include emissions from the use of landscaping equipment.

The project would result in low levels of off-site emissions due to energy generation associated with lighting. However, these emissions would be minimal and would not exceed the pollutant thresholds established by the BAAQMD.

The project would include a total of 4.2 miles of new trails that would be open to the public (approximately 2.8 miles of this would be newly constructed trails while 1.4 miles would be from existing trails or service roads). 2.5 miles of this trail system would incorporate EVMA, and 1.7 miles would be natural surface, multi-use trails for hikers, bicyclists, and equestrian. The proposed project would also include a staging area with all-weather parking to accommodate up to 25 vehicles.

Emission estimates for the project were calculated using CalEEMod. Model results are shown in Table 3.B. Trip generation rates for the project were based on the Circulation Assessment,[18] which estimates the proposed project would generate a maximum of 460 net new average daily trips associated with the additional parking spaces provided at the staging areas and trailheads. This analysis is conservative because the maximum daily trips would primarily occur during the peak season on weekend days.

The daily emissions associated with project operational trip generation, energy and area sources are identified in Table 4.2.F for ROG, NO_x, PM_{10}, and $PM_{2.5}$. The primary emissions associated with the project are regional in nature, meaning that air pollutants are rapidly dispersed when released, or in the case of vehicle emissions associated with the project, emissions are released in other areas of

[18] LSA, 2018. *Southern Las Trampas Land Use Plan Amendment Circulation Assessment*. May.

the air basin. Because the resulting emissions are dispersed rapidly and contribute only a small fraction of the region's air pollution, air quality in the immediate vicinity of the project site would not substantially change compared to existing conditions, or compared to the air quality monitoring data reported in Table 3.B. Model results are shown in Appendix C, Air Quality Impact Analysis.

Table 4.2.F: Project Operation Emissions

Project Construction	ROG	NO_x	PM_{10}	$PM_{2.5}$
Emissions in Pounds Per Day				
Area Source Emissions	0.0	0.0	0.0	0.0
Energy Source Emissions	0.0	0.0	0.0	0.0
Mobile Source Emissions	0.9	4.1	2.4	0.7
Total Emissions	**0.9**	**4.1**	**2.4**	**0.7**
BAAQMD Threshold	**54.0**	**54.0**	**82.0**	**54.0**
Exceed?				
Emissions in Tons Per Year				
Area Source Emissions	0.0	0.0	0.0	0.0
Energy Source Emissions	0.0	0.0	0.0	0.0
Mobile Source Emissions	0.2	0.7	0.4	0.1
Total Emissions	**0.2**	**0.7**	**0.4**	**0.1**
BAAQMD Threshold	**10.0**	**10.0**	**15.0**	**10.0**
Exceed?	**No**	**No**	**No**	**No**

Source: LSA, 2017.
BAAQMD = Bay Area Air Quality Management District
NO_x = nitrogen oxide
PM_{10} = Particulate Matter Less than 10 Microns in Aerodynamic Diameter
$PM_{2.5}$ = Particulate Matter Less than 2.5 Microns in Aerodynamic Diameter
ROG = reactive organic gases

The results shown in Table 4.2.F indicate the project would not exceed the significance criteria for daily ROG, NO_2, PM_{10} or $PM_{2.5}$ emissions; therefore, the proposed project would not have a significant effect on regional air quality and mitigation would not be required.

Therefore, the proposed project would not be a significant source of operational criteria pollutant emissions and this impact would be less than significant.

Localized CO Impacts. The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

Implementation of the proposed project would not conflict with the Contra Costa County Countywide Transportation Plan for designated roads or highways, a regional transportation plan, or other agency plans. The proposed project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, or increase traffic volumes at affected intersections to more than 24,000 vehicles per hour. Therefore, the project would not result in localized CO concentrations that exceed State or federal standards and impacts would be less-than-significant.

Significance after Mitigation: Less than significant.

4.2.4.2 Cumulative Impacts

CEQA defines a cumulative impact as two or more individual effects, which when considered together, are considerable or which compound or increase other environmental impacts. According to the BAAQMD, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Therefore, if daily average or annual emissions of operational-related criteria air pollutants exceed any applicable threshold established by the BAAQMD, the proposed project would result in a cumulatively significant impact.

The SFBAAB is currently designated a nonattainment area for California and National O_3, California and National $PM_{2.5}$, and California PM_{10} AAQS. Any project that produces a significant project-level regional air quality impact in an area that is in nonattainment adds to the cumulative impact. At a plan level, air quality impacts are measured by the potential for a project to exceed BAAQMD's significance criteria and contribute to California and National nonattainment designations in the SFBAAB. A project that exceeds the BAAQMD's significance criteria in the context of emissions from all other development projected within the entire SFBAAB would cumulatively contribute to impacts. Thus, per BAAQMD guidelines, the potential for the proposed project to result in cumulative air quality impacts is evaluated on an individual basis irrespective of other projects that may be occurring concurrently in the area (e.g., Faria Preserve Project and Chang Residential Project). The proposed project would not exceed BAAQMD's significance thresholds for criteria air pollutants, conflict with applicable air quality plans, expose sensitive receptors to substantial pollutant concentrations, or generate objectionable odors. Therefore, in combination with past, present, and reasonably foreseeable projects elsewhere within the SFBAAB and with implementation of applicable regulations, the proposed project would result in a *less-than-significant* cumulative impact with respect to air quality.

Significance without Mitigation: Less than significant.

4.3 BIOLOGICAL RESOURCES

This section provides an overview of the potential presence of biological resources in the project area, including identification of habitat types, suitability of habitat types for special-status species, likelihood for special-status species to occur, and an analysis of the project's potential to impact these habitats and species. The project area is shown on Figure 3-1 in Chapter 3.0, Project Description. The analysis of biological resources includes a description of the research methodologies applied to evaluation of biological resources, regulatory framework that guides the decision-making process, existing conditions in the project area, criteria for determining if the proposed project would result in significant impacts, potentially significant impacts, mitigation measures, and the level of significance after mitigation.

4.3.1 Research Methodologies

Prior to conducting fieldwork, the California Natural Diversity Database (CNDDB)[1] was searched for records of special-status plant and wildlife species and sensitive habitat occurrences within 5 miles of the project area and the special-status wildlife species list prepared by the Park District for Las Trampas was reviewed.[2]

To supplement the CNDDB review, the California Native Plant Society's Inventory of Rare and Endangered Plants of California (8th edition) was searched for records of special-status (rare) plant species[3] and the eBird bird species lists for Las Trampas were also reviewed.[4] Based on these data base searches, the list of special-status plant species presented in Section 4.3.2.3 was compiled and is used as a target list for special-status plants that could occur in the project area.

The USFWS Critical Habitat Portal[5] and current Google Earth aerial images of the site were also reviewed.

An official species list from the U.S Fish and Wildlife Service (USFWS)[6] was obtained for the project. This list identifies threatened, endangered, proposed and candidate plant and wildlife species, as well as proposed and final designated critical habitat, that may occur within the boundary of the project area and/or may be affected by the proposed project. Based on the wildlife research, the list of special-status wildlife species was developed and is presented in Section 4.3.2.3.

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1 California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database (CNDDB), RareFind 5 Commercial Version. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. February.

2 East Bay Regional Park District. 2017. Special Status Wildlife Species - Las Trampas Wilderness Regional Preserve. October 11.

3 California Native Plant Society (CNPS), Rare Plant Program. 2021. Inventory of Rare and Endangered Plants (online edition, v8-03). California Native Plant Society, Sacramento, CA. Website www.rareplants.cnps.org (accessed August 2021).

4 eBird. 2022. Species Lists for Las Trampas Regional Wilderness, Contra Costa County, California.

5 U.S. Fish and Wildlife Service (USFWS). 2021. Critical Habitat Portal. Website: ecos.fws.gov/crithab/ (accessed August 2021).

6 USFWS. 2022. Information for Planning and Consultation (IPaC). February 10.

4.3.1.1 Field Surveys

Reconnaissance-level surveys were conducted on July 26, 2018, and June 5, 2019, to assess current habitat conditions and evaluate the potential for the site to support special-status plant and animal species. The surveys were conducted by walking the entire proposed staging area and trail alignments and a 50-foot buffer on each side of the proposed trail alignments. The proposed Old Time Corral Staging Area and proposed trail alignment study areas also include the proposed staging area trailhead. Wildlife and plant species observed were recorded in field notes, and vegetation communities occurring along the proposed trail alignments were hand-drawn on an aerial photograph (i.e., oak woodland, grassland, or scrub).

A wetland delineation of the project area was completed on July 26, 2018, and June 5, 2019,[7] to map potential jurisdictional waters of the U.S. Potential jurisdictional boundaries were mapped using a global position system receiver with sub-meter accuracy. Boundaries were determined by following a combination of the limits of hydrophytic vegetation, observed wetland hydrology, hydrophytic soils, topographic breaks, and aerial ortho-photo interpretation.

Mapping of the vegetation at the project site was completed on June 5, and August 7, 2019. The vegetation communities were mapped according to the second addition of *A Manual of California Vegetation* (MCV2).[8]

4.3.1.2 Nomenclature

The scientific and vernacular nomenclature for plant species in this document are derived from Baldwin et al.[9] and updates listed on the Jepson Herbarium website.[10]

Vegetation types identified within the project area were classified to the alliance level according to MCV2.[11] These communities were classified to best align with the descriptions in the MCV2, if applicable; otherwise, the names of vegetation were selected based on the most prevalent form of vegetation present.

7 LSA. 2019. Aquatic Resources Delineation and Proposed Jurisdictional Determination, Southern Las Trampas Land Use Plan Amendment, Alameda County, California. November.

8 Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society. Sacramento, California.

9 Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley.

10 University of California, Berkeley. 2021. The University and Jepson Herbaria. Website: ucjeps.berkeley.edu2017/ (accessed August 3, 2021).

11 Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009, op. cit.

Common and scientific names for herpetofauna, birds, and mammals conform to Crother,[12] the American Ornithologists' Union (AOU) *Check-list of North American Birds* and supplements,[13] and Baker et al.,[14] respectively.

4.3.2 Setting

4.3.2.1 Regulatory Setting

In California, the process of reviewing projects and decisions that might impact biological resources is conducted under federal, State, and local laws. For the purposes of CEQA, special-status biological resources are defined to include the following:

- Any species identified as a federal candidate for listing, a sensitive species, or as having special status in local or regional plans, policies or regulations, by the California Department of Fish and Wildlife (CDFW) or USFWS;
- Habitat designated as State Sensitive Habitats by the CDFW Natural Heritage Program;
- Wetlands or other "waters of the United States" afforded protection pursuant to Section 404 of the Clean Water Act;
- Riparian or wetland habitats afforded protection pursuant to Section 1600 of the State Fish and Game Code (Code);
- Native resident or migratory wildlife corridors;
- Native wildlife nursery sites;
- Occupied nesting habitat for birds afforded protection pursuant to the Migratory Bird Treaty Act;
- Plants not protected by specific federal and State statutes that are afforded protection under CEQA Guidelines, Section 15380(b);

12 Crother, B.I. (ed.). 2017. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding, pp. 1-102. SSAR Herpetological Circular No. 43.

13 American Ornithologists' Union, 1998. *Checklist of North American Birds* and supplements. Seventh Edition. American Ornithologists' Union, Washington, D.C.

14 Baker, R.J., et al. 2003. *Revised checklist of North American mammals north of Mexico, 2003*. Museum of Texas Tech University Occasional Papers 229.

- Plants afforded protection as California Rare Plant Rank List 1 and List 2 plant species considered to meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act or Section 2062 and 2067 (California Endangered Species Act) of the California Fish and Game Code; and

- Plant and wildlife habitats afforded protection pursuant to Habitat Conservation Plans and Natural Community Conservation Plans.

Federal. The Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), National Environmental Policy Act, and Section 404 of the Clean Water Act are the primary federal planning, treatment, and review mechanisms for biological resources in the project area. Each is summarized below.

Endangered Species Act. The USFWS and the National Marine Fisheries Service (NMFS) are the designated federal agencies responsible for administering the ESA. The ESA defines species as "endangered" and "threatened" and provides regulatory protection for any species thus designated. Section 9 of the ESA prohibits the "take" of species listed by the USFWS as threatened or endangered. As defined in the ESA, taking means "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct." Recognizing that take cannot always be avoided, Section 10(a) of the ESA includes provisions for takings that are incidental to, but not the purpose of, otherwise lawful activities. Specifically, under Section 10(a)(1)(A) authorized take permits may be issued for scientific purposes (e.g., universities). Under Section 10(a)(1)(B) incidental take permits may be issued if taking is incidental and does not lead to jeopardy of the species.

Section 7(a)(2) of the ESA requires all federal agencies, including the USFWS, to evaluate projects with respect to any species proposed for listing or already listed as endangered or threatened and their critical habitat, if any is proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined in the ESA, "individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding."

Migratory Bird Treaty Act (16 U.S.C. Sections 703-711). The MBTA is the domestic law that affirms and implements a commitment by the United States to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. Unless and except as permitted by regulations, the MBTA makes it unlawful at any time, by any means, or in any manner to intentionally pursue, hunt, take, capture or kill migratory birds anywhere in the United States. The law also applies to the intentional disturbance and removal of nests occupied by migratory birds or their eggs during the breeding season. On December 22, 2017, the U.S. Department of the Interior redefined "incidental take" under the MBTA such that, "the MBTA's prohibition on pursuing, hunting, taking, capturing, killing, or attempting to do the same applies only to direct and affirmative purposeful actions that reduce migratory birds, their

eggs, or their nests, by killing or capturing, to human control." Thus, the federal MBTA definition of "take" does not prohibit or penalize the incidental take of migratory birds that results from actions that are performed without motivation to harm birds. This interpretation differs from the prior federal interpretation of "take," which prohibited all incidental take of migratory birds, whether intentional or incidental.

Section 404 of the Clean Water Act. Section 404 of the Clean Water Act, which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "waters of the United States." The USACE has established a series of nationwide permits that authorize certain activities in "waters of the United States," provided that the proposed activity can demonstrate compliance with standard conditions.

Normally, the USACE requires an individual permit for an activity that would affect an area in excess of 0.3 acre of "waters of the United States." Projects that result in impacts to less than 0.3 acre of "waters of the United States" can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. Use of any nationwide permit is contingent on no impacts to endangered species.

State. The California Endangered Species Act (CESA); the Native Plant Protection Act (NPPA); and Sections 1600-1603 of the State Fish and Game Code are the primary State planning, treatment, and review mechanisms for biological resources in the project area. Each is summarized below.

California Endangered Species Act. The CESA closely parallels the conditions of the federal ESA; however, it is administered by CDFW. The CDFW is authorized to enter into memoranda of understanding with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes. The CESA establishes a petitioning process for the listing of threatened or endangered species. The California Fish and Wildlife Commission is required to adopt regulations for this process and establish criteria for determining whether a species is endangered or threatened. CESA prohibits the "taking" of listed species except as otherwise provided in State law. Unlike the federal ESA, CESA applies the take prohibitions to species petitioned for listing (State candidates). State-lead agencies are required to consult with CDFW to ensure that any actions are not likely to jeopardize the continued existence of any State-listed species or result in destruction or degradation of required habitat. The CDFW is required to coordinate with the USFWS for actions that involve both federally- and State-listed species.

California State Fish and Game Code Sections 3503, 3503.5, and 3513. Under these sections of the California Fish and Game Code, a project operator is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds; or the taking of any nongame bird pursuant to California Fish and Game Code Section 3800. Fish and Game Code Section 3513 adopts the U.S. Department of the Interior take provisions under the MBTA.

The Native Plant Protection Act. The NPPA, enacted in 1977, includes measures to preserve, protect, and enhance rare and endangered native plants. There are 64 species, subspecies, and

varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. Individual land owners are required to notify the CDFW at least ten days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

Sections 1600-1603 of the State Fish and Game Code. All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports fish or wildlife resources are subject to the regulatory authority of the CDFW pursuant to Sections 1600 through 1603 of the State Fish and Game Code. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. Specifically, Section 1603 of the Code governs private-party individuals, and Section 1601 of the Code governs public projects.

CDFW jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. The CDFW must be contacted by the public or private party for a Streambed Alteration Agreement for any project that might impact a streambed or wetland. The CDFW maintains a "no net loss" policy regarding potential impact and requires replacement of lost habitats on at least an acre-for-acre basis.

Section 2081 of the State Fish and Game Code. Under Section 2081 of the Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess, any endangered, threatened, or candidate species in the State of California. These acts that are otherwise prohibited may be authorized through permits or memoranda of understanding if: 1) the take is incidental to an otherwise lawful activity; 2) impacts of the authorized take are minimized and fully mitigated; 3) the permit is consistent with any regulations adopted pursuant to any recovery plan for the species; and 4) the applicant ensures adequate funding to implement the measures required by CDFW. CDFW makes this determination based on the best scientific and other information that is reasonably available and includes consideration of the species' capability to survive and reproduce.

Local Resource Protection Ordinances and Policies. City and county ordinances and general plan policies, Park District 2013 Master Plan policies, and Park District Ordinance 38 are the primary local planning, treatment, and review mechanisms for biological resources in the project area. Other local planning policy documents are also considered where applicable. Each is summarized below.

City and County General Plan Policies. City and county ordinances and general plan policies provide guidance on Park District parklands from the planning stage through project implementation. Relevant city and county general plan policies pertaining to biological resources in the project area are described in Table 4.3.A, below.

Table 4.3.A: City and County Biological Resources Goals and Policies

Goal/Policy Item Number	Goal/Policy
Contra Costa County General Plan – Open Space Element	
8-D	To protect ecologically significant lands, wetlands, plant and wildlife habitats.
8-E	To protect rare, threatened and endangered species of fish, wildlife and plants, significant plant communities, and other resources which stand out as unique because of their scarcity, scientific value, aesthetic quality or cultural significance. Attempt to achieve a significant net increase in wetland values and functions within the County over the life of the General Plan. The definition of rare, threatened and endangered includes those definitions provided by the Federal Endangered Species Act, the California Endangered Species Act, the California Native Plant Protection Act and the California Environmental Quality Act
8-6	Significant trees, natural vegetation, and wildlife populations generally shall be preserved.
8-13	The critical ecological and scenic characteristics of rangelands, woodlands, and wildlands shall be recognized and protected.
8-p	Cooperate with, encourage and support the plans of appropriate public agencies to acquire privately-owned lands in order to provide habitat protection for the maintenance of rare, threatened or endangered plant and animal species.
8-u	Encourage the propagation of native oaks in foothill woodlands, where appropriate, by limiting cattle grazing to compatible light or moderate levels, and/or encouraging the replanting of native oak species. Proper planting and maintenance techniques are necessary to ensure the long-term survival of newly establish oaks.
8-78	Where feasible, existing natural waterways shall be protected and preserved in their natural state, and channels which already are modified shall be restored. A natural waterway is defined as a waterway which can support its own environment of vegetation, fowl, fish and reptiles, and which appears natural.
8-79	Creeks and streams determined to be important and irreplaceable natural resources shall be retained in their natural state whenever possible to maintain water quality, wildlife diversity, aesthetic values, and recreation opportunities.
Town of Danville 2030 General Plan – Resources and Hazards Element	
21.01	Preserve and enhance natural habitat areas that support wildlife, including large continuous areas of open space and wetland and riparian habitat.
21.02	Maintain open space in appropriate areas, including areas of scenic beauty, areas of economically viable agriculture, and areas where natural hazards such as flooding and land instability preclude safe development.
23.01	Share information about important local biological, productive, and historic resources with other communities and agencies in the region and work with these communities and agencies to protect such resources.
23.02	Work with other communities and agencies to protect and enhance the significant ecological communities of the Tri-Valley area, including wetlands, riparian areas, and oak woodlands.
23.04	Support efforts to incorporate Danville's scenic ridgelines into a larger, regional open space framework that connects parts of the Tri-Valley area.
City of San Ramon General Plan 2035 – Open Space and Conservation	
8.3-G-2	Strengthen the City's partnership with East Bay Regional Parks District, Contra Costa County, other jurisdictions and private organizations to expand the ridgeline and hillside open space system in the City's Planning Area.
8.3-I-1	Preserve, protect, and maintain significant native oak woodlands.
8.3-I-4	Require maintenance plans for open space areas, including identified natural resources such as ridges and waterways.
8.3-I-8	Encourage public access to creek corridors, as appropriate.
8.3-G-1	Expand the ridgeline and hillside open space system in the City's Planning Area by joint efforts with East Bay Regional Parks District, Contra Costa County and nonprofit trustee agencies.
8.4-I-1	Confer with appropriate agencies and organizations in the creation of an institutional framework and financing mechanisms necessary to acquire additional ridgeline areas and agricultural lands, and to preserve, restore, and manage important open space.

Source: Contra Costa County General Plan (2005), Town of Danville 2030 General Plan (2013), San Ramon General Plan 2035 (2015).

East Bay Regional Parks. The following provides a description of Park District policy documents and technical specifications that would apply to the proposed project and the protection of biological resources.

2013 Park District Master Plan. The 2013 Park District Master Plan defines the long-term vision for lands managed by the Park District. The Master Plan provides a decision-making framework and identifies policies that will achieve District-wide objectives. Development objectives, land use classifications, and planning and management guidelines are established by the Master Plan. Many of these policies generally address the protection and management of wildlands and biological resources, including special-status wildlife and plant species and their habitats, and are applicable to the existing and future operations and maintenance of all District lands, including Las Trampas.

District Wildland Management Policies and Guidelines (2001). The 2001 Wildland Management Policies and Guidelines were developed to provide general guidance pertaining to the administration and stewardship of Park District parklands to ensure the proper use and enhancement of wildland resources. These policies and guidelines address vegetation management, wildland seeding, native grassland restoration, riparian and wetland resources, and protection of plant and wildlife species and apply modern management practices to biological resources based on scientific principles and supported by available research. Implementation of these policies and guidelines would continue with implementation of the project concurrent with the Park District's Fuels Management and Integrated Pest Management (IPM) programs.

Park District Ordinance 38. Portions of Ordinance 38 address the disturbance of biological park features of significance on Park District lands. Relevant sections that are applicable to public use of Park District lands, including Las Trampas, and are enforced by the Park District to avoid disturbance to biological resources through the existing and future use of Park District lands, are summarized below.

- **Section 800.** This section states that "No person shall hunt, molest, disturb, injure, trap, take, net, poison, harm, or kill any kind of wild animal whether living or dead, nor remove, destroy or in any manner disturb the natural habitat of any animal…." And further states: "All State Fish and Game laws and regulations, which are applicable, shall apply (rev.4/16)."

- **Section 803.** This section states that "…No person shall feed ... feral or wild animals at any time on District parklands.

- **Section 804.** This section states that "No person shall damage, injure, collect or remove any plant or tree or portion thereof, whether living or dead, including but not limited to flowers, mushrooms, bushes, vines, grass, turf, cones and dead wood located on District parklands. In addition, any person who willfully or negligently cuts, destroys or mutilates vegetation shall be arrested or issued a citation pursuant to Penal Code Section 384a."

- **Section 810.** This ordinance states that "No person shall ride or operate a bicycle or ride a horse within a posted Special Protection Area, except on designated trails. Special Protection Areas are designated by the Board to preserve cultural and/or natural resources (added 4/12)."

Standard Technical Specifications and Supplementary Conditions. The Park District's Standard Technical Specifications and Supplementary Conditions contain provisions that are intended to ensure, among other things, the safety of the construction workers, staff and the public, and the protection of wildlife, site resources, and water quality during construction and operation of site amenities. Relevant sections are summarized below.

Project Cleanliness.

- The Contractor shall keep the project site and the surrounding areas free from accumulations of waste material and rubbish generated by employees and subcontractors. The Contractor shall remove daily all rubbish, tools, equipment and surplus materials leaving the work "broom clean" at the completion of each day, unless a different nature of cleanup or repair is specified elsewhere in the Contract Documents.

Work Hours.

- The hours of work shall be any 8.5-hour block as mutually agreed upon between the Contractor and the District between half hour after sunrise and half hour before sunset, Monday through Friday.

- No night work shall be permitted.

Environmental Protection Training.

- All workers shall complete an on-site training session conducted by a District Biologist at the start of construction and the Contractor shall provide a list of workers for on-site training by the District Biologist.

- All site supervisors and workers of the contractor and subcontractors shall attend the training.

- Workers who do not attend the training at the start of construction shall attend a subsequent training session. The Contractor shall notify the District Inspector one week prior to the anticipated arrival of new workers, to schedule a training session.

- Only workers who have completed the training shall be allowed to work on site. At the discretion of the Biological Monitor, untrained workers may perform one-time deliveries and similar minor construction support activities where there is no ground disturbance, provided that they are supervised by a trained member of the Contractor's supervisory staff.

- The District Inspector or Biological Monitor may stop construction until untrained workers are either off site or trained.

- The Biological Monitor is on site to observe construction activities, so the Contractor may not work on site while the Biological Monitor is training workers.

The purpose of the training is to:

- Familiarize personnel with rare, threatened and endangered species which may be present at the work site.

- Provide an overview of the laws, regulations and violation penalties governing protection of the species.

- Provide directions and information on how to avoid and minimize contact with the species, and what to do if they are encountered.

Site Set-up – Execution.

- Confine work activities to approved construction work areas, staging areas and access routes.

- Excavations shall not be left open overnight. Where not backfilled, excavations shall be tightly covered. Perimeters of plywood panels or other covers shall be edged with dirt to prevent intrusion of small animals.

- Excavations shall include a ramp with a maximum slope of 1:1 to allow animals to escape the excavation when not covered.

- Storage of equipment and vehicles shall be a minimum of 100 feet from the top of the creek bank.

- Fueling of equipment and vehicles shall take place a minimum of 200 feet from the top of the creek bank.

Erosion Control Storm Water Pollution Prevention Plan (SWPPP) Requirements.

- In addition to the requirements of the CASQA or Caltrans standard, the SWPPP shall contain an Erosion Control Plan that includes the following provisions:

    - Fiber rolls and erosion control blankets shall not contain netting that could trap small animals.

    - Photodegradable products are not acceptable.

    - All erosion control products shall be weed and seed free.

- All temporary erosion control measures shall be immediately removed when no longer needed.

- All temporary erosion control measures shall be removed and legally disposed of prior to project completion.

Clearing and Grubbing.

- Stripped material shall be disposed of off-site and in a legal manner or stockpiled for reuse as directed by the District.

- Upon completion of clearing and grubbing, areas shall be left in a neat, clean condition ready to receive subsequent work.

Excavated Material.

- All excavated material shall be piled in a manner which will not endanger the work and which will avoid completely obstructing access. Culverts, swales, and natural drainage patterns shall be kept clear.

- The excavations and support system shall comply in all respects with the requirements of Article 6, of the Construction Safety Orders of the Division of Industrial Safety.

- At no time shall trenches be left open during the Contractor's non-working hours. Trenches shall be backfilled to grade and/or covered with plywood or traffic-rated metal plates and pipe ends securely closed with a tight-fitting plug or cover at the end of each workday.

- All open excavations 5 feet or greater in depth shall be constructed with bracing, sheeting, shoring, or other equivalent method designed for the protection of life and limb in accordance to Section 6705 of the State Labor Code.

- The trench excavations and support system shall comply in all respects with the requirements of Article 6, of the Construction Safety Orders of the Division of Industrial Safety.

Protection of Existing Trees and Shrubs.

- Contractor shall protect all trees in work areas, staging areas and along construction access.

- No construction vehicle may be parked or driven within the drip line of a tree unless approved by the District Inspector.

- Snow fencing or equal barriers shall be placed around drip line of trees to be protected in place.

- When it is necessary to excavate adjacent to existing trees and shrubs, Contractor shall use all possible care to avoid injury to these plants and their roots. No roots three (3) inches or larger in diameter shall be cut without the prior approval of the District.

- In no case shall any limbs be cut or trees and shrubs removed without first obtaining approval from the District.

Supplementary Conditions.

- The California State Water Resources Control Board, San Francisco Bay Region, Oakland, California has jurisdiction over the project storm water discharges within the Project area. Accordingly, the following actions will be required prior to initiating implementation of the project: 1) the District will submit a Notice of Intent (NOI) and obtain a waste discharger identification number (WDID) from the above agency; 2) a Receipt of NOI will be obtained by the District from State Water Resources Control Board (SWRCB) prior to the start of construction; and 3) the Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) in conformance with SWRCB No. 92-08 DWQ for discharges of storm water runoff associated with construction activity.

Pathogen Controls Best Management Practices. 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.

Dry soil poses a low risk for spreading Sudden Oak Death because dry soil is less apt to stick to surfaces and the amount of viable *Phytophthora ramorum* inoculum on the surface of dry soil is very low. *P. ramorum* can survive, and appears to reproduce, in watercourses that drain Sudden Oak Death-affected watersheds, which can contain spores of *P. ramorum*. More spores are typically present in watercourses during the wet season, but spores may be present in some streams year-round. Moist soil on hiking boots and bicycle tires has also been shown to spread Sudden Oak Death, as have vehicles driven on dirt roads that pass through lands infested with P. *ramorum*, especially when conditions are muddy.

To minimize the spread of this pathogen, the Park District has adopted the following Phytophthora Best Management Practices.

General.

1. *Phytophthora ramorum* is the plant pathogen known to cause the Sudden Oak Death disease. The disease kills oak and other plant species, significantly woody

ornamentals, and has had devastating effects on the oak populations in California. Symptoms include bleeding cankers on the tree's trunk and dieback of the foliage, in many cases eventually leading to the death of the tree.

2. Equipment refers to any implement used to perform maintenance activities or travel to and from work sites. These include vehicles, mowers, skip loaders, tractors, weed eaters, shovels, rakes, etc.

3. While absolute sanitation is difficult to attain, Contractors shall make every practicable effort to use the following District Best Management Practices (BMPs) during the project's installation and Plant Establishment period to aid in preventing possible sudden oak death disease at the Project sites.

District General Construction BMPs Before Entering District Property. The following procedures must be followed before entering any District property, including but not limited to project area, to make sure vehicles and gear, tools and boots are free of potentially infected soil, weed propagules, seed or other debris.

1. **Worker Training.** Before entering the job site, field workers are to receive training that includes information on *Phytophthora* diseases and how to prevent the spread of these and other soil-borne pathogens by following approved phytosanitary procedures.

2. **Clothing and Gear.** At the start of work at each new job site, worker clothes should be free of all mud or soil. If clothes are not freshly laundered, workers shall remove all debris and adhered soil with a stiff brush. All gear should be cleaned with brushes, air or water to remove as much visible mud and debris as possible.

3. **Vehicles and Large Equipment.** Vehicles that only travel and park on paved public roads do not require external cleaning. Before arrival at construction sites, vehicles must be free of soil and debris including on tires, wheel wells, vehicle undercarriages, and other surfaces. Vehicles may be cleaned at a commercial vehicle or appropriate truck washing facility. The interior of vehicles and equipment (cabs, etc.) must be also be free of mud, soil, gravel and other debris (vacuumed, swept or washed).

District General Construction BMPs Before Leaving the Project Construction Sites. To minimize the potential for *P. ramorum* to spread beyond the project area, the following procedures must be followed before leaving project construction sites to make sure vehicles and gear, tools and boots are free of potentially infected soil, weed propagules, seed or other debris.

1. **Cleaning Equipment and Gear On-Site.** Scrub, brush and pick off soil, vegetation or other debris from shoes, saws, vehicles and other equipment at the field or work site (this method is 99 percent effective at removing infectious propagules and weed seeds). Other methods may include: blowing compressed air, followed by

water or sanitizing solution, if necessary. When water is used, the Contractor is to ensure that no erosion occurs, or waterways are contaminated.

2. **Cleaning Area.** Cleaning should be conducted on a surface that is unlikely to allow cleaned materials to become re-contaminated, such as pavement, a plastic tarp, or a continuous layer of gravel.

3. **Follow-up Cleaning.** If complete on-site sanitation is not possible, decontamination can be completed at a local power wash facility or in an isolated area at an off-site equipment yard.

Preventing Potential Spread of Contamination within Sites. In a partially infested site, the potential for *Phytophthora* to spread within the site needs to be addressed. As it is not practical to identify every portion of a site that contains or is free of *P. ramorum* because *P. ramorum* contamination is not visible, work practices should minimize unnecessary movement of soil within locations to prevent potential pathogen spread sign using the following BMPs.

1. Whenever possible, work on *P. ramorum*-infected and -susceptible species during the dry season. When working in wet conditions, keep equipment on paved or dry surfaces and avoid mud.

2. Do not bring more vehicles into work sites than necessary. Within the site, keep vehicles on surfaced or graveled roads whenever possible to minimize soil movement.

3. Travel off roads or on unsurfaced roads should be avoided when such roads are wet enough that soil will stick to vehicle tires and undercarriages. In intermittently wet areas, avoid visits when roads are wet; schedule activities during dry conditions when the risk of moving wet soil is minimal.

4. Vehicles should be cleaned before leaving infested areas and before entering new areas.

5. Sanitize pruning gear and other equipment before working in an area with susceptible plants to avoid transporting the *P. ramorum* pathogen throughout the site, or from an infested location to other non-infested locations.

6. Do not use untreated water from potentially infested streams for irrigation, dust control on roads, or similar purposes. Water can be treated with ultrafiltration, chemicals (chlorine, ozone), or UV radiation to eliminate *Phytophthora* spores.

7. Conform to all federal and state regulations and inspections to prevent the movement of *P. ramorum*-infested nursery stock.

District BMPs Community Outreach. As moist soil on hiking boots and bicycle tires has been shown to spread Sudden Oak Death, the Park District is working on implementing an outreach program that includes information on BMPs for minimizing the spread of *P. ramorum*. This information is incorporated into park brochures, on-site information panels and the Park District website.

Information includes, but is not limited to, the following guidance:

1. The East Bay Hills contains environments conducive to *P. ramorum*, the plant pathogen known to cause the Sudden Oak Death disease.

2. To minimize the spread of *P. ramorum*, wherever possible, Park visitors should:

    a. Stay on paved, rocked and well-traveled trails; and avoid cross-country travel, especially under wet conditions.

    b. Avoid wet areas as the risk of spreading pathogens or weeds increases with the amount of mud, soil and organic debris that adheres to shoes, tools, bicycles, pets, etc.

4.3.2.2 Existing Conditions

This section provides a description of the biological resources present within the project area. For the purposes of the biological resources analysis, the project area consists of areas where new construction would occur, which includes the proposed staging area and corral (0.75 acre), the Sabertooth Trail (1.1 miles), Warbler Loop Trail (0.8 mile), and Calaveras Ridge Trail (0.9 mile), and a 50-foot buffer on each side of the proposed trail alignments.

The proposed project also includes actions which do not involve ground disturbance (see Section 4.3.2.4 Project Elements). However, as these project elements would not result in construction related impacts, they are addressed separately in the Operational Impact Analysis included at the end of Section 4.3.4.1.

Existing conditions at the site are established at the time that the Notice of Preparation was published, on July 29, 2019. Database searches and literature reviews occurred at this time and were updated in 2022. Reconnaissance level field surveys were conducted on July 26, 2018 and June 5, 2019. The existing conditions descriptions below also reflect District staff knowledge of the project area and observational updates that have occurred since the NOP was circulated.

Soils. The Sabertooth Trail and Old Time Staging Area contain soils that are mapped as predominantly Los Osos clay loam, 30 to 50 percent slopes. Additionally, smaller areas of Millsholm loam, 15 to 60 percent slopes, are present. The trailhead or staging area consists of Botella clay loam, 2 to 9 percent slopes. These soils are all upland soils that are quite common in hilly terrain in Alameda and Contra Costa Counties. They are not normally hydric. The soils are grassland soils and normally have dark surface horizons due to incorporation of decomposing organic material.

The Calaveras Ridge Trail study area soils are mapped as Los Osos clay loam, 15 to 30 percent slopes, and Millsholm loam, 20 to 60 percent slopes. These soils are all upland soils that are quite common in hilly terrain in Alameda and Contra Costa Counties. They are not normally hydric. These soils are grassland soils and normally have dark surface horizons due to incorporation of decomposing organic material.

The Warbler Loop Trail soils are mapped as predominantly Los Osos clay loam, 30 to 50 percent slopes. Additionally, smaller areas of Millsholm loam, 15 to 60 percent slopes, are present. The trailhead or staging area consists of Botella clay loam, 2 to 9 percent slopes. These soils are all upland soils that are quite common in hilly terrain in Alameda and Contra Costa Counties. They are not normally hydric. The soils are grassland soils and normally have dark surface horizons due to incorporation of decomposing organic material.

Project Site Elevations. Elevation ranges at the trail alignments and staging area are the following:

- **Old Time Staging Area and Corral:** 740 - 780 feet (225 - 237 meters) above sea level.
- **Sabertooth Trail:** 750 - 1,360 (228 - 415 meters) feet above sea level.
- **Warbler Loop Trail:** 770 - 950 feet (235 - 290 meters) above sea level.
- **Calaveras Ridge Trail:** 900 - 1,200 feet (274 - 365 meters) above sea level.

Natural Communities. Natural communities, or habitat types, are assemblages of plants and animals found in particular 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 CDFW tracks the occurrences of natural plant communities that are of limited distribution Statewide or within a county or region and are often vulnerable to environmental effects of projects. In the most recent list of vegetation alliances/natural communities recognized in California,[15] alliances with a NatureServe Subnational (S) ranking code of S1 through S3 are considered to be "highly imperiled" and impacts to stands of these vegetation types/natural communities may be considered significant under CEQA. A Global (G) conservation ranking code is also used to indicate how imperiled species are at a global scale. These special-status natural communities are sometimes considered by lead or trustee agencies, but generally are not afforded the same protection as California Rare Plant Rank List 1B and 2 plant species. Many special-status natural communities support special-status plants and animals and are addressed under CEQA as habitat for those species. For those vegetation types described in this EIR that have a NatureServe Ranking ranging from G1 S1 to G3 S3, the ranking is provided in the description. In California and on a global basis, a G1 S1 ranking indicates a critically imperiled species, a G2 S2 ranking indicates an imperiled species, and a G3 S3 ranking indicates a vulnerable species.

Most types of wetlands and riparian communities are also considered special-status natural communities due to their limited distribution in California. While impacts to such communities may

[15] California Department of Fish and Wildlife (CDFW). 2019. California Natural Community List. Biogeographic Data Branch, Vegetation Classification and Mapping Program. Available online at: www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities (accessed November 8, 2019).

be considered significant under CEQA, wetlands and riparian communities are also afforded legal protection under Sections 401 and 404 of the federal Clean Water Act and Section 1602 of California Fish and Game Code (see above). Project proponents impacting wetlands and/or riparian communities must therefore obtain permits from the USACE, the Regional Water Quality Control Board (RWQCB), and/or CDFW as well as comply with CEQA. As such, these communities are typically addressed separately from "non-jurisdictional" special-status natural communities when evaluating project impacts under CEQA.

Vegetation communities and associated wildlife habitats on the project site include open grasslands, woodlands, riparian woodland, oak savanna, areas of brush, and drainages. The vegetation communities were classified into one of three overriding general vegetation type classifications based on the dominance, co-dominance, or presence of trees, shrubs, or herbaceous species. These classes include Class A: tree-overstory (woodland/forest) vegetation; Class B: shrubland vegetation; and Class C: herbaceous vegetation. A summary of the vegetation types and their acreage within the survey area are provided in Table 4.3.C. Figure 4.3-1 depicts the general land cover within the LUPA. Figure 4.3-2 depicts the location of these vegetation types. All of these vegetation types are described below. MCV2 classification of vegetation types within the project site are analogous to the alliances presented in MCV2.

Table 4.3.C: Vegetation Types within the Project Area

General Vegetation Type	Vegetation Alliance	Acres
Woodland Vegetation	Coast live oak woodland – Upland (*Quercus agrifolia – Umbellularia californica* Woodland)	3.11
	Coast live oak woodland – Riparian (*Quercus agrifolia* Woodland)	0.92
	Valley oak woodland (*Quercus lobata* Woodland Alliance)	0.40
Shrubland Vegetation	California sagebrush scrub (*Artemisia californica* Shrubland Alliance)	0.46
	Black sage scrub (*Salvia mellifera* Shrubland Alliance)	0.14
	Chamise chaparral (*Adenostoma fasciculatum* Shrubland Alliance)	0.05
	Arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance)	0.54
Grassland Vegetation	Non-native grassland (*Avena barbata – Bromus [diandrus, hordeaceus]* Provisional Semi-Natural Herbaceous Alliance)	54.77
	Creeping rye grass turfs (*Elymus triticoides** Herbaceous Alliance)	0.33

Source: Compiled by LSA (2021)
Note: Revisions to the scientific plant names have occurred since the publication of MCV2 in 2009. Changes are denoted with an asterisk (*). For creeping rye grass (*Elymus triticoides*), the current name was changed from *Leymus triticoides*.
Acreage shown depicts vegetation types mapped in the project area, which includes the entire proposed staging area and trail alignments and a 50-foot buffer on each side of the proposed trail alignments.

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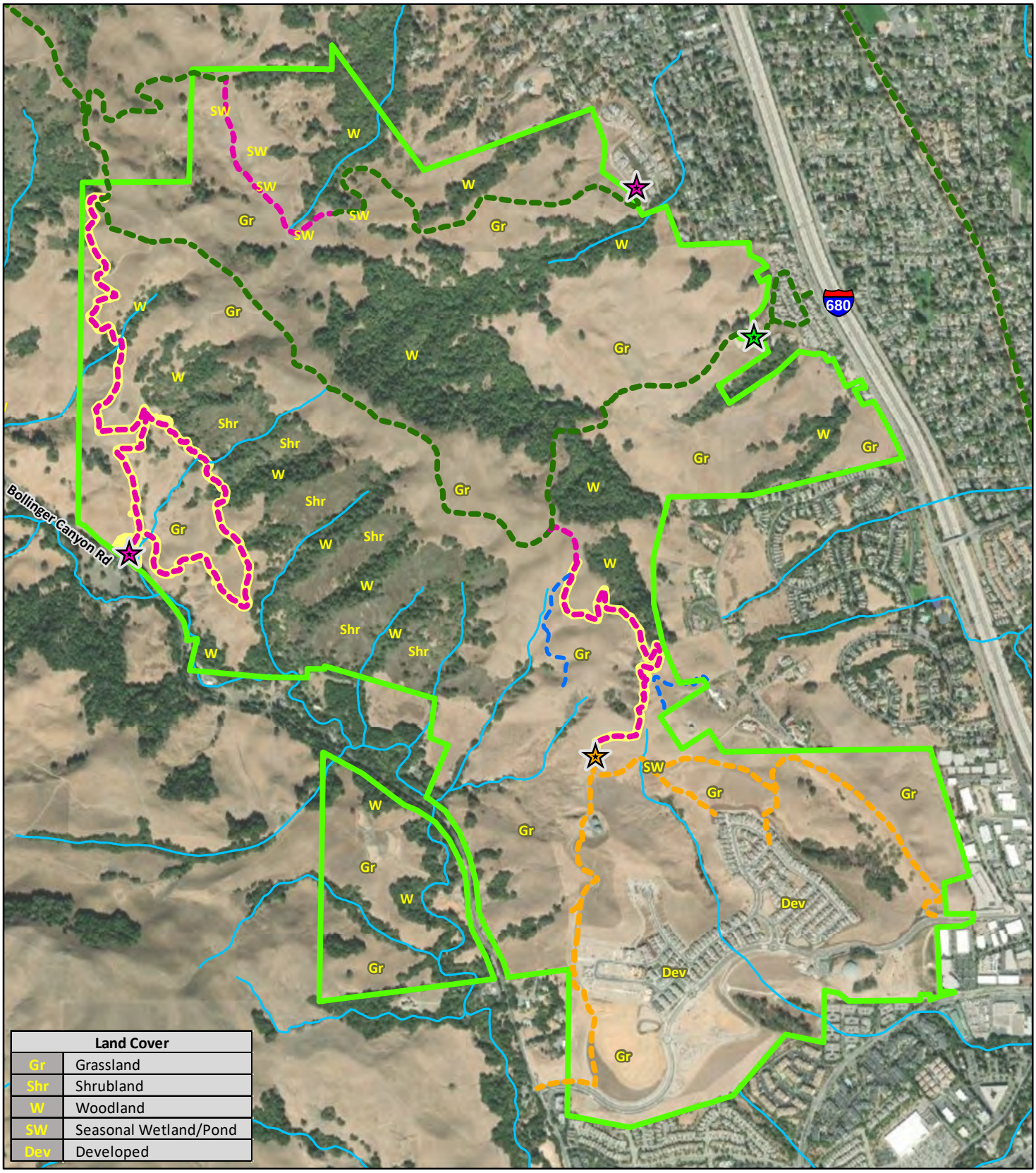

Land Cover	
Gr	Grassland
Shr	Shrubland
W	Woodland
SW	Seasonal Wetland/Pond
Dev	Developed

LSA

LEGEND

- Project Area
- Existing Public Access
- Proposed Public Access
- Other Public Access
- Proposed New Construction
- Existing EBRPD Trails
- Proposed EBRPD Trails
- Proposed Trails By Others
- Proposed Trail Closure
- Stream

0 700 1400
FEET

SOURCE: EBRPD (2019); USGS (09/2019).

FIGURE 4.3-1

Southern Las Trampas LUPA EIR

General Land Cover within the LUPA

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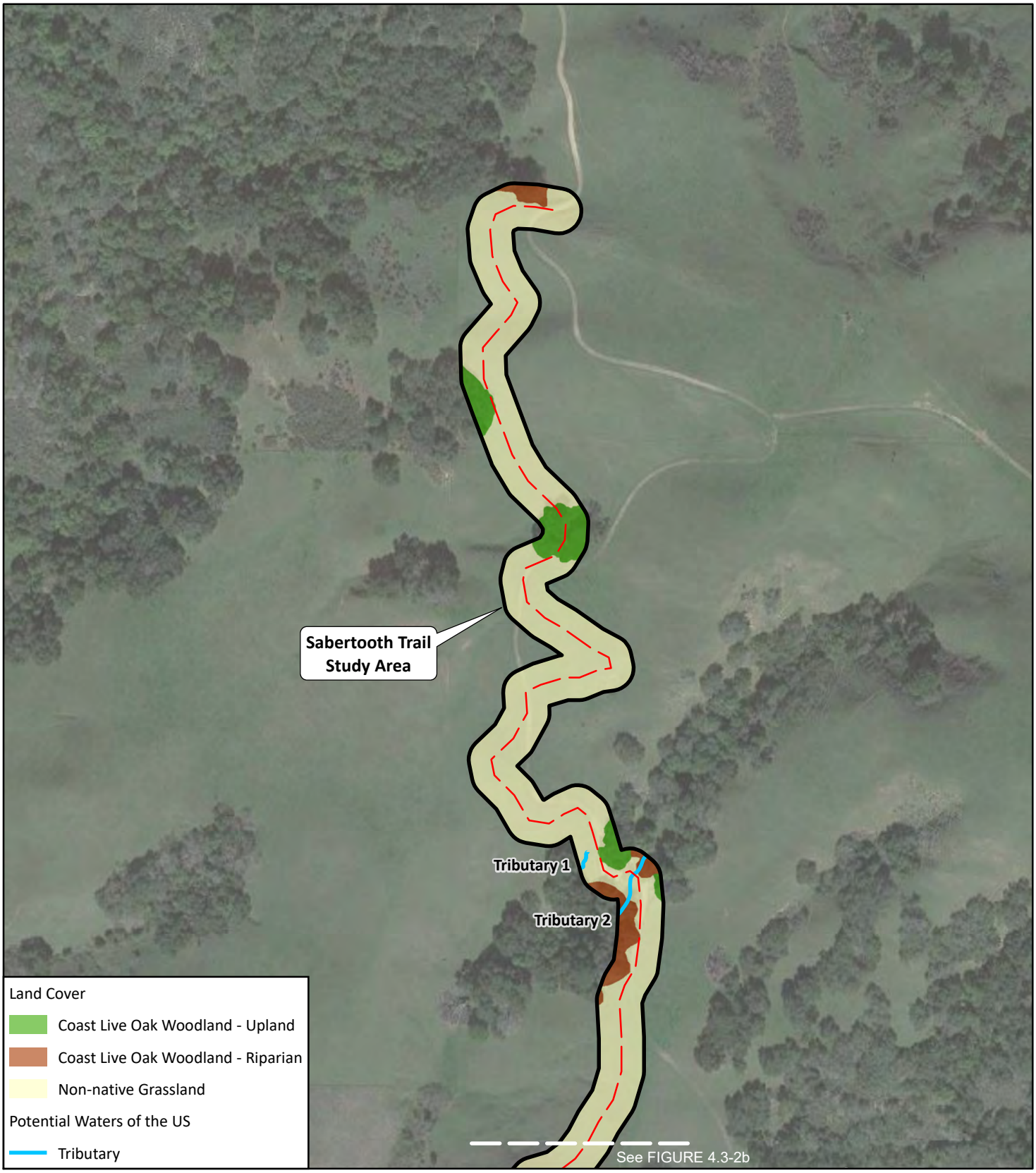

LSA

LEGEND

Study Area

Proposed Trail Alignment

N

0 150 300

FEET

SOURCE: Google Maps Sat (2020).

FIGURE 4.3-2a

Southern Las Trampas LUPA EIR

Land Cover Types and Potential Waters - Sabertooth Trail (Northern Portion)

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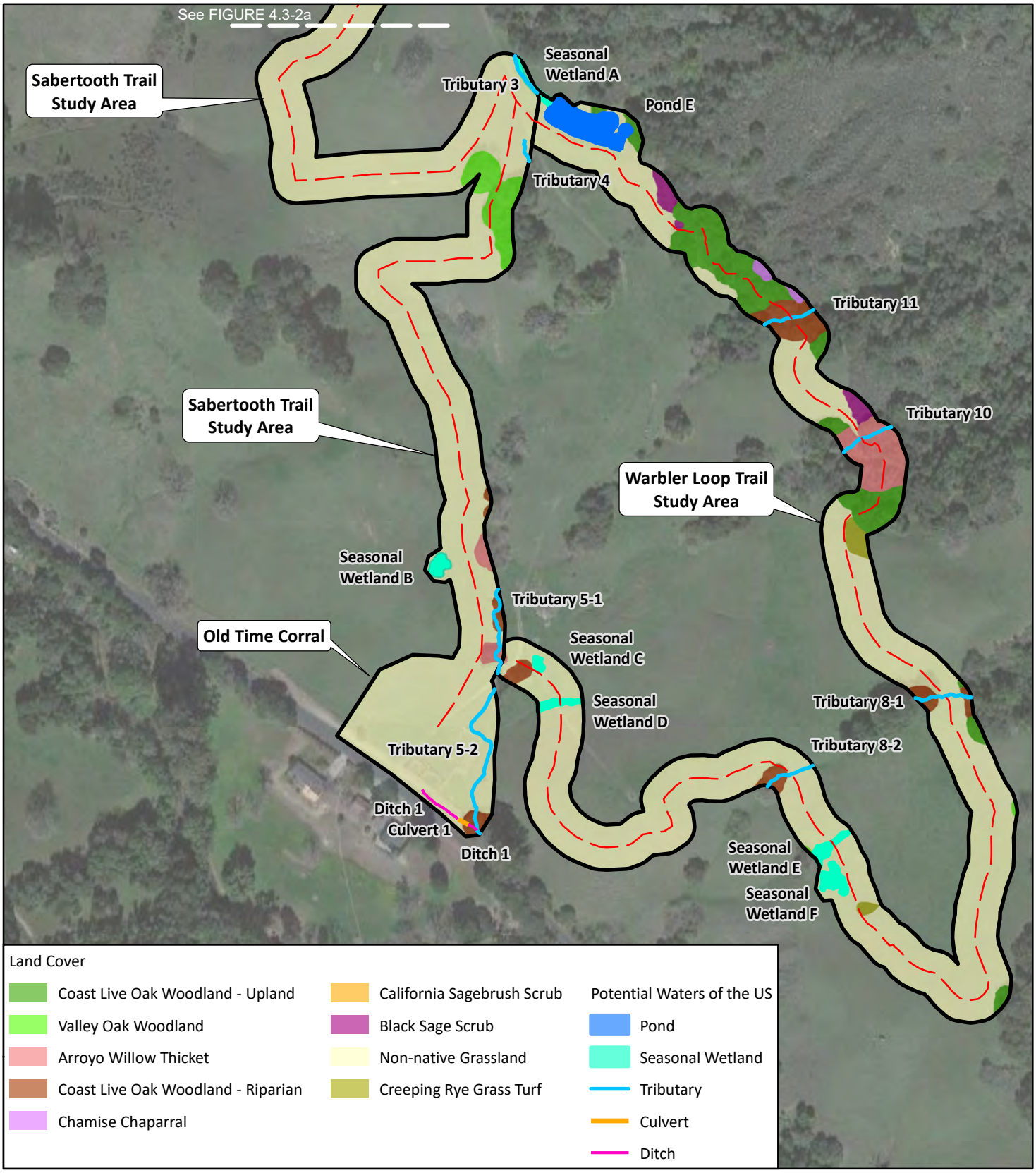

LSA

LEGEND

Study Area

Proposed Trail Alignment

N

0 150 300

FEET

SOURCE: Google Maps Sat (2020).

FIGURE 4.3-2b

Southern Las Trampas LUPA EIR

Land Cover Types and Potential Waters - Sabertooth Trail (Southern Portion), Warbler Loop Trail and Old Time Corral

I:\EBR1801\GIS\Maps\EIR\Figure_4.3-2b_Land Cover Types and Potential Waters - Sabertooth (South) and Warbler Loop Trails.mxd (9/10/2021)

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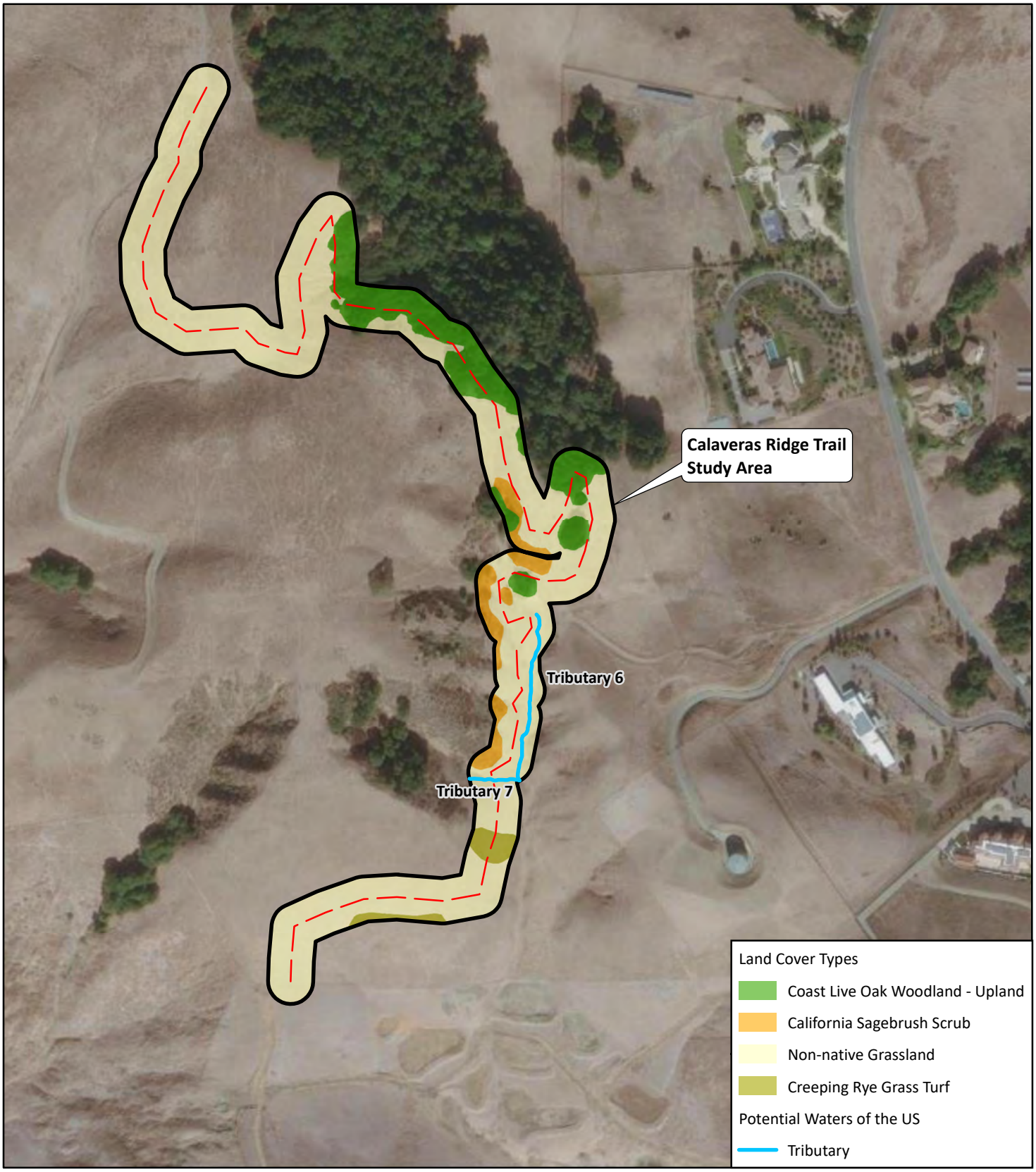

LSA

LEGEND

Study Area

Proposed Trail Alignment

FIGURE 4.3-2c

N

0 150 300

FEET

SOURCE: Esri World Imagery (2021).

Southern Las Trampas LUPA EIR

Land Cover - Calaveras Ridge Trail

I:\EBR1801\GIS\Maps\EIR\Figure_4.3-2c_Land Cover Types and Potential Waters - Calaveras Ridge Trail.mxd (9/10/2021)

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This page intentionally left blank Woodland Vegetation. Vegetation within this general classification is dominated, co-dominated, or is characterized by an even distribution of overstory trees. Woodland and forest vegetation on the project site consist of Valley Oak Woodland (*Quercus lobata* Woodland Alliance) and Coast Live Oak Woodland (*Quercus agrifolia* Woodland Association).

Valley Oak Woodland. Valley oak woodland occurs on the project site as mostly scattered single or pairs of valley oak trees. Plant species within the understory of valley oak woodland are associated with the non-native annual grassland vegetation type as is described below. This vegetation type is considered a sensitive natural community in the CNDDB.[16] This vegetation type has a high concern for conservation with a NatureServe ranking code of G3 S3 (Globally and State rare, uncommon or threatened, but not immediately imperiled).[17]

Coast Live Oak Woodland. Coast live oak woodland is found along much of the proposed trail alignment and occurs in upland and riparian settings. Although this vegetation type is dominated by coast live oak, other trees are present including California bay (*Umbellularia californica*) and California buckeye (*Aesculus californica*). Pacific madrone (*Arbutus menziesi*) was also observed in lower frequency. Plants in the understory include a variety of species including California maidenhair fern (*Adiantum jordanii*), mugwort (*Artemisia douglasiana*), ripgut brome (*Bromus diandrus*), Italian thistle (*Carduus pycnocephalus*), mouse-ear chickweed (*Cerastium glomeratum*), miner's lettuce (*Claytonia perfoliata* ssp. *perfoliata*), bristly dogtail grass (*Cynosurus echinatus*), woodfern (*Dryopteris arguta*), goosegrass (*Galium aparine*), cutleaf geranium (*Geranium dissectum*), toyon (*Heteromeles arbutifolia*), sticky monkey-flower (*Diplacus aurantiacus*), pacific sanicle (*Sanicula crassicaulis*), hedgeparsley (*Torilis arvensis*), and poison oak (*Toxicodendron diversilobum*).

Shrubland Vegetation. Vegetation within this general classification is dominated, co-dominated, or is characterized by woody shrubs. These vegetation types are often associated with soils that are shallow and dry, and often on slopes landforms. California sagebrush scrub (*Artemisia californica* Shrubland Alliance) was mapped along the Calaveras Ridge Trail.

California Sagebrush Scrub. California sagebrush scrub occurs in rocky areas, which are scattered along the proposed Calaveras Ridge Trail alignment. The dominant species in this vegetation type is California sagebrush. Other plants commonly associated with this vegetation type on the project site are primarily perennial species including coyote brush (*Baccharis pilularis*), morning glory (*Calystegia purpurata*), soap plant (*Chlorogalum pomeridianum*), California fuchsia (*Epilobium canum*), sticky monkeyflower, and poison oak. The open stands of California sagebrush scrub on the project site form a mosaic with non-native annual grasslands and grassland species, such as wild oats (*Avena barbata*) and ripgut brome, which can be found within the openings between individual shrubs.

16 California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database (CNDDB), RareFind 5 Commercial Version. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. February.

17 Ibid.

Black Sage Scrub. Black sage scrub is growing along the Warbler Loop Trail. The dominant species in this vegetation type is black sage. This vegetation type is comprised of an assemblage of other scrub plant species including chamise, California sagebrush, coyote brush, and sticky monkeyflower. Herbaceous species observed within or on the periphery of black sage scrub include deer weed (*Acmispon glaber*), silver hairgrass (*Aira caryophyllea*), coyote mint (*Monardella villosa*), skunk navarretia (*Navarretia melita*), and Wright's cudweed (*Pseudognaphalium canescens*). This vegetation type is associated with shallow and dry soils on sloping landforms.

Chamise Chaparral. Chamise chaparral is growing along the Warbler Loop Trail. The dominant species in this vegetation type is chamise. Other plants commonly associated with this vegetation type on the project site are primarily perennial species including coyote brush, California sagebrush, toyon, sticky monkeyflower, and poison oak.

Herbaceous Vegetation. Vegetation within this general classification is dominated, co-dominated, or is characterized by non-woody, herbaceous species, including grasses, graminoids, and broad-leaved herbaceous species. Shrubs, if present, usually comprise less than 5 percent of the vegetation cover and trees generally comprise less than 5 percent cover as well. Dry upland grasslands occurring on the project site consist of an assemblage of species found in wild oats grasslands (*Avena barbata* Semi-Natural Herbaceous Stands) and annual brome grasslands (*Bromus* [*diandrus*, *hordeaceus*] Semi-Natural Herbaceous Stands). These stands intergrade in various proportions and are therefore classified as an alliance between the vegetation types and have been lumped together into the more generalized category of non-native grasslands (*Avena barbata – Bromus* [*diandrus*, *hordeaceus*] Semi-Natural Alliance). One other, more distinct, herbaceous vegetation type, creeping rye grass turfs (*Elymus triticoides* Herbaceous Alliance), was observed within the project site; this vegetation type is associated with seasonally wet slopes.

Non-Native Grassland. Grasslands on the project site consist of mostly non-native grassland species. Non-native grasslands are the most prevalent vegetation type on the project site and are dominated by wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*B. hordeaceus*), and Italian rye grass (*Festuca perennis*). In addition to the abundance of annual grasses within this category, this vegetation type also supports non-native forbs (broad-leaved plants), including mustard (*Brassica* sp.), Italian thistle (*Carduus pycnocephalus*), and yellow star-thistle (*Centaurea solstitialis*), smooth cat's ear (*Hypochaeris glabra*), California bur clover (*Medicago polymorpha*), Harding grass (*Phalaris aquatica*), fiddle dock (*Rumex pulcher*), milk thistle (*Silybum marianum*), and hairy vetch (*Vicia villosa*). Native herbaceous species were observed in low frequency within this vegetation type, including common yarrow (*Achillea millefolium*), purple clarkia (*Clarkia purpurea* subsp. *quadrivulnera*), California poppy (*Eschscholzia californica)*, and cream cups (*Platystemon californicus*).

Creeping Rye Grass Turfs. This vegetation type is dominated by a creeping rye grass, a facultative wetland plant that grows on poorly drained clay soils that are seasonally wet. Stands of creeping rye grass turf on the project site were found on slopes within the non-native grassland. This vegetation type is considered a sensitive natural community in the CNDDB. This vegetation type has a high concern for conservation with the CNDDB rarity ranking of G3 S3

(Globally and State rare, uncommon or threatened, but not immediately imperiled, but assigned rank is uncertain).

Riparian Habitat. Although the dominant plant of the arroyo willow thickets (*Salix lasiolepis* Shrubland Alliance), is a tree, its description is presented in the shrublands category as classified in MCV2.

Arroyo Willow Thickets. Stands of arroyo willow occur in riparian or moist hillside settings in the project area. The understory of this dense, thicket-forming vegetation type is sparsely occupied by annual grassland species.

The Arroyo willow thickets and portions of the Coast Live Oak woodland that overlap the tributaries are considered riparian habitat under CEQA and by CDFW.

Wetlands. Potential Clean Water Act Section 404 waters of the United States identified in the staging area and along the proposed trail alignments include approximately 0.22 acre of tributaries (including one ditch and culvert), and approximately 0.38 acre of adjacent waters of the United States for a total potentially jurisdictional area of 0.60 acre (see Table 4.3.D and Figure 4.3-2).

Table 4.3.D: Summary of Potential Jurisdictional Waters of the United States

	Length (linear feet)	Width (linear feet)	Area (square feet)	Area (acre)
STUDY AREA 1 - SABERTOOTH TRAIL AND OLD TIME CORRAL STAGING AREA				
Tributaries (Including Potentially Jurisdictional Ditches and Culverts)				
Tributary 1	50	2	100	0.002
Tributary 2	150	6	900	0.021
Tributary 3	100	4	400	0.009
Tributary 4	50	4	200	0.005
Tributary 5-1	200	3	600	0.014
Tributary 5-2	380	8	3,040	0.070
Ditch 1	130	2	260	0.006
Culvert 1	30	1	30	0.001
Adjacent Waters				
Seasonal Wetland A	-	-	530	0.012
Seasonal Wetland B	-	-	1,430	0.03
STUDY AREA 2 – WARBLER LOOP TRAIL				
Tributaries (Including Potentially Jurisdictional Ditches and Culverts)				
Tributary 8-1	130	8	1,040	0.024
Tributary 8-2	120	6	720	0.017
Tributary 10	120	4	480	0.011
Tributary 11	120	8	960	0.022
Adjacent Waters				
Seasonal Wetland C	-	-	500	0.01
Seasonal Wetland D	-	-	1,050	0.02
Seasonal Wetland E	-	-	1,500	0.03
Seasonal Wetland F	-	-	2,180	0.05
Pond E	-	-	11,560	0.27

Table 4.3.D: Summary of Potential Jurisdictional Waters of the United States

	Length (linear feet)	Width (linear feet)	Area (square feet)	Area (acre)
STUDY AREA 3 – CALAVERAS RIDGE TRAIL				
Tributaries (Including Potentially Jurisdictional Ditches and Culverts)				
Tributary 6	390	2	780	0.018
Tributary 7	110	1	110	0.003
Adjacent Waters				
None				
SUMMARY				
All Tributaries, Ditches, Culverts	2,080	-	9,620	0.223
All Adjacent Waters	-	-	18,750	0.438
All Potentially Jurisdictional Features	2,080	-	28,370	0.603

Source: Compiled by LSA (2022).

A total of 12 tributaries, 6 seasonal wetlands, 1 pond, 1 ditch, and 1 culvert were identified within or adjacent to the proposed staging area and trail alignments. Most of these tributaries and seasonal wetlands are located near the Warbler Loop Trail, Sabertooth Trail Connection, and Old Time Corral Staging Area. These potentially jurisdictional features support hydrophytic plant species, such as seaside barley (*Hordeum marinum*), rabbit's-foot grass (*Polypogon monspeliensis*), rush (*Juncus* spp.), and Italian rye.

Developed. Developed areas within the project area consist of gravel access roads, utility poles, and structures related to the corral at the proposed Old Time Corral Staging Area.

Wildlife. Wildlife species likely to occur within the project area are those adapted to the non-native grassland and coast live oak and riparian woodland communities of the Central Coast Range foothills surrounding San Francisco Bay. The vegetation communities present at or near the trail alignments and staging area (see Figures 4.3-2a through 4.3-2c) are part of a larger matrix of plant communities providing wildlife habitat (see Figure 4.3-1). Wildlife species observed during the reconnaissance-level surveys are listed in Table 4.3.E. This EIR assumes many additional species are likely to occur on the site throughout the year based on the review of other databases.

Table 4.3.E: Wildlife Species Observed During the Field Surveys

Common Name	Scientific Name	Status
Amphibians		
California red-legged frog	*Sceloporus occidentalis*	R/CSC/FT
Pacific tree frog	*Pseudacris regilla*	R
Reptiles		
Western fence lizard	*Sceloporus occidentalis*	R
California kingsnake	*Lampropeltis californiae*	R
Birds		
Mallard	*Anas platyrhynchos*	R
California quail	*Callipepla californica*	R
Wild turkey	*Meleagris gallopavo*	R/I

Table 4.3.E: Wildlife Species Observed During the Field Surveys

Common Name	Scientific Name	Status
Rock pigeon	*Columba livia*	R/I
Mourning dove	*Zenaida macroura*	R
White-throated swift	*Aeronautes saxatalis*	R
Anna's hummingbird	*Calypte anna*	R
Turkey vulture	*Cathartes aura*	R
Red-shouldered hawk	*Buteo lineatus*	R
Red-tailed hawk	*Buteo jamaicensis*	R
Acorn woodpecker	*Melanerpes formicivorus*	R
Nuttall's woodpecker	*Picoides nuttallii*	R
Northern flicker	*Colaptes auratus*	R
Ash-throated flycatcher	*Myiarchus cinerascens*	S
Black phoebe	*Sayornis nigricans*	R
Say's phoebe	*Sayornis phoebe*	W
Steller's jay	*Cyanocitta stelleri*	R
California scrub-jay	*Aphelocoma californica*	R
Common raven	*Corvus corax*	R
Tree swallow	*Tachycineta bicolor*	S
Violet-green swallow	*Tachycineta thalassina*	S
Barn swallow	*Hirundo rustica*	S
Chestnut-backed chickadee	*Poecile rufescens*	R
Oak titmouse	*Baeolophus inornatus*	R
Bewick's wren	*Thryomanes bewickii*	R
Wrentit	*Chamaea fasciata*	R
Western bluebird	*Sialia mexicana*	R
European starling	*Sturnus vulgaris*	R/I
Lesser goldfinch	*Spinus psaltria*	R
House finch	*Haemorhous mexicanus*	R
Grasshopper sparrow	*Ammodramus savannarum*	R/CSC
Dark-eyed junco	*Junco hyemalis*	R
Savanna sparrow	*Passerculus sandwichensis*	W
Lazuli bunting	*Passerina amoena*	S
Spotted towhee	*Pipilo maculatus*	R
Western meadowlark	*Sturnella neglecta*	R
Brewer's blackbird	*Euphagus cyanocephalus*	R
Orange-crowned warbler	*Oreothlypis celata*	R
Mammals		
California ground squirrel	*Spermophilus beecheyi*	R/burrows
Botta's pocket gopher	*Thomomys bottae*	R/burrows
California vole	*Microtus californicus*	R
Mouse species	*Peromyscus* sp.	R
San Francisco dusky-footed woodrat	*Neotoma fuscipes annectens*	R/houses/CSC
Black-tailed deer	*Odocoileus hemionus*	R
Coyote	*Canis latrans*	R/scat

Source: Compiled by LSA (2022).
CSC = California Species of Special Concern
FT = Federally Threatened Species
I = Introduced
R = Year-round resident; expected to nest/breed on the Project site or vicinity
S = Spring/summer resident; may nest in the Project site or vicinity
W = Winter resident; winters on or near site but migrates out of Bay Area to nest

Non-Native Grassland Wildlife Species. The extensive annual grassland in the project area provides habitat for a variety of native wildlife species. Common amphibians and reptiles likely to occur (potentially occurring special-status species are discussed later in this section) include Pacific treefrog (*Pseudacris regilla*), western toad (*Bufo boreas*), western fence lizard, southern alligator lizard (*Elgaria multicarinatus*), gopher snake (*Pituophis catenifer*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*). The openness of grasslands provides ideal foraging habitat for raptors such as golden eagle (*Aquila chrysaetos*), turkey vulture, red-tailed hawk, and American kestrel (*Falco sparverius*).

Smaller songbirds that use grasslands for foraging and/or nesting include grasshopper sparrow (*Ammodramus savannarum*), western bluebird, savanna sparrow, and western meadowlark. Botta's pocket gopher and California ground squirrel (*Otospermophilus beecheyi*) appear to be the primary burrowing mammals on the site; California ground squirrel were observed at lower elevations of the trail alignment within the Chen property. Common mammals likely to use the grassland portions of the site include deer mice (*Peromyseus* sp.), California vole, coyote (*Canis latrans*), northern raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereoargenteus*), and black-tailed deer.

Oak and Riparian Woodland Wildlife Species. The riparian woodland supports a more diverse species assemblage than grassland due to increased structural diversity of vegetation provided by trees, shrubs, and leaf litter. The increased leaf litter, moisture content, and, in some areas, understory vegetation, of riparian woodland provides increased foraging opportunities and cover for amphibians and reptiles. Many of the grassland species listed above are also likely to occur in the woodlands, with the addition of species that prefer leaf litter and woody ground cover such as arboreal salamander (*Aneides lugubris*) and California slender salamander (*Batrachoseps attenuatus*).

Common bird species that occur in the riparian woodland include Anna's hummingbird (*Calypte anna*), Steller's jay (*Cyanocitta stelleri*), California scrub-jay, Bewick's wren, and dark-eyed junco. The woodland also supports species more closely associated with more natural, undeveloped landscapes such as Pacific-slope flycatcher (*Empidonax difficilis*), orange-crowned warbler (*Oreothlypis celata*), and spotted towhee (*Pipilo crissalis*). Larger trees and snags provide nesting habitat for raptors such as red-tailed hawk, red-shouldered hawk (*Buteo lineatus*), Cooper's hawk (*Accipiter cooperii*), barn owl (*Tyto alba*), and great horned owl (*Bubo virginianus*).

Most of the same mammal species that occur in grassland are likely to inhabit the riparian woodlands. The linear nature of riparian woodlands facilitates movement and dispersal for these species. A San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*) house was observed near the middle of the proposed Calaveras Ridge Trail alignment. Larger trees and snags may occasionally support roosting bat species such as big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*) (winter and migration only), pallid bat (*Antrozous pallidus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), and Yuma myotis (*Myotis yumanensis*).

Wetland Wildlife Species. Wildlife observed at the wetlands consist of California red-legged frog (*Rana draytonii*), Pacific tree frog, garter snake (*Thamnophis sp.*), and mallard. Other birds, such

as great egret (*Ardea alba*) and great blue heron (*Ardea herodias*), are likely to reside at the ponds and seasonal wetlands when water is present.

4.3.2.3 Special-Status Species

For the purposes of the analysis in this EIR, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal ESA or CESA.
- Plant species assigned to California Rare Plant Ranks Lists 1A, 1B, or 2.
- Animal species designated as Species of Special Concern or Fully Protected Species by the CDFW.
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA Guidelines.
- Species considered as a taxon of special concern by local agencies.

Special-Status Plants. Based on the results of the data base search and literature review, 21 special-status plant species were evaluated as potentially occurring in the site vicinity (Table 4.3.F). Of these species, eleven are not likely to occur on the site due to the lack of suitable habitat. The following seven special-status plant species may occur or have a low potential to occur due to the presence of marginal habitat in onsite woodlands and grasslands, but are nevertheless assumed to be potentially present in the project area:

- Bent-flowered fiddleneck (*Amsinckia lunaris*; CRPR List 1B)
- Big-scale balsamroot (*Balsamorhiza macrolepis*; CRPR List 1B)
- Round-leaved filaree (*California macrophylla*; CRPR List 1B)
- Mount Diablo fairy-lantern (*Calochortus pulchellus*; CRPR List 1B)
- Diamond-petaled California poppy (*Eschscholzia rhombipetala*; CRPR List 1B)
- Diablo helianthella (*Helianthella castanea*; CRPR List 1B)
- Common viburnum (*Viburnum ellipticum*; CRPR List 1B)

Out of these seven species, two – Mount Diablo fairy-lantern and common viburnum – have been observed in Las Trampas and are included in the Park District's Checklist of Wild Plants for Las Trampas Regional Wilderness.[18] Neither of these species were observed during the 2019 reconnaissance-level surveys.

Special-Status Wildlife. Based on the results of the data base search, literature review and the reconnaissance-level field surveys, 32 special-status wildlife species were evaluated for the project area (Table 4.3.G). Of these species, the following were determined to be present or potentially

[18] East Bay Regional Park District. 2018. Checklist of Wild Plants for Las Trampas Regional Wilderness. May 23.

present on the project site due to the presence of suitable habitat. These species are further discussed below.

- California tiger salamander (*Ambystoma californiense;* Federally Threatened, California Threatened)
- California red-legged frog (*Rana draytonii;* Federally Threatened, California Species of Special Concern)
- Western pond turtle (*Emys marmorata*; California Species of Special Concern)
- Alameda whipsnake (*Masticophis lateralis euryxanthus*; Federally Threatened, California Threatened)
- Burrowing owl (*Athene cunicularia*; California Species of Special Concern)
- Long-eared owl (*Asio otus*; California Species of Special Concern)
- Northern harrier (*Circus hudsonius*; California Species of Special Concern)
- Golden eagle (*Aquila chrysaetos*; California Fully Protected Species)
- White-tailed kite (*Elanus leucurus*; California Fully Protected Species)
- Vaux's swift (*Chaetura vauxi*; California Species of Special Concern)
- Olive-sided flycatcher (*Contopus cooperi*; California Species of Special Concern)
- Grasshopper sparrow (*Ammodramus savannarum*; California Species of Special Concern)
- Loggerhead shrike (*Lanius ludovicianus*; California Species of Special Concern)
- San Joaquin kit fox (*Vulpes macrotis mutica*; Federally Endangered, California Threatened)
- San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*; California Species of Special Concern)
- Pallid bat (*Antrozous pallidus*; California Species of Special Concern)
- Western red bat (*Lasiurus blossevillii*; California Species of Special Concern)
- American badger (*Taxidea taxus*; California Species of Special Concern)
- Mountain lion (*Puma concolor*; Candidate California Listed)
- Monarch butterfly (*Danaus plexippus*; Candidate Federally Listed)
- Western bumble bee (*Bombus occidentalis*; Candidate State Listed)
- Crotch bumble bee (*Bombus crotchii*; Candidate State Listed)

Table 4.3.F: Special-Status Plant Species Evaluated for the Project

Species	Status[1] (Federal/ State/CRPR)	Habitat/Blooming Period	Potential to Occur
Amsinckia grandiflora Large-flowered fiddleneck	FE/CE/1B	Occurs on grassy slopes in cismontane woodland and valley and grassland in annual grasslands. General micro habitat requirements are vaguely described as annual grassland in various soils. Plants cannot tolerate disturbance due to grazing, gophers, and competition from dense annual grasses. Elevation: 270-550 m. Blooms: (March) April-May	**Unlikely present.** This species is unlikely to occur due to disturbance related to grazing and growth of thick annual grasses. Species is extremely rare and presumed extinct in Contra Costa County. Species known at the Lawrence Livermore National Laboratory. No CNDDB occurrences have been recorded within 5 miles of the site.
Amsinckia lunaris Bent-flowered fiddleneck	–/–/1B	Occurs on gravelly slopes in valley and foothill grassland, coastal bluff scrub, and openings within cismontane woodland. This species is often found on serpentine Elevation: 5-800 m. Blooms: March-June	**Potentially present.** Marginally suitable habitat is present within the project site's oak woodlands and grasslands. The closest CNDDB occurrence is approximately 1.9 miles from the Sabertooth Trail alignment, along Las Trampas Ridge Trail and Chamise Trail in the Las Trampas Regional Wilderness Preserve.
Arctostaphylos manzanita ssp. laevigata Contra Costa manzanita	–/–/1B	Rocky slopes in chaparral. Elevation: 150-610 m. Blooms: January-March	**Not present.** No manzanita species were observed during the reconnaissance field surveys. The closest CNDDB occurrence is approximately 4.9 miles from the Calaveras Trail alignment.
Arctostaphylos auriculata Mt. Diablo manzanita	–/–/1B	Sandstone soils in canyons and on slopes in chaparral and cismontane woodland. Elevation: 180-565 m. Blooms: June-September	**Not present.** No manzanita species were observed during the reconnaissance field surveys. The closest CNDDB occurrence is approximately 5 miles from the Sabertooth Trail alignment.
Arctostaphylos pallida Pallid manzanita	FT/CE/1B	Siliceous shale, sandy or gravelly soil in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, and coastal scrub. Elevation: 370-480 m. Blooms: December-March	**Not present.** No manzanita species were observed during the reconnaissance field surveys. No CNDDB occurrences have been recorded within 5 miles of the site.
Balsamorhiza macrolepis Big-scale balsamroot	–/–/1B	Open grassy or rocky slopes in valley grassland and foothill woodland. Elevation: 350-1710 m. Blooms: March-June	**Potentially present.** Suitable habitat is present within the project site's grasslands. No CNDDB occurrences have been recorded within 5 miles of the site.
California macrophylla Round-leaved filaree	–/–/1B	Cismontane woodland, valley and foothill grasslands. Elevation: 15-1200 m. Blooms: March-May	**Potentially present.** Suitable habitat is present within the project site's oak woodlands and grasslands. No CNDDB occurrences have been recorded within 5 miles of the site.

Table 4.3.F: Special-Status Plant Species Evaluated for the Project

Species	Status[1] (Federal/ State/CRPR)	Habitat/Blooming Period	Potential to Occur
Calochortus pulchellus Mount Diablo fairy-lantern	–/–/1B	Openings in wooded and brushy slopes/ chaparral, coastal scrub, riparian woodland, and associated grasslands. Elevation: 200-800 m. Blooms: April-June	**Potentially present.** Suitable habitat is present within the project site's woodlands, shrublands, and grasslands. Observed at unknown location within Las Trampas.[2] The closest CNDDB occurrence is approximately 2.2 miles from the Sabertooth Trail alignment.
Centromadia parryi ssp. *congdonii* Congdon's tarplant	–/–/1B	Grazed and un-grazed annual grasslands with alkaline or saline soils and sometimes described as heavy white clay (saline clay soil). Elevation: 1-230 m. Blooms: June-November	**Potentially present.** Marginally suitable habitat is present within the project site's grasslands. However, this species is primarily associated with alkaline/saline soil types; these types do not underlie the project site's grasslands. Neither Congdon's tarplant, nor any other tarplant species were observed during the reconnaissance-level surveys, which were conducted at a time in which the plant would be identifiable. The closest CNDDB occurrence is approximately 0.5 mile from the trail alignment of the Calaveras Ridge Trail.
Eriogonum truncatum Mt. Diablo buckwheat	–/–/1B	Dry, exposed clay or sandy substrates in chaparral, coastal scrub, valley and foothill grassland. Elevation: 105-350 m. Blooms: June-September	**Not present.** No suitable habitat present. The closest CNDDB occurrence is a record from 1933 at an unknown location along Alamo Creek, mapped approximately 4.8 miles from the Calaveras Ridge trail alignment.
Eryngium jepsonii Jepson's coyote-thistle	–/–/1B	Vernal pools and valley and foothill grassland with clay soils. Elevation: 3-305 m. Blooms: April-August	**Not present.** No suitable habitat present. The closest CNDDB occurrence is approximately 2.6 miles from the Calaveras Ridge trail alignment.
Eschscholzia rhombipetala Diamond-petaled California poppy	–/–/1B	Fallow fields and open places in valley grasslands. Elevation: 0-300 m. Blooms: March - April	**Potentially present.** Suitable habitat is present within the project site's grasslands. No CNDDB occurrences have been recorded within 5 miles of the site.
Extriplex joaquinana San Joaquin spearscale	–/–/1B	Chenopod scrub, alkali meadow, grassland; in seasonal alkali wetlands or sink scrub. Elevation: 1-250 m. Blooms: April-October	**Not present.** No suitable habitat present. The closest CNDDB occurrence is possibly extirpated record from 1922 at an unknown location in Danville, estimated in the CNDDB at approximately 0.6 mile from the Sabertooth Trail alignment.

Table 4.3.F: Special-Status Plant Species Evaluated for the Project

Species	Status[1] (Federal/ State/CRPR)	Habitat/Blooming Period	Potential to Occur
Fritillaria liliacea Fragrant fritillary	–/–/1B	Coastal scrub, valley and foothill grassland, cismontane woodland, and coastal prairie. Most often on serpentine soils, but not exclusively as other various soils reported, though usually clay. Elevation: 3-410 m. Blooms: February-April.	**Unlikely present.** Marginally suitable habitat is present within mesic areas of heavy clay associated with the project site's grasslands. However, this species is unlikely to occur due to its low tolerance to heavy grazing. The closest CNDDB occurrence is a 1902 record from an unknown location in Danville, estimated in the CNDDB at approximately 0.6 mile from the Sabertooth Trail alignment.
Helianthella castanea Diablo helianthella	–/–/1B	Open, grassy sites, usually rocky, axonal soils. Partial shade in broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Elevation: 200-1300 m. Blooms: April-June	**Potentially present.** Suitable cismontane woodland habitat is present on the project site. The closest CNDDB occurrence is approximately 1.5 miles from the Sabertooth Trail alignment, along Virgil Williams Trail approximately 2 miles east-southeast of Las Trampas Peak and approximately 1.9 miles from near the northwest end of Bollinger Canyon Road in Las Trampas.
Hoita strobilina Loma Prieta hoita	–/–/1B	Chaparral and cismontane woodland, usually on soils that are underlain by ultramafic rock. Elevation: 30-860 m. Blooms: May-July (August-October)	**Not present.** No suitable habitat present. The closest CNDDB occurrence is a 1865 possibly extirpated record from an unknown location in the Oakland Hills, estimated in the CNDDB at approximately 1.4 miles from the Sabertooth Trail alignment.
Malacothamnus hallii Hall's bush mallow	–/–/1B	Chaparral, coastal scrub. Some populations on serpentine. Elevation: 10-760 m. Blooms: May-September (October)	**Unlikely present.** Marginally suitable habitat is present in the project site's shrublands. However, this species is typically associated with serpentine soils that do not occur on the site. Therefore, this species is unlikely to occur on the site. The closest CNDDB occurrence is approximately 4.7 miles from the Sabertooth Trail alignment.
Monolopia gracilens Woodland wooly threads	–/–/1B	Grassy sites, in openings, sandy to rocky soils in chaparral, serpentine grasslands, cismontane woodland, broadleafed upland forests, and north coast coniferous forests; often seen on serpentine after burns. Elevation: 100-1200 m. Blooms: March-July	**Unlikely present.** Marginally suitable habitat is present within the project site's oak woodlands, shrublands, and grasslands. However, this species is typically associated with rocky, sandy, and serpentine soils, which are not present on the project site. Therefore, this species is unlikely to occur. The closest CNDDB occurrence is a 1888 record from an unknown location in the Oakland Hills, estimated in the CNDDB at approximately 1.4 miles from the Sabertooth Trail alignment.

Table 4.3.F: Special-Status Plant Species Evaluated for the Project

Species	Status[1] (Federal/ State/CRPR)	Habitat/Blooming Period	Potential to Occur
Navarretia gowenii Lime Ridge navarretia	–/–/1B	Chaparral. Microhabitat requirements include calcium carbonate-rich soil with high clay content and possibly serpentine soils. Elevation: 100-300 m. Blooms: May-June	**Unlikely present.** Marginally suitable chaparral habitat is present within the project site's grasslands. However, this species is associated with carbonate-rich clay soils, which are not present on the project site. Therefore, this species is unlikely to occur. No CNDDB occurrences have been recorded within 5 miles of the site.
Stuckenia filiformis subsp. *Alpina* Northern slender pondweed	–/–/2B	Shallow, clear water of lakes, drainage channels in marshes and swamps (assorted shallow freshwater). Elevation: 300-2150 m. Blooms: May-July	**Not present.** No suitable habitat present. Suitable pond habitat may occur near the project site, but these aquatic habitats are outside of the area where project activities would occur. The closest CNDDB occurrence is approximately 5 miles from the Sabertooth Trail alignment.
Viburnum ellipticum Common viburnum	–/–/2B	Chaparral, cismontane woodland, lower montane coniferous forest, generally shaded slopes of drainages. Elevation: 160-720 m. Blooms: May-June	**Potentially present.** Suitable habitat is present within the associated drainages of the project site's shaded woodlands. Species known to occur in Las Trampas.[2] No CNDDB occurrences have been recorded within 5 miles of the site.

Source: Compiled by LSA (2022).
Source (unless otherwise noted): California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database (CNDDB), RareFind 5 Commercial Version. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. February.

[1] Status: California Rare Plant Rank (CRPR)
1B = California Rare Plant Rank 1B: Plant species rare, threatened, or endangered in California and elsewhere.
2B = California Rare Plant Rank 2B: Plant species rare, threatened or endangered in California, but more common elsewhere.
FE = Federally listed as threatened
CE = California State listed as endangered

[2] East Bay Regional Park District. 2018. Checklist of Wild Plants for Las Trampas Regional Wilderness. May 23.

CNDDB = California Natural Diversity Database

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Amphibians			
Ambystoma californiense California tiger salamander	FT/CT/–	Spends most of its life in underground burrows. Breeds in vernal pools and ponds, including cattle stock ponds. Breeds after the first rains in late fall and early winter, when the wet season allows the salamander to migrate to the nearest pond, a journey that may be over 1 mile and take several days. Lays eggs in small clusters or singly, which hatch after 14 to 21 days. The pools must hold water for a minimum of 12 weeks for the larvae to successfully metamorphose into their terrestrial form.	**Present.** One adult female observed in a pond near the Heritage Pear Trail on December 7, 2018 and a total of 26 adults were observed in the same pond and in one additional seasonal wetland on December 13, 2021.[2] Could occur in other suitable seasonal pools within Las Trampas and in grasslands surrounding suitable pools.
Rana draytonii California red-legged frog	FT/–/CSC	Inhabits permanent and temporary pools, streams, freshwater seeps, and marshes in lowlands and foothills. Uses adjacent upland habitat for foraging and refuge. Breeds during the wet season from December through March in slow parts of streams, lakes, reservoirs, ponds, and other waters with emergent vegetation. Lays 300 to 4,000 eggs in a large cluster, which is attached to plants near the water surface. Requires water for 4 to 7 months for tadpoles to complete metamorphosis.	**Present.** This species was observed at two ponds near the Heritage Pear Trail during the reconnaissance-level survey. An immature individual was observed at a pond on July 26, 2018, while an adult frog was observed at the same pond on May 24, 2018. An adult frog was also observed on July 26, 2018, at another pond. These ponds provide suitable breeding habitat. Individual frogs migrating between ponds and streams may move through the project site, especially on rainy nights. Suitable aquatic habitat is also present within the drainages, seasonal wetlands, and riparian habitat.
Reptiles			
Emys marmorata Western pond turtle	–/–/CSC	Permanent or nearly permanent water (fresh to brackish) in a wide variety of habitat types. Requires basking sites such as steep banks, logs, or rocks. Upland areas with friable soils are required for egg laying.	**Potentially present.** This species has the potential to occur in Las Trampas,[3] and could occur within the drainages and ponds near the proposed trail alignments, staging area and corral site. Closest CNDDB occurrence is approximately 2.1 miles from the Warbler Loop Trail alignment.

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Masticophis lateralis euryxanthus Alameda whipsnake	FT/CT/–	Lives primarily in scrub and chaparral communities, but has also been observed in nearby grasslands and woodlands. Feeds primarily on lizards. Most active in the spring and fall. Retreats from hot temperatures in the summer and cold temperatures in the winter into burrows or other underground refuges.	**Present.** This species is known to occur in Las Trampas.[3] Numerous CNDDB occurrences are within 5 miles of the site, with the closest being approximately 0.5 mile from the Sabertooth Trail alignment. Due to the presence of suitable scrub and riparian woodland habitat near the trail alignments, staging area, and corral site, the project site is part of a matrix of habitat that could be used by the species and this species could occur within the project site. The entire project area has been designated as Critical Habitat for the Alameda whipsnake (Unit 2).
Birds			
Athene cunicularia Burrowing owl	–/–/CSC	Nearly or quite level grassland, prairie, and desert floor with short or sparse vegetation. Subterranean nester that generally uses existing mammal burrows (especially of ground squirrels), but will also excavate its own burrows.	**Present.** This species is known to occur within Las Trampas.[3] During the time of the July 2018 and June 2019 field surveys, the vegetation was too tall throughout the majority of the proposed trail alignments to support burrowing owls. The staging area, proposed corral site and the lower elevation portions of the Sabertooth Trail and Warbler Loop Trail alignment have shorter vegetation and ground squirrel burrows that could be used by burrowing owls. Burrowing owls are more likely to occur in the grasslands along the upper portions of the trail alignment if grazing reduces the grass height in these areas. The closest CNDDB occurrence is approximately 3 miles from the Calaveras Ridge Trail alignment.
Asio otus Long-eared owl	–/–/CSC	Woodlands and forests that are open or adjacent to grasslands, meadows, or shrublands.	**Potentially present.** Suitable nesting habitat is present. Species detected in an unspecified location in a riparian area within Las Trampas in May 2015.[4] No CNDDB occurrences have been recorded within 5 miles of the site.
Circus hudsonius Northern harrier	–/–/CSC	Nests primarily in large expanses of grasslands including fallow agricultural fields, marshes, and meadows.	**Present.** This species is known to occur within Las Trampas.[3] The project area provides grasslands suitable for foraging and nesting northern harriers. No CNDDB occurrences have been recorded within 5 miles of the site.
Aquila chrysaetos Golden eagle	–/–/CFP	Hunts over rolling foothills and mountain areas. Nests in cliff-walled canyons or large trees in open areas.	**Present.** This species occurs within Las Trampas.[3] Golden eagle surveys conducted by the Park District detected no

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
			occupied golden eagle territories that overlap directly with the project site.[3] However, due to the presence of suitable nesting habitat, this species could nest in large trees adjacent to the staging area and trail alignments. No CNDDB occurrences have been recorded within 5 miles of the site.
Falco peregrinus anatum American peregrine falcon	–/–/CFP	Typically nests on cliffs. Will also nest on tall office buildings and bridges. Occasionally uses abandoned stick nests built by other raptors or ravens or electrical transmission towers as nest sites.	**Not present (nesting).** The project area does not support suitable nesting habitat, such as tall buildings, cliffs, or bridges. Species is not known to nest within Las Trampas.[3] No CNDDB occurrences have been recorded within 5 miles of the site.
Elanus leucurus White-tailed kite	–/–/CFP	Nests in shrubs and trees in open areas and forages in adjacent grasslands and agricultural land.	**Potentially Present.** Suitable nesting habitat is present in trees and large shrubs along or adjacent to the staging area and trail alignment. Suitable foraging habitat present. Species known to occur in Las Trampas.[4] No CNDDB occurrences have been recorded within 5 miles of the site.
Sternula antillarum browni California least tern	FE/SE/CFP	Nests on sandy beaches, alkali flats, hard-pan surfaces (salt ponds).	**Not present.** No suitable habitat is present on or near the project site. No CNDDB occurrences have been recorded within 5 miles of the site.
Chaetura vauxi Vaux's swift	–/–/CSC	Grasslands and agricultural fields; nests in large hollow trees near open water; forages in most habitats but prefers pipes and lakes.	**Present.** Suitable foraging habitat is present and suitable nesting habitat may be present in trees in the project area. Species observed within Las Trampas in October 2017[4] during the non-breeding season. No CNDDB occurrences have been recorded within 5 miles of the site.
Contopus cooperi Olive-sided flycatcher	–/–/CSC	Coniferous forests with open canopies.	**Not Present (nesting).** No suitable coniferous forest habitat present near the proposed staging area and trail alignments. Species observed during the breeding season at an unspecified location within Las Trampas.[4] No CNDDB occurrences have been recorded within 5 miles of the site.
Agelaius tricolor Tricolored blackbird	–/ST/CSC	Breeds in large colonies near freshwater, preferably emergent wetland such as cattails and tules but also in thickets of willow and other shrubs. Requires nearby foraging areas with large numbers of insects.	**Not Present (nesting).** This species is not known to occur within Las Trampas,[3] but suitable foraging habitat is present in the grasslands on the site. Species has been observed foraging in grasslands in San Ramon east of the project area.[5] The closest CNDDB breeding occurrence is

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
			approximately 4.9 miles from the Calaveras Ridge Trail alignment. The project area does not support large marshes with emergent vegetation. Based on the lack of current nearby occurrences and suitable breeding habitat, this species is not likely to breed on the site.
Ammodramus savannarum Grasshopper sparrow	–/–/CSC	Occurs in grasslands with coyote brush and other shrubs.	**Present.** This species occurs and breeds within Las Trampas.[3] Suitable breeding and foraging habitat is present along the proposed trail alignments and in staging area. Species was observed during the reconnaissance-level survey near the Las Trampas Ridge Trail. No CNDDB occurrences have been recorded within 5 miles of the site.
Dendroica petechia brewsteri Yellow warbler	–/–/CSC	Riparian woodland; nests in dense shrubs or small trees (e.g., willows)	**Not Present (nesting).** This species is known to occur within Las Trampas as a migrant.[3] Species may briefly occur within the riparian woodland along the proposed staging area and trail alignments, but would not likely nest on the site. Species is a rare nester in the County. No CNDDB occurrences have been recorded within 5 miles of the site.
Lanius ludovicianus Loggerhead shrike	–/–/CSC	Open grasslands and woodlands with scattered shrubs, fence posts, utility lines, or other perches. Nests in dense shrubs and lower branches of trees.	**Present.** This species is known to occur within Las Trampas.[3] Species could nest in the trees and shrubs along the proposed staging area and trail alignments and forage within the open habitat along the site. No CNDDB occurrences have been recorded within 5 miles of the site.
Mammals			
Vulpes macrotis mutica San Joaquin kit fox	FE/CT/–	Found primarily in flat areas with short, sparse vegetation in the southern San Joaquin Valley. Feeds on kangaroo rats and other small rodent species, but will also consume insects, hares, mice, and lizards. Lives in dens that it either excavates itself or moves into atypical dens including manmade structures.	**Potentially present.** This species is not known to occur within Las Trampas.[3] This species is very rare in the region, but the project site does provide suitable foraging and denning habitat. No CNDDB occurrences within 5 miles of the site have been recorded within the last 30 years. The closest CNDDB occurrence is approximately 4 miles from the Calaveras Ridge Trail alignment. No potential dens were observed along the proposed staging area and trail alignments during the field surveys.

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	–/–/CSC	Primarily found along riparian areas within chaparral and woodlands. Feeds mainly on woody plants but also eats acorns, grasses, and fungi. Builds conspicuous stick houses in trees and on the ground.	**Present.** This species occurs and breeds within Las Trampas.[3] A woodrat house was observed adjacent to the Calaveras Ridge Trail. Additional woodrat houses likely occur in wooded and scrub areas along or adjacent to the proposed staging area and trail alignments. The closest CNDDB occurrence is approximately 4.9 miles from the Sabertooth Trail alignment.
Corynorhinus townsendii Townsend's big-eared bat	–/–/CSC	This species distribution is limited by suitable roosting sites, which include caves, mines, tunnels, buildings, and other manmade structures. Feeds primarily upon moths.	**Not Present.** This species is not known to occur within Las Trampas.[3] The closest CNDDB occurrence is a 1926 record approximately 4.3 miles from the Sabertooth Trail alignment. No suitable roosting sites are present near the proposed staging area and trail alignments.
Antrozous pallidus Pallid bat	–/–/CSC	Roost in caves, tunnels, and occasionally buildings and hollow trees. Forages over a variety of habitats.	**Potentially Present.** This species is not known to occur within Las Trampas,[3] but suitable habitat in trees with hollows is present near the project site. The closest CNDDB occurrence is a 1991 record from an unknown location in Danville, approximately 0.6 mile from the Sabertooth Trail alignment.
Lasiurus blossevillii Western red bat	–/–/CSC	Often roosts and forages on or near riparian habitat. Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	**Potentially present.** Suitable roosting habitat is present in trees and suitable foraging habitat is present at and near riparian habitat. Species does not breed in the project area.[6] No CNDDB occurrences recorded within 5 miles of the project site.
Taxidea taxus American badger	–/–/CSC	Occurs in grassland, scrub, and woodland with loose-textured soils.	**Potentially present.** This species has the potential to occur in Las Trampas.[3] Although no large burrows suitable for badgers were observed along the proposed staging area, corral site and trail alignments during the reconnaissance-levels surveys, suitable foraging and denning habitat is present. Suitable prey in the form of ground squirrels was concentrated near the Old Time Corral Staging Area. No CNDDB occurrences recorded within 5 miles of the project site.

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Puma concolor Mountain lion	–/Candidate CT	Various habitats where deer are present, including grassland, woodland, and mountainous terrain.	**Potentially present.** Suitable habitat is present. The project site could be within a mountain lion(s) home range. Species not tracked by the CNDDB.
Invertebrates			
Callophrys mossii bayensis San Bruno elfin butterfly	FE/–/–	Known to occur only on slopes of the coastal mountains in San Mateo County. Lays eggs on the larval host plant, stonecrop (*Sedum spathulifolium*).	**Not present.** The project area is outside the known range of the species and does not contain the host plant. There are no CNDDB records within 5 miles of the site.
Danaus plexippus Monarch butterfly (California Overwintering Population)	Candidate/ Sensitive Winter Roosting Sites	Occurs throughout California wherever milkweed (*Asclepias* spp.) plants grow. Migration typically occurs September – October. Overwinters along the coast from northern Mendocino to Baja California, Mexico through January – February. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress) with nectar and water sources nearby. Adults breed from June – September and require milkweeds for laying eggs, larval development, and metamorphosis. Adults utilize other flowing species for nectaring during the breeding season.	**Potentially present.** Suitable breeding habitat may be present if their host plant, milkweed, is present. The project area is outside of the known overwintering range of the species and there are no CNDDB records within 5 miles of the site.
Lepidurus packardi Vernal pool tadpole shrimp	FT/–/–	Inhabits a wide variety of seasonal aquatic habitats, including vernal pools, seasonal wetlands, ephemeral stock tanks, and manmade ditches. Reproduces by producing cysts, which persist in the dried soil of the water feature until it refills during the rainy season.	**Not present.** No suitable vernal pools or other seasonal wetlands are present within the project area. Species current range does not include in the project area. No CNDDB records within 5 miles of the site.
Bombus crotchii Crotch bumble bee	–/ Candidate CT	Open grassland and scrub habitats supporting flowering plants, such as Asclepias sp., Chaenactis sp., Lupinus sp., Medicago sp., Phacelia sp., and Salvia sp.	**Potentially Present.** Suitable habitat present in grasslands along trail alignment and staging area. No CNDDB occurrences recorded within 5 miles of the trail alignment and staging area. Species historically known to occur in the region.[7]
Bombus occidentalis Western bumble bee	–/ Candidate CT	Variety of habitat types, supporting native flowering plants. Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. Generalist forager on many plant species. Nests in underground cavities such as old rodent nests and in open west-southwest slopes bordered by trees. Species has declined precipitously perhaps from disease.	**Potentially Present.** Suitable habitat present in grasslands along trail alignment and staging area. Closest CNDDB occurrence includes specimens collected in 1950 and 1960 at an unknown location in Danville, approximately 0.3 mile from the site.

Table 4.3.G: Special-Status Wildlife Species Evaluated for the Proposed Project

Species	Status[1] (Federal/State/ CDFW)	Habitat Requirements	Potential to Occur
Fish			
Hypomesus transpacificus Delta smelt	FT/CE/–	Only found in estuarine waters from the Sacramento-San Joaquin confluence to San Pablo Bay. Usually found in water with an average salinity concentration of 2 parts per thousand for much of its life cycle, but can tolerate a wide range of salinities and moves into river channels and tidally influenced backwater sloughs.	**Not present.** No suitable habitat is present on or near the site. There are no CNDDB records within 5 miles of the site.
Oncorhynchus mykiss irideus Steelhead – northern California Distinct Population Segment	FT/–/–	Requires cool, swift moving perennial streams with clean, unsilted gravel beds for spawning and egg deposition.	**Not present.** No suitable perennial streams are located on the project site. There are no CNDDB records within 5 miles of the site.

Source: Compiled by LSA (2022).

[1] Status: FE = Federally listed as endangered
FT = Federally listed as threatened
CE = California State listed as endangered
CFP = California Fully Protected
CSC = California species of special concern
CT = California State listed as threatened

[2] Lim, T. 2021. Resource Analyst, East Bay Regional Park District. Personal Communication. December 21.

[3] East Bay Regional Park District. 2017. *Special Status Wildlife Species – Las Trampas Wilderness Regional Preserve.* October 11.

[4] eBird. 2022. *Species Lists for Las Trampas Regional Wilderness, Contra Costa County, California.*

[5] LSA, personal observation.

[6] Pierson, E.D., W.E. Rainey, and C. Corben. 2006. Distribution and status of Western red bats (*Lasiurus blossevillii*) in California. California Department of Fish and Game, Habitat Conservation Planning Branch, Species Conservation and Recovery Program Report 2006-04, Sacramento, CA, 45 pp.

[7] California Department of Fish and Wildlife (CDFW). 2019. Evaluation of the Petition from the Xerces Society, Defenders of Wildlife, and the Center for Food Safety to List Four Species of Bumble Bees as Endangered Under the California Endangered Species Act.

CNDDB = California Natural Diversity Database

California Tiger Salamander. California tiger salamander is a federally and State listed threatened species that occurs in grassland and oak woodland habitats of the Central Valley and coastal hills and valleys from Santa Rosa southward to the Santa Rita Hills.[19] During the dry summer months, adult and juvenile tiger salamanders remain underground in small rodent burrows or soil cracks in order to survive the summer heat.[20] After the first autumn rains, adults emerge from underground to mate and lay their eggs in vernal pools, stock ponds, and other ephemeral water bodies where fish and other predators of tiger salamander eggs and larvae are generally absent. After hatching, larvae remain in the water during metamorphosis to juvenile form. After metamorphosis is complete, juveniles disperse from the aquatic breeding site to underground burrows or crevices for the summer. The distance between upland sites and aquatic breeding sites depends on local topography, vegetation, and the distribution of rodent burrows. A 2005 study[21] showed that 95 percent of adult tiger salamanders dispersed to within 2,034 feet of their breeding pond, and that 95 percent of sub-adults dispersed to within 2,067 feet. A 2007 five-year study found tiger salamander movements potentially as far as 1.3 miles to and from breeding ponds.[22]

California tiger salamanders have been documented in seasonal ponds near the existing dirt access road to be designated the Heritage Pear Trail. In December 2018, one adult female tiger salamander was observed in a pond near the Heritage Pear Trail in an open Las Trampas parkland portion of the site,[23] while one California tiger salamander was observed at a burrow near the pond in November 2018.[24] A total of 26 adults were observed in the same and in an adjacent seasonal pond on December 13, 2021.[25] This species was not previously known to occur in the Las Trampas. Historic records from Danville from 1952 had been the last known documented records of California tiger salamander in this area.[26] The closest extant CNDDB occurrences from the project site are approximately 5.9 miles in Mt. Diablo State Park and approximately 5.8 miles in San Ramon. California tiger salamander could breed in these and other ponds in the project area, disperse across surrounding uplands, and use small mammal burrows as upland refuge habitat.

California Red-Legged Frog. California red-legged frog is a federally threatened species and California Species of Special Concern that occurs in and along freshwater marshes, streams, ponds, and other semi-permanent water sources. Optimal habitat contains emergent or riparian vegetation closely associated with deep (i.e., greater than 2.3 feet), still, or slow-moving

19 Stebbins, R.C. 2003. *A Field Guide to Western Amphibians and Reptiles*. Third edition. Houghton Mifflin, Boston, Massachusetts.

20 Ibid.

21 Trenham, P.C. and H.B. Shaffer. 2005. Amphibian upland habitat use and its consequences for population viability. In *Ecological Applications* 15(4):1158–1168.

22 Orloff, S. 2007. *Migratory movements of California tiger salamander in upland habitat – a five-year study: Pittsburg, California*. Prepared for Bailey Estates LLC, Walnut Creek, California.

23 Lim, T. 2021. Resource Analyst, East Bay Regional Park District. Personal Communication. July 28.

24 California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Database (CNDDB), RareFind 5 Commercial Version. California Department of Fish and Wildlife, Biogeographic Data Branch, Sacramento. February.

25 Lim, T. 2021. Resource Analyst, East Bay Regional Park District. Personal Communication. December 21.

26 CDFW. 2022, op. cit.

water.[27] Although the species can occur in intermittent streams and ponds, they are unlikely to successfully breed in streams in which all surface water disappears.[28] Suitable breeding ponds and pools usually have a minimum depth of 20 inches, but California red-legged frogs do sometimes breed successfully in pools as shallow as 10 inches.[29] Regardless of water depth, breeding habitat must contain water for egg, tadpole, and metamorphic development.

California red-legged frogs have been observed in seasonal ponds near the existing dirt access road to be designated as the Heritage Pear Trail, approximately 0.25 mile east of the proposed Sabertooth Trail alignment. These seasonal ponds are in the same area as the ponds where California tiger salamanders were observed. This species could use the ponds, wetlands, and tributaries along the trail alignment and near the staging area as breeding or non-breeding aquatic habitat. Most of the wetlands along the trail alignment are likely not deep enough to support breeding habitat and no suitable pools for breeding were observed in the segments of the tributaries adjacent to the trail alignment and staging area. This frog species could disperse through the grassland, woodland, and scrubland habitats throughout the project site.

Alameda Whipsnake. Alameda whipsnake is a federally and State threatened species that occurs primarily in areas that support scrub communities, including mixed chaparral, chamise-redshank chaparral, coastal scrub, and annual grassland, oak woodlands, and valley foothill riparian scrub habitats. Within these plant communities, specific habitat features needed by striped racers include, but are not limited to, small mammal burrows, rock outcrops, talus, and cover types that provide temperature regulation, shelter from predators, egg-laying sites, and winter hibernation refuges. Many of these same elements are important in maintaining prey species (e.g., western fence lizards). Swaim[30] described the concept of "core area" in assessing Alameda whipsnake habitat. A "core area" is an area of concentrated use by one or more Alameda whipsnakes, and is believed to be centered on open-canopy scrub on east-, southeast-, south-, and southwest-facing slopes or in grasslands near the scrub community with the same aspects.[31] Rock outcrops and woody debris are common components of core areas since they provide cover for Alameda whipsnakes as well as western fence lizards, the principal food source for the species. This snake also inhabits grasslands and woodlands, particularly riparian woodlands that are near scrub habitat.

The CNDDB contains numerous Alameda whipsnake occurrences within 5 miles of the site, but the locations of these occurrences are suppressed by CDFW.[32] The entire project area has been

27 Jennings, M.R. and M.P. Hayes. 1994. *Amphibian and reptile species of special concern in California*. Final report to California Department of Fish and Wildlife, Inland Fisheries Division, Rancho Cordova.

28 Ibid.

29 Fellers, G.M. 2005. California red-legged frog. M. Lannoo, editor. In *Amphibian Declines: The Conservation Status of United States Species*. University of California Press, Berkeley.

30 Swaim, K. 1994. Aspects of the ecology of the Alameda whipsnake (*Masticophis lateralis euryxanthus*). M.S. Thesis, California State University at Hayward. 140 pp.

31 Ibid.

32 CDFW. 2022, op. cit.

designated as Critical Habitat for the Alameda whipsnake (Unit 2).[33] Due to known occurrences in the area, and the presence of scrub and riparian habitat within and near the site, the project site is part of a matrix of habitats that could be used by the species and Alameda whipsnake could move or disperse through the proposed staging area, corral site, and trail alignments.

Western Pond Turtle. The western pond turtle is a California Species of Special Concern. Pond turtles use permanent or nearly permanent water bodies in a variety of habitats. They can be found in ponds, marshes, rivers, streams, and irrigation ditches within grasslands, woodlands, and open forests. Basking sites such as logs, rocks, mats of floating vegetation, or open mud banks are necessary for thermoregulation. Upland areas, frequently in grassland, are used for egg laying. Pond turtles could pass through the staging area and trail alignments, especially when water is present within the tributaries and ponds adjacent to the project site.

Burrowing Owl. Burrowing owl is a California Species of Special Concern that occurs in open, well-drained grasslands with abundant small mammal burrows, particularly those of California ground squirrels. Burrowing owls also prefer areas with short vegetation so they can easily scan their surroundings and spot potential predators.[34] The closest CNDDB occurrence is a 2004 record of a wintering owl approximately 2.5 miles from the site.[35] The presence of multiple ground squirrel burrows and low grass height in some areas provide suitable habitat conditions for the species. No owls or sign of their presence were observed during the reconnaissance surveys, but burrowing owls may nest and/or winter within the grasslands in the project area.

Long-Eared Owl. Long-eared owl is a California Species of Special Concern that occurs in woodlands and forests that are open or adjacent to grasslands, meadows, or shrublands. This species was detected at an unspecified location in a riparian area within Las Trampas in May 2015.[36] Long-eared owls may forage and/or nest along the proposed trail alignments and staging area.

Northern Harrier The northern harrier is a California Species of Special Concern that occurs in grasslands, fields, marshes, and meadows. This raptor is known to forage in Las Trampas[37] and could nest in the grasslands and wetlands near the staging area and trail alignments.

Golden Eagle. The golden eagle is a California Fully Protected Species and a species protected by the Bald Eagle Protection Act that nests in sheltered tree groves and forages over a variety of habitats, including grasslands. This raptor is known to forage in Las Trampas,[38] but golden eagle surveys conducted by the Park District detected no occupied golden eagle territories that

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33 U.S. Fish and Wildlife Service (USFWS). 2006. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Alameda Whipsnake. Federal Register / Vol. 71, No. 190 / Monday, October 2.

34 Zarn, M., 1974. Burrowing owl *(Speotyto cunicularia hypugaea). Habitat Management Series for Unique or Endangered Species, Technical Report T-N-250*. Bureau of Land Management, Denver, Colorado.

35 CDFW. 2022, op. cit.

36 eBird. 2022. Species Lists for Las Trampas Regional Wilderness, Contra Costa County, California.

37 East Bay Regional Park District. 2017, op. cit.

38 East Bay Regional Park District. 2017. Special Status Wildlife Species - Las Trampas Wilderness Regional Preserve. October 11.

overlap directly with the project site. Golden eagle territories occur at Las Trampas on the western side of Bollinger Canyon Road and at Rocky Ridge west of Las Trampas Ridge.[39] Even though no nesting golden eagles have been detected at the project site to date, golden eagles could nest in the trees near the staging area and trail alignments in the future.

White-Tailed Kite. The white-tailed kite is a California Fully Protected Species. This species nests in trees or large shrubs with dense foliage located near suitable foraging habitat (e.g., grasslands, marshes, agricultural fields). Preferred prey includes voles and mice. Although no nests were found during the site visit, the numerous trees along or near the proposed trail alignments and staging area provide suitable nest sites and foraging habitat is present in the grasslands. White-tailed kites are known to occur in Las Trampas[40] and could nest in the project area.

Vaux's Swift. The Vaux's swift is a California Species of Special Concern. This species forages within grasslands and agricultural fields and nests in large hollow trees near open water. Suitable foraging habitat is present and suitable nesting habitat may be present in trees in the project area. In 2017, this species was observed within Las Trampas during the non-breeding season.[41]

Olive-sided Flycatcher The olive-sided flycatcher is a California Species of Special Concern that occurs in coniferous forest with open canopies. This bird species tends to nest and forage in coniferous forests and in riparian woodland where conifers are present. Coniferous forests are not present along the trail alignment and staging area, and therefore, olive-sided flycatchers are unlikely to nest in these areas, but this species could fly through the area during migration. In 2015, this species was observed within Las Trampas during the breeding season.[42]

Grasshopper Sparrow. The grasshopper sparrow is a California Species of Special Concern that occurs in open habitats with scattered shrubs. Grasshopper sparrows were observed during the June 5, 2019, survey near the Las Trampas Ridge Trail. This bird species could nest along the staging area and trail alignment and has been confirmed as breeding within Las Trampas.[43]

Loggerhead Shrike. The loggerhead shrike is a California Species of Special Concern. Shrikes occur in open habitats with scattered shrubs, trees, posts, fences, utility lines, and other perches. They primarily nest in the lower branches of dense shrubs and trees, although they have also been observed nesting in buildings and debris piles. They feed primarily on large insects, small birds, and small mammals. Although no shrikes were observed along the trail alignments and staging area during reconnaissance field surveys, the numerous trees and shrubs provide suitable nest and perch sites. This species was observed within Las Trampas in 1990

39 Bell, D. 2021. Personal Communication Doug Bell, East Bay Regional Park District.
40 Ibid.
41 Ibid.
42 eBird. 2022. Species Lists for Las Trampas Regional Wilderness, Contra Costa County, California.
43 East Bay Regional Park District. 2017, op. cit.

during the breeding season.[44] This species may nest in trees and shrubs along the trail alignments and staging area.

San Joaquin Kit Fox. The San Joaquin kit fox is a federally endangered and State threatened species. Although very rare in the region, it could occur along the trail alignment and staging area due to the presence of suitable grassland habitat. No CNDDB occurrences of this species within 5 miles of the site have been recorded in the last 30 years[45] and no potential dens were observed within proposed construction areas during the field surveys.

San Francisco Dusky-Footed Woodrat. The San Francisco dusky-footed woodrat is a California Species of Special Concern that occurs and breeds within Las Trampas.[46] A woodrat house was observed adjacent to the Calaveras Ridge Trail during the field survey. Additional woodrat houses likely occur in wooded and scrub areas along or adjacent to the staging area and trail alignments.

Pallid Bat and Western Red Bat. The pallid bat and western red bat are a California Species of Special Concern that could roost and/or forage within Las Trampas. Pallid bats roost in caves, tunnels, and occasionally buildings and hollow trees. Western red bat typically roosts in riparian trees and forages in or near riparian habitat. Suitable roosting habitat is present in trees within Las Trampas. These bat species could roost in the trees along the trail alignment and near the staging area.

American Badger. The American badger is a California Species of Special Concern that occurs in grassland, scrub, and woodland with loose-textured soils where prey, such as rodents, are present. Suitable foraging and denning habitat are present in Las Trampas. This species could den or forage along the trail alignments and near the staging area.

Mountain Lion. The mountain lion is a Candidate State-listed threatened that could den, migrate, and/or forage within Las Trampas. Mountain lions could forage or move throughout the site and could den in the woodland and scrub habitat along the trail alignment and near the staging area. They can breed and give birth at any time of the year. Mountain lions primarily eat deer and other mammals.

Monarch Butterfly. The monarch butterfly is a federal Candidate listed species that could breed within Las Trampas. The project site is outside of the known overwintering range for this species, and therefore, monarchs would not overwinter at the project site. Monarch butterflies breed from June to September and require their obligate larval host plant, milkweed (*Asclepias* spp.), for laying eggs, larval development, and metamorphosis. This species utilizes other flowering species for nectaring during the breeding season. Although no milkweed was observed

44 Ibid.
45 CDFW. 2022, op. cit.
46 Ibid.

during the reconnaissance-level surveys, milkweed is known to occur in Las Trampas[47] and could occur within the staging area and along the trail alignments. Therefore, monarch butterflies could breed within the site if milkweed is present.

Crotch Bumble Bee and Western Bumble Bee. The Crotch bumble bee and western bumble bee are Candidate State listed species. These two species are known to occur in grassland and scrub habitat where suitable native nectar plants are present. These species historically occurred in the region, but are considered rare.[47] Western bumble bee specimens were collected in 1950 and 1960 at an unknown location in Danville, approximately 0.3 mile from the site.[48] Due to the presence of suitable flowering plant species along the trail alignment and staging area, these species, although unlikely due to their rarity, could be present.

4.3.2.4 Project Elements

This section includes a summary of the proposed project elements provided for in the recommendations and actions contained in the proposed LUPA.

Project components involving new construction include the following:

New Trails. The proposed project includes approximately 2.8 miles of new trails to be constructed and 0.5 miles of an existing service road to be opened to public access (3.4 miles to be opened to the public in the near term or Phase I). As shown on Figure 3-2 in Chapter 3.0, Project Description, the new trails to be constructed include the Sabertooth Trail, Warbler Loop Trail, and an extension of the Calaveras Ridge Trail. These trails would traverse a mix of grassland, scrub, oak/bay woodland, and riparian woodland, and would include crossings of jurisdictional drainages. The proposed Warbler Loop and Calaveras Ridge Tails are multi-use trails that would consist of a 4-foot-wide trail footprint (permanent impact area) plus 2 feet on each side of the trail for a temporary work area. The proposed Sabertooth Trail is an EVMA/multi-use road and would be 12 feet wide (permanent impact area) plus 2 feet on each side of the trail for temporary work areas. Armored ford crossings and bridge crossings would be constructed where applicable to allow drainage crossings with erosion and water quality protection. Trail-related project components would require ground disturbance to no deeper than 4 feet (refer to Figure 13, Typical Trail Cross Section of the proposed LUPA).

The proposed trails would be constructed using 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, Puilaskis, and shovels. Cut and fill would likely be balanced on site; there would be no off-site hauling. Trail construction would affect some scrub and grassland habitat and may require removal of a few trees in woodland habitats to accommodate a 6-foot-wide by 10-foot-tall trail

47 East Bay Regional Park District. 2012. Las Trampas Regional Wilderness Checklist of Wild Plants Sorted Alphabetically by Growth Form, Scientific Name. February 27. Available at: http://ebparks-prod.civica.granicusops.com/civicax/filebank/blobdload.aspx?BlobID=23619.

48 CDFW. 2022, op. cit.

corridor. Disturbance to understory vegetation within the woodland habitats would be limited to an approximately 8-foot-wide area.

Old Time Corral Staging Area. The proposed 0.75-acre Old Time Corral Staging Area would be located within the previously disturbed area that supports a corral, non-native grasses, and ruderal plant species. A new corral would be constructed within the grading footprint of the staging area.

The proposed project also includes the below actions which do not involve ground disturbance. As these project components would not result in construction related impacts, they are addressed separately in the Operational Impact Analysis included at the end of Section 4.3.4.1.

1. Open land bank properties for public access (approximately 615 acres)
2. Incorporate 141 acres into Las Trampas, but to remain land banked and closed to public access
3. Designate 35-acres as a Special Resource Protection Area, which supports sensitive amphibian species
4. Designate 166 acres encumbered by conservation easements as Special Protection Features
5. Provide public access from two walk-in entrances
6. Close approximately 1-mile of existing service roads
7. Designate an existing 1.4-mile access road as a multi-use trail (i.e., Heritage Pear Trail) This trail connects park users from the proposed Podva walk-in entrance to existing trails within Las Trampas parkland. Approximately 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 remaining 0.5 miles of the trail is an existing service road on open Las Trampas parkland.

4.3.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact on biological resources if it would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites;

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. As the Park District is a Special District with the authority to ..."acquire land...to plan...develop...and operate a system of public parks and to do all other things necessary or convenient to carry out the purposes of the District" it adheres to its own policies and ordinances pertaining to tree removal. Tree removal would involve the replacement of the removed tree at a minimum 1:1 ratio. The proposed project is consistent with each of these policies and plans; thus, the proposed project would have no impact on local policies or ordinances, and this criterion is not discussed further in this EIR.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The proposed improvements within the project area would not conflict with any habitat conservation plan, natural community conservation plan, or other local or regional habitat conservation plans, as the project area is not included in any current habitat conservation plan or NCCP program in this region. Thus, the proposed project would have no impact on habitat conservation plans or natural community conservation plans, and this criterion is not discussed further in this EIR.

4.3.4 Impact Analysis

The proposed project could significantly impact biological resources, including special-status plant and wildlife species, jurisdictional wetland features, sensitive plant communities, and riparian habitat. The potential for protected biological resources to be impacted by construction and operation of the proposed trails and staging area are a function of the likelihood the species is present when each project component is constructed, as well as the type and duration of construction activities and subsequent usage. Another factor is the sensitivity of the species or resource to disturbance.

4.3.4.1 Project Impacts

Potential impacts related to the special-status plant and wildlife species, sensitive and riparian habitats, wetlands, and wildlife movement are discussed below.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Special-Status Plants. The project area provides suitable habitat for seven special-status plants known from the project region. These species include the bent-flowered fiddleneck, big-scale balsamroot, round-leaved filaree, Mount Diablo fairy-lantern, diamond-petaled California poppy, Diablo helianthela, and common viburnum. Except for common viburnum, these special-status plant species have a California Rare Plant Rank of 1B (meaning these plant species are rare, threatened, or endangered in California and elsewhere), while common viburnum has a California Rare Plant Rank of 2B (meaning this plant species is rare, threatened or endangered in California, but more common elsewhere). Mount Diablo fairy-lantern and common viburnum have been observed at Las Trampas.[49]

Construction of the Old Time Corral Staging Area, corral, and the new trails (including the Sabertooth Trail, Warbler Loop Trail, and Calaveras Ridge Trail extension) would involve grading activities and vegetation disturbance within potential habitat for all of the seven above-identified special-status plant species. If present, individual plants could be damaged or killed by construction activities including excavation and grading. Construction activities could also indirectly impact special-status plants if the plants are located immediately adjacent to the proposed trail alignment and staging area, through incidental impacts from equipment, altering hydrology, or other indirect effect. Therefore, impacts to special-status plant species are potentially significant.

Impact BIO-1: Construction of the proposed Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to seven special-status plant species, if present on or near to the project area.

Mitigation Measure BIO-1 The following measures shall be implemented to avoid, minimize, and/or mitigate potential impacts on special-status plants.

- Preconstruction botanical surveys of the project site shall be completed by a qualified botanist according to the CDFW's 2018 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*.[50] Surveys shall be floristic in nature, include areas of potential direct impacts and a minimum 50 feet surrounding area, be

[49] East Bay Regional Park District. 2018, op. cit.

[50] California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. State of California, California Natural Resources Agency. March 20.

conducted at the time of year when species are both evident and identifiable, and be replicable. The purpose of these surveys shall be to identify the locations of special-status plants that could be affected during project construction. If special-status plants are not found in the survey area, then no further mitigation is required. If special-status plants are found in the survey area, then the below mitigation measures shall also be implemented.

- Locations of identified special-status plants shall be recorded by the qualified botanist using a global positioning system (GPS) unit or equivalent and flagged in the field. The GPS data shall be used to create digital and hardcopy maps for distribution to construction inspectors and contractors to inform them of areas where disturbance is prohibited, or where activities are restricted.

- Special-status plant species identified during surveys shall be submitted to the CNDDB.

- Where possible, identified special-status plants will be avoided. This may include making small adjustments to the trail alignment (within the 50 feet buffer around the trail alignments evaluated in this EIR), as well as the following:

    1. The qualified botanist shall establish an adequate buffer area to exclude activities that could harm an identified special-status plant population that is near the construction area.

    2. Access during construction may be restricted around special-status plant populations through appropriate field direction by the qualified botanist. This access restriction may include signage, buffers, seasonal restrictions, and design or no access, depending on the location and special-status species in question.

    3. The Park District and its construction contractors shall install a temporary, plastic mesh-type construction fence (Tensor Polygrid or equivalent) at least 4 feet tall around any established buffer areas to prevent encroachment by construction equipment and personnel. The qualified botanist shall determine the exact location of the fencing. The fencing shall be strung tightly on posts set at maximum intervals of 10 feet (3 meters) and shall be checked and

maintained weekly until all construction is complete in the area where special-status plant species occur.

4. No grading, clearing, storage of equipment or machinery, or other disturbance or construction activity shall occur until all temporary construction fencing has been installed by the Park District, and its construction contractor, and inspected and approved by the qualified botanist.

- If avoidance of special-status populations is not possible, then a Rare Plant Mitigation Plan shall be designed and implemented. CDFW approval of the Rare Plant Mitigation Plan is required before implementation of an activity that could directly or indirectly impact a federally or state listed or CNPS Rare Plant Rank 1A, 1B, 2A, or 2B species, and under no circumstances will state or federally listed plants be impacted without additional consultation with appropriate regulatory agencies. At a minimum, the plan shall include the following elements:

  1. For annual species, seed shall be collected from plants that will be impacted, seed stored in an appropriate seed banking facility, and a portion of the seeds shall be redistributed in the project vicinity, as directed by the qualified botanist. Individual plants may also be transplanted. For perennial species, seed collection and seed banking may be augmented by transplanting entire plants or cuttings, as directed by the qualified botanist.

  2. Suitable sites shall be identified in Las Trampas (or other nearby suitable location) and prepared for redistribution of seeds (or transplants) at mitigation ratios that are appropriate for the species lifeform (e.g., annual or perennial) and success based on performance standards calibrated by established reference populations. The plan shall outline the site preparation activities.

  3. Monitoring surveys of the seeded or transplanted areas shall be conducted for a minimum of three years. The Park District shall prepare monitoring reports that document the monitoring results and the success of the rare plant mitigation program.

  4. Mitigation will be deemed successful when the mitigation population provides the same ecological functions as the impacted population, after taking into account natural fluctuations in population size, health, etc. This will include

each of the relocated species establishes at least one stable population of approximately the same size of the impacted population, defined as species presence and population size over a 3-year period, taking into account fluctuations in local reference populations. If this goal is not achieved in 4 years, then contingency measures shall be implemented. Such measures will include evaluating the environmental or other characteristics affecting plant survival and implementing corrective measures, which may include additional seeding and planting; altering or implementing a weed control regime; or introducing or altering other management activities. Efforts shall continue until the mitigation site meets the success criteria for two consecutive years.

Significance after Mitigation: Less than Significant.

Special-Status Wildlife – Overview of Impacts. Multiple special-status wildlife species are known to occur or have the potential to occur at the project site (see Table 4.3.G). This section describes the types of impacts that could affect these special status wildlife species and the associated mitigation measures that would be implemented to minimize and mitigate impacts.

The proposed project would result in approximately 3.5 acres of habitat loss/conversion within the 3.2 miles of proposed new trails and 0.75 acre of habitat loss within the proposed staging area and corral location. The proposed new trail alignments cross several tributaries and two seasonal wetlands, while the proposed staging area would impact one drainage ditch. The project would permanently impact up to approximately 1,123 square feet and temporarily impact up to 578 square feet of these streams and wetlands.

Special status wildlife species could be impacted both directly and indirectly during construction or during operational activities after construction has been completed. The potential for protected resources to be impacted by construction and operation of the proposed trails and staging area are a function of the likelihood the species is present when the project is constructed, as well as the type and duration of construction activities. Another factor is the sensitivity of the species or resource to disturbance. For example, a San Francisco dusky-footed woodrat may not react to construction activities near its house during the day, whereas a raptor may abandon its nest if construction is within 100 feet from the nest.

The below discussion addresses direct and indirect impacts to special-status wildlife species from project-related construction activities. A separate discussion is then provided addressing potential impacts to special-status wildlife species from use and operation of the new staging area, trails, corral, as well as from other non-construction project features.

Special Status Wildlife – Impacts to Federal and State Listed Amphibians. The proposed project could result in construction-related direct and indirect impacts to California red-legged frog and California tiger salamander. Both species are known to occur and breed in ponds near the existing

dirt access road to be designated as the Heritage Pear Trail, approximately 0.25 mile from the proposed Sabertooth trail, which is the closest proposed construction location. All of the project site is within the known dispersal distance of both species from these ponds and these species could occur in other tributaries, wetlands, ponds, and/or uplands (including small mammal burrows) in or near proposed construction areas. Therefore, grading and other construction activities could result in mortality or harm of individual California red-legged frogs or California tiger salamanders using burrows, soil crevices, or other retreats within the project site. Migrating California red-legged frogs and California tiger salamanders may also seek refuge under construction equipment and in excavations and trenches, exposing them to potential harm from other construction activities. In the absence of avoidance and minimization measures, spills of oil or fuel from construction equipment could impact habitat for these species and food-related trash left on the construction site could attract additional predators, leading to increased predation pressure on these species. Therefore, construction-related direct and indirect impacts are potentially significant.

In total, the proposed project would result in the conversion of approximately 3.5 acres of upland habitat potentially used by these species to trails and 0.75 acre of potential upland habitat to a staging area and corral. There would be no impacts to expected breeding habitat. The proposed new trail alignments cross several tributaries and two seasonal wetlands, while the proposed staging area would impact one drainage ditch; these project features would permanently impact up to approximately 1,123 square feet (0.03 acre) and temporarily impact up to 578 square feet (0.01 acre) of streams and wetlands. Given that these species can still disperse across trails, the large amount of surrounding habitat, that the proposed project only includes hardscaping 0.75 acre (for the proposed staging area and corral), that work within streams/wetlands is limited, the project would not create a barrier to movement, and the project would not affect expected breeding habitat, impacts associated with habitat loss/conversion would be less than significant. Impacts to jurisdictional resources (e.g., riparian habitat, streams, wetlands) are addressed later in this document (see Impacts BIO-14 and 15).

Impact BIO-2: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to California tiger salamander and California red-legged frog.

General Avoidance and Minimization Measures.

Mitigation Measure BIO-2a The following general avoidance measures shall be implemented to avoid potential direct and indirect impacts to special-status wildlife species during all construction activities:

- A qualified biologist or biological monitor shall be present to observe construction activities and shall have the authority to halt work as necessary if special-status species are in harm's way or permit conditions or mitigation measures are being violated.
- Preconstruction biological surveys appropriate to special-status wildlife species potentially present shall be conducted by the

qualified biologist immediately prior to initiation of construction.

- Before any construction activities begin on the project, the qualified biologist shall conduct a training session for construction workers and other personnel present during construction. The training shall include a description of each special-status species that might occur and their respective habitats, the general measures that are being implemented to protect each of the species as they relate to the project, and the physical boundaries within the project shall be accomplished. The training shall also provide instruction in the appropriate protocol to follow in the event that a special-status species is found onsite, including contact telephone numbers.

- Before starting ground disturbing activities within construction areas, the Park District and its construction contractors shall clearly delineate the boundaries of the construction area with fencing, stakes, or flags. Contractors shall be required to restrict construction-related activities to within the fenced, staked, or flagged areas. Contractors shall maintain fencing, stakes, and flags until the completion of construction-related activities in that area. Fencing stakes and flags shall be removed upon completion of construction work. Sensitive habitat areas, including special-status wildlife species habitat and known populations, and jurisdictional wetlands, shall be clearly indicated on the project construction plans.

- The Park District or its construction contractors shall install temporary wildlife exclusion fencing along the perimeter of the proposed staging area that borders open space habitat (fencing does not need to be installed along Bollinger Canyon Road). Temporary exclusion fencing near sensitive habitats, such as riparian habitat and along the tributaries and wetlands, shall be installed at the discretion of the qualified biologist. All construction areas not fenced, such as trails, shall be clearly marked with flagging and monitored during initial ground disturbance as described above. Final fence design, including appropriate animal escape structures within the fencing and fence location, shall comply with permit conditions, as appropriate for each species being protected. Any construction-related disturbance outside of these boundaries, including parking, temporary access, construction staging, or areas used for storage of materials, shall be prohibited without approval of the qualified biologist. New trails and other project features

shall not extend beyond the delineated construction work area boundary. Construction vehicles shall pass and turn around only within the delineated construction work area boundary or existing local road network. Where new access is required outside of existing roads or the construction work area, the route shall be clearly marked (i.e., flagged and/or staked) prior to being used, subject to review and approval of the qualified biologist.

- Where wildlife exclusion fencing is not installed and ground disturbing activity is occurring, the qualified biologist shall approve the proposed disturbance in advance and clear the area prior to the start of ground disturbing activity.

- A qualified biological monitor shall be on-site during installation of the exclusion fencing. The fencing shall be inspected by the qualified biological monitor on a daily basis during construction activities to ensure fence integrity. Any needed repairs to the fence shall be performed on the day of their discovery. After construction has been completed, the exclusion fencing shall be removed within 72 hours.

- Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, the qualified biologist or a biological monitor working under their direction shall survey within the exclusion area to ensure that no special-status species are present. The qualified biologist or a biological monitor working under their direction shall also monitor vegetation removal or grading activities inside fenced exclusion areas for the presence of special-status species.

- Excavated soils shall be stockpiled in disturbed areas lacking native vegetation, and/or as shown on the construction plans, or approved by the qualified biologist.

- All detected erosion caused by project-related impacts (i.e., grading or clearing for new trails) and other improvements shall be remedied immediately upon discovery.

- The introduction of exotic plant species shall be avoided first through prevention, followed by physical methods. Construction equipment shall arrive at the project area free of soil, seed, and vegetative debris to reduce the likelihood of introducing new weed species. Weed-free rice straw or other certified weed free straw shall be used for erosion control. Earth-moving equipment, gravel, fill, or other materials shall be

weed-free. Mechanical seeding equipment shall be inspected for residual seeds and cleaned prior to use onsite. Construction operators shall ensure that clothing, footwear, and equipment used during construction is free of soil, seeds, vegetative matter or other debris or seed-bearing material before entering the Park or from an area with known infestations of invasive plants and noxious weeds. Weed populations introduced into the site during construction shall be eliminated by mechanical means approved by the qualified biologist.

- If special-status wildlife species are found within or near construction areas during project construction work, construction activities shall cease in the vicinity of the animal until the animal moves on its own outside of the project area (if possible). The wildlife resource agency(ies) with jurisdiction over the species shall be contacted if permits issued for the project do not address relocation of the species regarding any additional avoidance, minimization, or mitigation measures that may be necessary if the animal does not move on its own. The daily monitoring report prepared by the qualified biologist shall document the activities of the animal within the site; exclusion fence construction, modification, and repair efforts; and movements of the animal once again outside the of the construction area. This report shall be submitted to the Park District and the appropriate regulatory agency with jurisdiction over the wildlife species.

- All special-status wildlife species observed during surveys shall be reported to the CNDDB.

- Whenever possible, steep-walled holes or trenches shall be covered each evening to prevent animal entry. If this is not possible and the steep-walled holes or trenches must be left open overnight, escape ramps or structures shall be installed. Steep-walled holes or trenches shall be inspected for trapped animals on a daily basis until they are back-filled. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed or other special-status species are trapped, the USFWS and/or CDFW, as appropriate, shall be contacted immediately to determine the appropriate method for relocation, or the species may be relocated according to the conditions of the permits issued for the project. The qualified biologist may elect to order a stop work requirement if they determine it to be necessary, and upon consultation with the appropriate regulatory agency.

- Construction pipes, culverts, or other structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more shall be inspected for special-status species before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status species is discovered inside a pipe, and does not move of its own accord, that section of pipe shall not be moved until the appropriate resource agency, with jurisdiction over that species, has been consulted to determine the appropriate method for relocation, or the species may be relocated according to the conditions of the permits issued for the project. If necessary, under the direct supervision of the qualified biologist, the pipe may be moved once to remove it from the path of construction activity until the animal has escaped.

- Vehicles and equipment shall be in proper working condition to ensure that there is no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. Contractor equipment shall be checked for leaks daily prior to operation and repaired when leaks are detected. Fuel containers shall be stored within appropriately sized secondary containment barriers. The qualified biologist shall be immediately informed of any hazardous spills and not more than 24 hours of the incident occurrence. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly disposed of at an appropriate facility. If vehicle or equipment maintenance is necessary, it may be performed in the designated staging areas, as shown on the construction plans or approved by the qualified biologist.

- Temporarily disturbed areas shall be returned to pre-project conditions or better.

- Project-related vehicles shall observe a 15-mile-per-hour speed limit on unpaved access roads within the limits of construction.

California Red-legged frog and California Tiger Salamander Specific Measures

The following mitigation measure, in addition to the general special-status species protection measures identified above (Mitigation Measures BIO-2a), would be implemented to further protect California red-legged frog and California tiger salamander during construction activities:

Mitigation Measure BIO-2b The Park District shall implement the following measures before, during, and after all ground-disturbing construction activities within the project site to minimize impacts to individual and California red-legged frogs and California tiger salamanders. Additional measures

may be required by the USFWS and/or CDFW per their permitting authority. Although USFWS and/or CDFW permits will be obtained by the Park District, they have not yet been issued, and therefore, at a minimum the following measures shall be implemented:

- The qualified biologist shall survey all work areas within 48 hours before the initiation of construction activities. If California red-legged frog or California tiger salamander are found, the Park District biologist shall contact the USFWS and/or CDFW to determine if moving them is appropriate. If the agencies approve relocation, the qualified biologist shall move them to an approved site in the Project area prior to the initiation of construction. The qualified biologist shall maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photos) to assist him or her in determining whether translocated animals are returning to their original point of capture. A final clearance survey shall be conducted immediately before construction commencement.

- A qualified biologist, experienced with California red-legged frog, California tiger salamander, Alameda whipsnake, and other locally occurring special-status species shall be present onsite during all ground disturbing activities to search for individuals that may be unearthed or harmed during excavation/construction. The qualified biologist shall have the authority to halt work, if a California red-legged frog, California tiger salamander, Alameda whipsnake, or other special-status species is found onsite. Individuals of species shall be allowed to move away from the project area on their own or removed from the construction area following the procedures specified in the USFWS or CDFW permits. The Park District shall report all discoveries of California red-legged frogs, California tiger salamanders, and Alameda whipsnake in the construction areas to resource agencies according to the procedures specified in the State and federal listed species permits.

- Construction activities shall be limited to periods of low rainfall (less than 0.25 inch per 24-hour period and less than 40 percent chance of rain). The project biologist shall consult the 72-hour weather forecasts from the National Weather Service (NWS) prior to the startup of any ground disturbing activities on the project site. Construction activities shall cease 24 hours prior to a 40 percent or greater forecast of rain from the NWS. Construction may continue 24 hours after the rain ceases

provided that there is no precipitation (less than 20 percent chance) in the 24-hour forecast.

- Contractor specifications shall include the following worker restrictions and guidelines, at a minimum:
    - Construction personnel and vehicles shall stay within designated work areas. Entry into adjacent Las Trampas lands or established exclusion zones shall be strictly prohibited.
    - In the event a California red-legged frog, California tiger salamander, or Alameda whipsnake is inadvertently killed, injured or entrapped, the contractor shall immediately notify the onsite monitor/biologist and Park District's construction inspector, who will stop work and notify the USFWS and/or CDFW.
- Instream disturbances shall be performed during the dry season when drainage channels have flows that are minimal (e.g., May 15 to October 15).
- As part of the project's Stormwater Pollution Prevention Plan (SWPPP) implementation, the Park District shall include in the specifications a requirement to use tightly woven fiber of natural materials (e.g., coir rolls or mats) or similar material for erosion control to ensure that special-status species do not get trapped. Plastic mono-filament netting (erosion control matting) or similar material shall be prohibited.
- Upon completion of construction, temporarily impacted areas shall be restored to pre-project grades and contours and stabilized to prevent erosion. If the areas do not naturally revegetate, a seed mix of native and naturalized grass and forb species shall be applied to all of the grassland areas disturbed by the project. The seed shall be from sources that are regionally appropriate for the site.

Significance with Mitigation: Less than significant.

Alameda Whipsnake. Due to known occurrences in the area, and the presence of scrub and riparian habitat within and near the site, the project site is part of a matrix of habitats that could be used by the species and Alameda whipsnake could move or disperse through the proposed new staging area, corral and trail alignments. The species could also potentially occupy burrows or other retreats within the construction footprint. Therefore, grading and other construction activities could result in mortality or harm of individual Alameda whipsnakes. In the absence of avoidance and minimization

measures, spills of oil or fuel from construction equipment could impact habitat for this species and food-related trash left on the construction site could attract additional predators, leading to increased predation pressure. Therefore, construction-related direct and indirect impacts are potentially significant.

In total, the proposed project would result in the conversion of approximately 3.5 acres of upland habitat potentially used by this species to trails and 0.75 acre of potential upland habitat to a staging area and corral. Given that this species can still disperse across trails, the large amount of surrounding habitat, that the proposed project only includes hardscaping 0.75 acre (for the proposed staging area and corral), that work within streams/wetlands is limited and would not create a barrier to movement, impacts associated with habitat loss/conversion would be less than significant.

Impact BIO-3: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to Alameda whipsnake.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a and relevant measures in Mitigation Measure BIO-2b would reduce potential direct and indirect construction-related impacts to Alameda whipsnake to a less-than-significant level.

Mitigation Measure BIO-3 In addition to the special-status species measures provided in Mitigation Measures BIO-2a and the relevant measures in BIO-2b, the following measures shall be implemented to further avoid or minimize impacts to Alameda whipsnakes:

- Ground disturbing work shall be performed during the period April 1 to October 31, when Alameda whipsnakes are more active and capable of moving away from construction activities.
- If scrub vegetation is removed, only hand tools shall be used, or a qualified biologist shall survey the area immediately prior to equipment clearing.

Significance with Mitigation: Less than significant.

Alameda Whipsnake Critical Habitat. The trail alignment, corral and staging area are situated within an area designated as critical habitat for the Alameda whipsnake (Unit 2).

The Federal Register (50 CFR Part 17, Vol. 65, No. 192) lists primary constituent elements for the Alameda whipsnake, which are those habitat components that are essential for the primary biological needs of foraging, sheltering, breeding, maturation, and dispersal. The primary constituent elements (PCEs) are:

- Areas that support scrub communities, including mixed chaparral, chamise-redshank chaparral, coastal scrub, annual grassland, and oak woodlands that lie adjacent to scrub habitats.

- The PCEs may be found in grasslands and various oak woodlands that are linked to scrub habitats by substantial rock outcrops or river corridors.

- Habitat features that provide a source of cover during dispersal or are near scrub habitats and contain habitat features (e.g., rock outcrops) that support adequate prey populations may also contain primary constituent elements.

- Species require plant canopy covers that supply a suitable range of temperatures for the species' normal behavioral and physiological requirements (including but not limited to foraging, breeding, and maturation).

- Openings in the plant canopy or scrub/grassland edge provide sunning and foraging areas. Corridors of plant cover and retreats (including rock outcrops) sufficient to provide for dispersal between areas of habitat, and plant community patches of sufficient size to prevent the deleterious effects of isolation (such as inbreeding or the loss of a subpopulation due to a catastrophic event) are also essential.

- Specific habitat features include, but are not limited to, small mammal burrows, rock outcrops, talus, and other forms of cover to provide temperature regulation, shelter from predators, egg laying sites, and winter hibernaculum. Many of these same elements are important in maintaining prey species. Adequate insect populations are necessary to sustain prey populations.

Although the proposed trail alignment and staging area are situated within designated critical habitat, the proposed project would not significantly modify or reduce the extent of critical habitat. The total area of the proposed staging area and trails would constitute less than 0.0136 percent of the total area of designated Critical Habitat Unit 2 and less than 0.0022 percent of the total area of all designated critical habitat for this species. Furthermore, the trails would not appreciably diminish the ecological value of adjacent critical habitat lands. The trails would not significantly alter or diminish the capability for Alameda whipsnakes to disperse across habitats within the project area nor would it result in significant degradation of adjacent habitats nor would they affect core scrub habitat for this species. The proposed staging area would be situated within an area currently occupied by a corral and adjacent to an existing road, which does not contain PCE's for the species. Therefore, construction and use of the staging area would not result in a substantial loss of critical habitat and project impacts on Alameda whipsnake critical habitat would be less than significant.

Western Pond Turtle. The proposed project could result in direct and indirect impacts to western pond turtle. No construction activities are proposed within ponds providing suitable habitat for this species. However, western pond turtle could occur in the tributaries, wetlands, ponds, and adjacent uplands near the staging area and corral and along the proposed trail alignments and could nest along the banks of the pond or tributaries or adjacent riparian or grassland habitat (known as communal/traditional nesting areas). Therefore, grading and other construction activities could result in mortality or harm of individual western pond turtles. In the absence of avoidance and minimization measures, spills of oil or fuel from construction equipment could impact habitat for this species and food-related trash left on the construction site could attract additional predators,

leading to increased predation pressure on the species. Therefore, construction-related direct and indirect impacts are potentially significant.

Impact BIO-4: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to western pond turtle.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a and the relevant measures from BIO-2b, would reduce potential direct impacts to western pond turtle to a less-than-significant level.

Mitigation Measure BIO-4 The Park District shall implement the following measures before, during, and after all ground-disturbing construction activities within the project site to avoid significant impacts to individual western pond turtles:

- The Park District shall require a qualified biologist to conduct surveys for western pond turtles and nesting areas prior to initiating any ground-disturbing activities within 0.25-mile of potential western pond turtle aquatic habitat. If a western pond turtle is observed in aquatic habitat during the nesting season (May to July), a subsequent survey of the surrounding upland habitats shall be conducted to determine the suitability of the upland habitats for nesting and to examine the area for any evidence of turtle nesting activity. If a nesting area is detected or suspected, the Park District shall install temporary exclusion fencing around the nesting area, designed to not prevent movement of turtles between the nesting site and nearby aquatic habitat, but to exclude the movement of turtles into the construction area.

Significance with Mitigation: Less than significant.

Golden Eagle. There are no known occupied golden eagle territories that overlap directly with the project site. However, due to the presence of suitable nesting habitat, this species could nest in large trees adjacent to or near the proposed construction areas. Construction-related activities could result in loss or abandonment of an active golden eagle nest through the removal of a nesting tree or through noise, vibration, or visual disturbance. Therefore, related impacts are potentially significant.

Impact BIO-5: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to nesting golden eagles.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential direct impacts to golden eagle to a less-than-significant level.

Mitigation Measure BIO-5 Within 15 days prior to the initiation of ground-disturbing activities during the nesting season (February 1 to August 31), a qualified biologist shall conduct a preconstruction survey for nesting golden eagles within 0.5-mile of construction locations.

If nesting eagles are present, a buffer free from new construction disturbance shall be established within a 0.5-mile radius of the nest. No new project-related construction activities (i.e., activities that were not already ongoing when the nest was established, or that are of a substantially greater intensity than when the nest was established) shall be undertaken within the buffer. In some cases (*e.g.,* if the activity is not visible from the nest site), it is possible that a lesser buffer would be adequate to avoid disturbance of the nesting eagles, but such a variance would be set by a qualified biologist in consultation with the CDFW and USFWS. In such a case, the biologist shall monitor the behavior of the nesting birds during the first full day of construction activity immediately surrounding the buffer. The biologist shall look for signs of stress such as repeated alarm calls, agitated behavior, or departure of the birds from the nest. If the birds do not show signs of habituation to the new disturbance by resuming their normal nesting activities, work within the vicinity of the nest shall stop and the CDFW and USFWS shall be consulted to refine the buffer determination. If the birds continue their normal activities, the biologist shall inspect the nest site every 1 to 2 days (the frequency determined in consultation with the CDFW and USFWS) for as long as the nest is active and work is ongoing within the reduced buffer to confirm that the birds are tolerant of the construction activities.

Any required buffer shall remain in place until young are no longer dependent on the nest, or until the nesting attempt fails (for reasons other than project activities) and it is determined that the birds will not attempt to re-nest. A qualified biologist shall determine through direct observation when the nest is no longer in use. Before construction activities occur within the buffer area, the biologist must confirm that the nest is no longer active.

Significance after Mitigation: Less than Significant

Burrowing Owl. The closest CNDDB occurrence is a 2004 record of a wintering owl approximately 2.5 miles from the project site. However, the presence of ground squirrel burrows and low grass height in some areas provide suitable habitat conditions for the species and the species could occur in or near construction areas as a wintering or nesting species. Therefore, construction-related activities could result in loss or abandonment of an active burrowing nest nesting through direct disturbance on an occupied burrow or through noise, vibration, or visual disturbance. In addition,

construction-related activities could result in harm to winter burrowing owls, should they occur in or near the construction area. Therefore, related impacts are potentially significant.

Impact BIO-6: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to burrowing owl.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential direct impacts to burrowing owl to a less-than-significant level by ensuring the project would not result in a substantial adverse effect on this species.

Mitigation Measure BIO-6

Preconstruction activity surveys for burrowing owls shall be performed by a qualified biologist no more than 15 days before initial ground disturbance activities within a construction area. A survey to determine presence or absence may be performed at any time to facilitate passive relocation efforts (which can only occur outside of the nesting season of February 1 to August 31). In addition, a preconstruction activity survey by a qualified biologist must be conducted no more than 15 days prior to the commencement of grading, to confirm the absence of burrowing owls. This survey shall be conducted in all areas on and within 500 feet of the impact area and shall be conducted in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation (e.g., the surveys shall be conducted during weather conditions suitable for owl detection as recommended in the Staff Report. Surveys shall be conducted within 2 hours of dawn or sunset to maximize the detection of owls).

If burrowing owls are present during the breeding season (generally February 1 to August 31), a 250-foot buffer, within which no new activity will be permissible, shall be maintained between project activities and occupied burrows. Owls present on the site after February 1 will be assumed to be nesting unless evidence indicates otherwise as confirmed by a qualified biologist. This protected buffer area shall remain in effect until August 31, or based upon monitoring evidence, until the young owls are foraging independently or a qualified biologist has determined that the nest is no longer active. In some cases (e.g., if an activity is not visible from the nest site), it is possible that a breeding-season buffer less than 250 feet would be adequate to avoid disturbance of nesting burrowing owls, but such a variance would be set by a qualified biologist in consultation with the CDFW. In such a case, the biologist shall monitor the behavior of the nesting birds during the first full day of construction activity immediately surrounding the buffer. The biologist shall look for signs of stress such as repeated alarm calls, agitated behavior, or departure of the birds from the nest. If the

birds do not show signs of habituation to the new disturbance by resuming their normal nesting activities, work within the vicinity of the nest shall stop and the CDFW shall be consulted to refine the buffer determination. If the birds continue their normal activities, the biologist shall inspect the nest site every 1 to 2 days (the frequency determined in consultation with the CDFW) for as long as the nest is active and work is ongoing within the reduced buffer to confirm that the birds are tolerant of the construction activities.

If burrowing owls are present during the nonbreeding season (generally September 1 to January 31), a 150-foot buffer zone shall be maintained around the occupied burrow(s) if practicable. If such a buffer is not practicable, then a buffer adequate to avoid injury or mortality of owls (based on the determination of a qualified biologist) shall be maintained. If an adequate buffer (as determined by a qualified biologist) cannot be maintained, or if destruction of the burrow is required, the non-nesting birds may be passively relocated subject to CDFW approval of a Burrowing Owl Exclusion Plan.

Significance after Mitigation: Less than Significant

Other Nesting Birds. The proposed project has the potential to impact other special-status birds, such as long-eared owl, northern harrier, white-tailed kite, Vaux's swift, olive-sided flycatcher, grasshopper sparrow, and loggerhead shrike, American peregrine falcon, olive-sided flycatcher, tri-colored blackbird, and yellow warbler, and other nesting birds protected by the MBTA and/or California Fish and Game code, either directly from removing the nest or indirectly from noise or human presence during construction of the proposed staging area and trails. Breeding seasons vary from year to year depending on the species, weather, and other conditions, but nesting birds could be disturbed anytime from February through August. Within the project area, birds may nest in trees, shrubs, grasslands, bare ground, and on manmade structures and equipment. Breeding birds are most likely to abandon nests early in the nest cycle. If the young birds are forced to fledge early, they could be subject to predation or starvation, which could result in reproductive failure. A few trees may be removed or trimmed where the trail alignment passes through a woodland. Therefore, related impacts to nesting birds are potentially significant.

Impact BIO-7: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to nesting special-status or otherwise protected bird species.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential impacts to nesting birds to a less-than-significant level.

Mitigation Measure BIO-7 Prior to construction activities occurring during the nesting bird season (February 1 through August 31), a preconstruction activity

surveys for nesting birds will be conducted by a qualified biologist to ensure that no nests will be disturbed during project implementation. Surveys will be conducted no more than seven days prior to the initiation of construction activities. During this survey, the biologist shall inspect all trees and other potential nesting habitats (e.g., shrubs, ground and structures) in the impact area plus a surrounding 300-foot buffer for nests. If removal of potential nesting substrate or project grading will occur during more than one nesting season, or in different parts of the site in phases over the course of a single season, then additional pre-activity surveys must be performed within seven days prior to initiation of work in any particular area. If the preconstruction activity survey does not identify the presence of any active nests on or within 300 feet of the site, construction activities may proceed.

If nests known to have eggs or young, or that cannot be confirmed to be inactive or to lack eggs or young, are found, or adults are demonstrating nesting behavior, a qualified biologist shall establish an appropriate construction-free buffer around each nest. Generally, a buffer of 300 feet for raptors and 100 feet for songbirds are adequate to avoid causing nest abandonment. The buffer shall remain in place until the qualified biologist has confirmed that the nest is no longer active.

If less than a 100-foot nest buffer is necessary and determined to be appropriate for a particular nest or nests, a qualified biologist shall monitor the nest(s) before construction to document baseline nesting behavior and monitor the nest during construction to ensure nesting birds are not exhibiting signs of stress and territorial behavior. If signs of stress are observed during the monitoring, construction activities shall cease or buffer shall increase, as determined by a qualified biologist, the to a sufficient distance where the nesting birds are longer exhibiting signs of stress.

To prevent encroachment, the buffer shall be clearly marked for avoidance. The established buffer shall remain in effect until the young have fledged or the nest is no longer active as confirmed by the biologist.

Significance after Mitigation: Less than Significant

San Joaquin Kit Fox. No CNDDB occurrences of this species within 5 miles of the site have been recorded in the last 30 years and no potential dens were observed within proposed construction areas during the field surveys. Although the occurrence of the San Joaquin kit fox within Las Trampas is very unlikely, the project area nevertheless is within the range of the species and

provides potential breeding, foraging, and movement habitat.[51] Construction of the proposed project could impact San Joaquin kit fox, if present, by directly impacting their dens or indirectly impacting nearby dens through construction-related noise and/or visual disturbance. Therefore, as construction-related activities could result in loss of an active den and/or individual kit foxes, related impacts are potentially significant.

Impact BIO-8: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to San Joaquin kit fox.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential impacts to San Joaquin kit fox to a less-than-significant level.

Mitigation Measure BIO-8

Prior to any ground disturbance related to construction activities, a qualified biologist shall conduct a preconstruction survey in suitable habitat located within 300 feet of the proposed construction areas. The survey shall establish the presence or absence of kit fox and/or suitable dens, and shall evaluate use by kit fox consistent with USFWS survey guidelines (USFWS 1999). Preconstruction surveys shall be conducted no more than 30 days before ground disturbance. The biologist shall survey the proposed disturbance footprint and a 100-foot buffer to identify kit fox and/or suitable dens. If kit fox and/or suitable dens are identified in the survey area during preconstruction surveys, the following measures shall be implemented:

- If a suitable San Joaquin kit fox den is discovered within the proposed disturbance footprint or 100-foot buffer that could be potentially active, the den shall be monitored for three days by a qualified biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.
- Unoccupied dens within the proposed trail alignments or staging area shall be destroyed immediately to prevent subsequent use.
- If a natal or pupping den is found, the Park District shall be notified immediately. The den shall not be destroyed until the pups and adults have vacated and then only after consultation with USFWS and CDFW.
- If San Joaquin kit fox activity is observed at the den during the initial monitoring period, the den shall be monitored for an

[51] U.S. Fish and Wildlife Service (USFWS). 1999. San Joaquin Kit Fox Survey Protocol for the Northern Range. June 1999.

additional five consecutive days. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist.

- If suitable dens are identified in the survey area, exclusion zones around each den entrance or cluster of entrances shall be demarcated. The configuration of exclusion zones shall be circular, with a radius measured outward from the den entrance(s). No activities shall occur within the exclusion zones. Exclusion zone radii for potential dens shall be at least 50 feet. Exclusion zone radii for known dens will be at least 100 feet.

Significance after Mitigation: Less than Significant

American Badger. The project area provides suitable breeding and foraging habitat for the American badger. Construction of the proposed project could impact American badgers, if present, by directly impacting their dens or indirectly impacting nearby dens through construction-related noise and/or visual disturbance. Therefore, as construction-related activities could result in loss of an active den and/or individual badgers, related impacts are potentially significant.

Impact BIO-9: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to American badger.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential impacts to American badger to a less-than-significant level.

Mitigation Measure BIO-9 To address potential impacts to the American badger, the Park District shall implement the following measures:

- Preconstruction activity surveys for badger dens shall be performed within 15 days prior to commencement of grading or other ground-disturbing activities. These surveys shall be conducted by a qualified biologist familiar with the characteristics of badger burrows. If active badger burrows are identified within the proposed development area, they should be avoided to the maximum extent practicable. If avoidance is not feasible, a qualified biologist should determine if the burrow is being used as a maternity den. If young are determined to be present, a buffer free from new construction-related disturbance shall be established around the den; the dimensions of this buffer shall be determined by the biologist in consultation with the CDFW. The buffer shall be maintained until young vacate the den, as determined by a qualified biologist.

- If the occupied burrow is simply being used as a refugium by a single badger, or after young have been weaned from a maternity den, one of the following measures may be implemented upon CDFW-approval to avoid potential impacts on individual badgers:
    - Active trapping and relocation of badgers to suitable off-site habitat by a qualified biologist.
    - An on-site passive relocation program, through which badgers are excluded from occupied burrows by installation of a one-way door in burrow entrances, monitoring of the burrow for one week to confirm badger usage has been discontinued, and hand- excavation and collapse of the burrow to prevent reoccupation.
- If relocation of badgers is necessary, the biologist shall conduct a follow-up survey of the impact areas the day that grading or construction is to commence to determine whether any relocated badgers have returned to the construction site. If badgers have returned to the construction site, they shall be relocated again using one of the measures described above.

Significance after Mitigation: Less than Significant

San Francisco Dusky-Footed Woodrat. San Francisco dusky-footed woodrat nests were observed in the project area, including one near the proposed Calaveras Ridge Trail. Additional woodrat nests may be present in the riparian, woodland and scrubland habitats along the trail alignment or other construction areas. Construction activities could result in the direct loss of a woodrat nest(s) and its occupants, or indirectly disturb woodrats should construction activities occur in proximity to an occupied nest. Therefore, as construction-related impacts are potentially significant.

Impact BIO-10: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to San Francisco dusky-footed woodrat.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential impacts to San Francisco dusky-footed woodrat to a less-than-significant level.

Mitigation Measure BIO-10 A qualified biologist shall conduct a preconstruction survey for San Francisco dusky-footed woodrat nests prior to the start of project activities. Surveys will be conducted in the immediate work area and a 25-foot buffer around those areas. If woodrat nests are present, the nests will be flagged in the field and delineated on project site maps in order to avoid potential impacts to woodrat nests during construction activities. For any woodrat nests that

cannot be avoided, a woodrat nest relocation plan shall be prepared and submitted to CDFW for approval. At a minimum, the plan shall include the phased dismantling and relocation of the nest materials to a suitable location, and the installation of artificial shelters at a ratio of 1:1 per dismantled nest to provide readily accessible refugia for dispersing individuals. If breeding woodrats are present, relocation of houses shall be delayed until the breeding season is over or the qualified biologist otherwise determines that young are no longer present.

Significance after Mitigation: Less than Significant

Roosting Bats. Bats, including special-status bats, such as the pallid bat and western red bat, could roost in large trees in the project area and forage on the project site. Roosting bats could be disturbed, killed, or injured by tree removal activity, if present in construction areas. Trees may be trimmed or removed where the trail passes through woodland habitat. Disturbance of roosting special-status bats would be a potentially significant impact.

Impact BIO-11: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to roosting special-status bat species.

Implementation of the following mitigation measure, in addition to general avoidance measures discussed in Mitigation Measures BIO-2a, would reduce potential impacts to roosting bats to a less-than-significant level.

Mitigation Measure BIO-11 Prior to any tree removal during the maternity roosting period (April 15 to August 31) or hibernation period (October 15 to February 28), a focused tree habitat assessment shall be conducted by a qualified bat biologist of all trees that will be removed or impacted by construction activities. Trees containing suitable potential bat roost habitat features would then be clearly marked. The habitat assessments should be conducted enough in advance to allow preparation of a report with specific recommendations, and to ensure tree removal can be scheduled during seasonal periods of bat activity if required. If it is determined that day roosting bats are unlikely to occur, the tree may be removed as described below. If the absence of roosting bats cannot be confirmed, then the removal of trees providing suitable maternity or hibernation roosting habitat should only be conducted during seasonal periods of bat activity, including:

1. Between March 1 (or after evening temperatures rise above 45F and/or no more than 1/2" of rainfall within 24 hours occurs) and April 15; or

2. Between September 1 and about October 15 (or before evening temperatures fall below 45F and/or more than 1/2" of rainfall within 24 hours occurs).

Appropriate methods will be used to minimize the potential of harm to bats during tree removal. Such methods may include but are not limited to using a two-step tree removal process. This method is conducted over two consecutive days and works by creating noise and vibration by cutting non-habitat branches and limbs from habitat trees using chainsaws only (no excavators or other heavy machinery) on Day 1. The noise and vibration disturbance, together with the visible alteration of the tree, is very effective in causing bats that emerge nightly to feed, to not return to the roost that night. The remainder of the tree is removed on Day 2. A bat biologist qualified in two-step tree removal is required on Day 1 to supervise and instruct the tree-cutters who will be on the site conducting the work, but only for a sufficient length of time to train all tree cutters who will conduct two-step removal of habitat trees. The bat biologist is generally not required on Day 2, unless a very large cavity is present and a large colony is suspected.

Significance after Mitigation: Less than Significant

Mountain Lion. The project site may be located within the home range of a mountain lion(s). However, given the large area of habitat in the project area, that mountain lions are generally elusive and move away from noise, and that no potential den sites are present in the proposed construction areas, it is not expected that construction activities would result in harm to individual mountain lions. Therefore, related impacts are less than significant.

Monarch Butterfly. The project site is located outside of the range of wintering monarch butterflies, and therefore, winter roosts (which are considered sensitive by CDFW) would not be impacted by the proposed project. While it is possible that milkweed plants, if present, could be used by breeding monarchs, related impacts would be less than significant because of the large area of open space maintained relative to project-related habitat alteration, and because winter roosts would not be disturbed.

Crotch bumble bee and Western Bubble Bee. The Crotch bumble bee and western bumble bee could occur in grassland and scrub habitat within the project site. Disturbance related to construction would be a potentially significant impact.

Impact BIO-12: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to Crotch bumble bee and western bumble bee.

Mitigation Measure BIO-12 To address potential impacts to the Crotch bubble bee and western bubble bee, the Park District shall implement the following measures:

- A minimum of two preconstruction surveys conducted within 30 days during appropriate activity periods (i.e., March through September) prior to the start of ground disturbing activities to identify bumble bee activity. The preconstruction surveys shall occur when temperatures are above 60° Fahrenheit (15.5°Celsius) and not during wet conditions (e.g., foggy, raining, or drizzling). The survey shall be conducted at least 2 hours after sunrise and 3 hours before sunset and shall occur at least 1 hour after rain subsides. Preferably, the survey should be conducted during sunny days with low wind speeds (less than 8 miles per hour), but surveying during partially cloudy days or overcast conditions are permissible if the surveyors can still see their own shadow.

- If Crotch or western bumble bees, or potential Crotch or western bumble bees (since bumble bees can be difficult to identify in the field) are observed within the project site, a plan to protect Crotch and/or western bumble bee nests and individuals shall be developed and implemented in consultation with CDFW and USFWS. The plan shall include, but not be limited to, the following measures:

    - Specifications for construction timing and sequencing requirements (e.g., avoidance of raking, mowing, tilling, or other ground disturbance until late March to protect overwintering queen bumble bees);

    - Establishment of appropriate no-disturbance buffers for bumble bee nest sites to avoid impacts to the bees and construction monitoring by a qualified biologist to ensure compliance if bumble bee nests are identified;

    - Restrictions associated with construction practices, equipment, or materials that may harm bumble bees (e.g., avoidance of pesticides/herbicides, BMPs to minimize the spread of invasive plant species);

    - Provisions to avoid Crotch or western bumble bees, or potential Crotch or western bumble bees if observed away from a bumble bee nest during project activity (e.g., ceasing of project activities until the animal has left the active work area on its own volition); and

- Prescription of an appropriate restoration seed mix targeted for the Crotch and western bumble bee, including native plant species known to be visited by native bumble bee species and containing a mix of flowering plant species with continual floral availability through the entire active season of the Crotch and western bumble bee (March through September).

Potential Operational Impacts to Special-Status Species. The proposed project includes the following actions which do not involve ground disturbance or other construction-related activities:

1. Open land bank properties for public access (approximately 615 acres)
2. Incorporate 141 acres into Las Trampas, but to remain land banked and closed to public access
3. Designate 35-acres as a Special Resource Protection Area, which supports sensitive amphibian species
4. Designate 166 acres encumbered by conservation easements as Special Protection Features
5. Provide public access from two walk-in entrances
6. Close approximately 1-mile of existing service roads
7. Designate an existing 1.4-mile access road as a multi-use trail (i.e., Heritage Pear Trail) This trail connects park users from the proposed Podva walk-in entrance to existing trails within Las Trampas parkland. Approximately 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 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.

Several of these action (2, 3, 4, and 6) would benefit biological resources through added protections and management over open space or decommissioning an existing access road. The other actions (1, 5, and 7) could make existing parklands more accessible to the public. Without mitigating factors, related impacts could include but are not limited to increased potential for disturbance of wildlife, disturbance to habitat, increased trash, and spread of non-native plant and wildlife species. However, related impacts are less than significant for the following reasons:

- The Park District has expertise in the operation and management of park lands. All existing Park District BMPs and policies will be applied. For example, applicable policies in the Park District 2013 Master Plan and Park District Ordinance 38, and Standard Technical Specifications and Supplementary Conditions to minimize potential operational impacts to special-status wildlife species through standard maintenance and operation measures will be implemented. These policies and measures include required environmental protection training for District maintenance staff, policies for park visitors that minimize impacts to wildlife and sensitive habitat, regular monitoring and maintenance of trails and associated infrastructure, litter pick-

up, and other ongoing monitoring and maintenance activities. In addition, the Park District's Integrated Pest Management (IPM) program will be implemented to aid in control of noxious weeds, as well as the implementation of BMPs to control phytophthora.

- There is already public access along the access road to be designated as the Heritage Pear Trail, which currently passes by several ponds supporting special-status amphibians. No physical improvements are proposed for this trail. This area is currently open to the public and the trail is actively used. As part of the proposed project, the trail and surrounding area will be designated as a Special Resource Protection Area (SRPA), which will provide the following protections to the area:

    - 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.[52] One important factor is that livestock ponds have become crucial breeding habitats for both animals (Fellers 2005; Holland et al. 1990).[53,54] 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.[55] Therefore, cattle grazing would 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 would be posted year-round identifying the area as a SRPA 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 would be regularly monitored, and adaptive management actions would be implemented as required. Qualified staff would 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

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52 Ford, L.D., P.A. Van Hoorn, D.R. Rao, N.J. Scott, P.C. Trenham, and J.W. Bartolome. 2013. *Managing Rangelands to Benefit California Red-legged Frogs and California Tiger Salamanders*. Livermore, California: Alameda County Resource Conservation District.

53 Fellers, G.M. 2005. *Rana draytonii* Baird and Girard 1852, California red-legged frog. In: M. Lannoo (Ed.), Amphibian Declines: The Conservation Status of United States Species; Volume 2: Species Accounts. University of California Press, Berkeley, California. 1094 p.

54 Holland, D.C., M.P. Hayes, and E. McMillan. 1990. Late summer movement and mass mortality in the California tiger salamander (Ambystoma californiense). Southwestern Naturalist 35:217-220.

55 Ford, L.D., P.A. Van Hoorn, D.R. Rao, N.J. Scott, P.C. Trenham, and J.W. Bartolome. 2013, op. cit.

- New populations of invasive plants or notable spread of non-native plant species
- Appropriate grazing levels

Focused amphibian surveys would 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 would prepare an annual summary report that includes the results of observations of use and resource conditions and response or remedial actions recommended to resolve observed issues. Potential remedial actions may include, but are not limited to:

- Removal of unplanned user-created trails
- Temporary closures of areas
- 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.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Sensitive Natural Communities. Three sensitive natural communities occur on the site: arroyo willow thickets along the Sabertooth Trail, valley oak woodland along the Sabertooth Trail and Warbler Loop Trail, and creeping rye grass turf along the Calaveras Ridge Trail and Warbler Loop Trail. Construction of the project would not impact the valley oak woodland, but arroyo willow thickets and creeping rye grass turf would likely be impacted.

Construction activities associated with development of the proposed trails could impact creeping rye grass turf along the Calaveras Ridge Trail and Warbler Loop Trail (Figure 4.3-2). The approximate 0.1 acre of creeping rye grass stand along the Warbler Loop Trail could possibly be avoided during trail construction, but up to approximately 0.2 acre of creeping rye grass may be impacted by construction of the Calaveras Ridge Trail. Related impacts are potentially significant.

Impact BIO-13: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact creeping wild rye grassland.

Implementation of the following mitigation measure would reduce the identified impacts to creeping rye grass turf to a less than significant level.

Mitigation Measure BIO-13 If feasible, the proposed trail alignments shall be re-routed to a suitable trail alignment within the 50-ft buffer study area to avoid/minimize impacts to the creeping rye grass turf. The stands of creeping rye grass near the final alignment shall be flagged and avoided during construction to the degree feasible.

If creeping rye grass cannot be avoided, the loss of creeping rye grass turf shall be mitigated by restoring an equivalent amount of creeping rye grass turf onsite. The Park District shall reseed temporarily disturbed areas of creeping rye grass turf habitat that are disturbed by trail construction with an appropriate weed-free native seed mix that contains creeping rye grass seed and/or plugs. The restored rye grass areas shall be monitored and reported on according to the HMMP described in Mitigation Measure BIO-2c.

Significance after Mitigation: Less than Significant

Riparian and Arroyo Willow Thickets. The proposed project could have limited impacts on riparian habitat, including arroyo willow thickets, associated with Tributaries 6 and 7 along the Calaveras Ridge Trail and Tributaries 8-1, 10, and 11 along the Warbler Loop Trail. Construction of the Calaveras Ridge Trail would involve trimming a few riparian trees (likely less than 15 trees), including oaks and California bay, which would result in the temporary impact of riparian woodland. No riparian trees would be removed along the Calaveras Ridge Trail. Construction of the Warbler Loop Trail may involve the removal or trimming of riparian vegetation (likely less than 15 trees) where the trail passes through the riparian woodland at the trail crossings at Tributaries 8-1, 10, and 11. Related impacts are potentially significant.

Impact BIO-14: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to riparian plant communities.

Implementation of the following mitigation measure would reduce the identified impacts to riparian habitat to a less than significant level.

Mitigation Measure BIO-14a To minimize disturbance to riparian habitat for trail construction occurring adjacent to riparian habitat, riparian areas shall be clearly delineated with flagging by a qualified biologist. Riparian areas shall be separated and protected from the work area through silt fencing, amphibian/reptile-friendly fiber rolls (i.e., no mono-filament), or other appropriate erosion control material. Material staging, and all other project-related activity shall be located as far as possible from

riparian areas with no driving or parking of vehicles or equipment within the dripline of a riparian tree.

Mitigation Measure BIO-14b If impacts to riparian habitat within the project area cannot be avoided, the Habitat Mitigation and Monitoring Plan (HMMP) discussed in Mitigation Measure BIO-15 shall be implemented for all impacted riparian habitat.

Significance after Mitigation: Less than Significant

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Wetlands, drainages, and tributaries in the project area are likely subject to regulation under Section 404 of the federal Clean Water Act and California Porter-Cologne Water Quality Control Act. Construction activities could adversely affect these features through directly filling, or indirectly through increased erosion or sedimentation. Some of the tributaries have already been impacted through the installation of culverts, roads, and water troughs or cisterns associated with ranching operations in the project area. The Project has been designed to avoid and/or minimize direct impacts on wetlands and/or waters under the jurisdiction of the USACE, RWQCB, and CDFW to the extent feasible. The trail alignment, however, does cross several tributaries and two seasonal wetlands, while the proposed staging area would impact one ditch. The project would permanently impact up to approximately 1,123 square feet and temporarily impact up to 578 square feet of these jurisdictional features. Table 4.3.H lists the impacts to these potentially jurisdictional features.

Table 4.3.H: Impacts to Potentially Jurisdictional Wetlands and Tributaries

Potentially Jurisdictional Feature	Permanent Impacts (Square Feet)	Temporary Impacts (Square Feet)
Seasonal Wetland C	120	80
Seasonal Wetland D	120	80
Tributary 5-1	64	72
Tributary 6	66	26
Tributary 7	72	48
Tributary 8-1	128	64
Tributary 8-2	128	64
Tributary 10	160	72
Tributary 11	160	72
Ditch 1	105	0
Total	**1,123**	**578**

Source: Compiled by LSA (2021).

Construction of the trails and staging area would consist of the following impacts to jurisdictional wetlands and drainages:

- Trail construction activities would involve the construction of block fords and puncheons at two tributary crossings at the Calaveras Ridge Trail that would result in approximately 138 square feet of permanent impacts to the jurisdictional tributaries. At Tributary 6, a small puncheon with

a 1-foot by 6-foot by 1-foot (6 square foot) sill would be installed and an additional 10-foot long by 6-foot wide by 1-foot deep (60 square foot) area would be hardened with rock. At Tributary 7, a 12-foot by 6-foot (72 square foot) rock or articulated block ford would be installed at the crossing. Temporary impacts to Tributary 6 would be approximately 26 square feet and temporary impacts to Tributary 7 would be approximately 48 square feet.

- At the Sabertooth Trail, approximately 3 cubic yards of rock fill would be installed at a 24-foot by 14-foot articulated block ford along the existing road. The rock fill would be installed for energy dissipation and stabilization purposes.

- At the Warbler Loop Trail, the trail would cross Seasonal Wetland D and Tributaries 5-1, 8-1, 8-2, 10, and 11 and would result in up to 726 square feet of permanent impacts to these features. At Seasonal Wetland D, a 20-foot by 6-foot drain lens consisting of rock fill material would be constructed. Construction of the drain lens would permanently impact up to 120 square feet and temporarily impact up to 80 square feet of the wetland.

- A new crossing over Tributary 5-1 would be constructed in order to connect Sabertooth to the Warbler Loop Trail. This crossing would include the construction of a small bridge with two abutments that would be constructed over the tributary, which would permanently impact up to 64 square feet and temporarily impact up to 72 square feet of the tributary.

- A new crossing would be constructed over Seasonal Wetland D. This crossing would include a drain lens, which would be constructed in order allow the water to move through it slowly. Construction of the drain lens would permanently impact up 120 square feet and temporarily impact up to 80 square feet of the wetland.

- Trail work at Tributaries 8-1 and 8-2 would each involve the construction of a 16-foot by 8-foot articulated ford with energy dissipation up and down stream of the crossing. Construction of the ford would permanently impact up to 128 square feet and temporarily impact up to 64 square feet at each tributary.

- Work at Tributaries 10 and 11 would each involve the construction of two abutments that would permanently impact up to 160 square feet and temporarily impact up to 72 square feet at each tributary.

- A new proposed driveway at the Old Time Corral Staging Area would permanently impact approximately 210 square feet of Ditch 1. This ditch would be realigned a few feet to the north of the existing ditch and would include a new 30-foot-long culvert.

The Park District would obtain required permits for impacts to jurisdictional features from the relevant regulatory agencies, including the USACE, CDFW, and RWQCB. These permits would include conditions and BMPs that the Park District would implement during construction. These permits may also specify mitigation, which the Park District would provide as specified by the agencies. This proposed project would have an adverse effect on federally protected wetlands/other waters as defined by Section 404 of the Clean Water Act (including, but not limited to seasonal wetlands and tributaries) through direct removal, filling, hydrological interruption, or other means. Therefore, related impacts are significant.

Impact BIO-15: Proposed construction of the Old Time Corral Staging Area, corral and the new trails could result in a potentially significant impact to jurisdictional waters of the United States and of the State.

Through implementation of Mitigation Measure BIO-15, impacts to jurisdictional waters of the United States and of the State would be less than significant.

Mitigation Measure BIO-15

The permanent impacts of approximately 1,123 square feet and temporary impacts of approximately 578 square feet at seven tributary crossings, two seasonal wetlands, and one ditch, and any additional riparian habitat (see Impact BIO-14) would be mitigated by restoration/enhancement at onsite tributaries and/or wetlands or other suitable nearby locations. These activities may include the removal of invasive plants (enhancement) and/or the planting of native riparian plants (restoration/creation), or other appropriate activities.

To achieve this, the Park District shall prepare and implement a project-wide Habitat Mitigation and Monitoring Plan (HMMP) to mitigate temporary and permanent impacts to sensitive/jurisdictional habitat. The HMMP shall be subject to approval by the USACE, RWQCB, and/or CDFW prior to any disturbance of jurisdictional features. Additionally, all required permits and certifications shall be obtained from the USACE, RWQCB, and/or CDFW prior to any disturbance of jurisdictional features and all permit conditions shall be implemented.

At a minimum, the HMMP shall include the following:

- Permanently impacted wetlands, streams, riparian, and other sensitive habitat shall be compensated at a minimum 1:1 ratio through restoration/creation or a minimum 2:1 ratio through enhancement. The permitting agencies may require higher mitigation ratios.
- Any native riparian trees that are removed shall be replaced at a minimum 3:1 ratio.
- All temporarily disturbed areas, including wetlands, streams, riparian, other sensitive areas, shall be returned to pre-project conditions or better. Methods may include erosion control, seeding, replanting, and weed control.
- Documentation of the preconstruction habitat conditions within jurisdictional area to be impacted, including wetlands, streams, riparian, and other sensitive habitat.

- Location of habitat restoration, creation, and/or enhancement sites.
- Procedures for procuring plants, such as transplanting or collecting cuttings from plants, including storage locations and methods to preserve the plants.
- Quantity and species of plants to be planted or transplanted.
- Planting procedures, including the use of soil preparation and irrigation.
- Schedule and action plan to maintain and monitor the mitigation site(s) for a minimum 5-year period.
- Reporting procedures, including the contents of annual progress reports.
- List of criteria (e.g., growth, plant cover, survivorship) by which to measure success of the plantings and wetland creation/restoration/enhancement.
- Contingency measures to implement if the wetland/stream/riparian creation/restoration/enhancement is not successful (i.e., weed removal, supplemental plantings, etc.).
- Performance standards, monitoring, and reporting for a minimum of five years to ensure success of the mitigation and remedial measures if performance standards are not met.

Significance after Mitigation: Less than Significant

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed project consists of the construction of connecting trails and a new staging area at the existing corral located along Bollinger Canyon Road. The location of the proposed staging area is along Bollinger Canyon Road and is already developed with a corral and provides limited opportunities for wildlife movement. The locations of the trail alignments are not part of an expected regional wildlife corridor since they do not occur along a major riparian corridor or ridge top. Although the trails do cross through several tributaries and riparian corridors, the trail crossings would not impede movement of wildlife along these corridors due to the narrow width of the trails and the open construction of the trail, which does not include fences that may restrict movement of wildlife. The trails and staging area would not significantly affect the movement of wildlife since

wildlife would be able to continue to cross over the trails or move through or around the staging area. Additionally, the staging area and trails would be utilized during the daylight hours, when many nocturnal wildlife species are less likely to move through the site. Construction of the tributary crossings would occur during the dry season when no water is present. Fish and other aquatic species would be able to move through the crossings after the trails are complete.

The project site does not contain native wildlife nursery sites, such as heron rookeries or salmonid spawning areas. Impacts to wildlife that may breed or nest on the site would be mitigated in accordance with individual Mitigation Measures BIO-5 through BIO-11 for special-status and sensitive wildlife species.

Given that the proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, related impacts would be less-than-significant.

4.3.4.2 Cumulative Impacts

The geographic scope for the analysis of cumulative impacts includes the San Ramon Creek and Las Trampas Creek watersheds, the Park District open space, including the Las Trampas Wilderness Regional Preserve, and adjacent open space areas. These contiguous open space areas in the East Bay provide habitat and corridors for wildlife and plants, including special-status species.

Present and reasonably foreseeable projects within the immediate vicinity of the project site include the Faria Preserve and the Chang Development project. These projects are located directly adjacent to the LUPA project site and the habitat is contiguous. The Faria Preserve is within the San Ramon city limits, west of I-680 and south of the Danville town limit, and would include 740 residential units, a 1.5-acre house of worship site, a 2.6-acre educational facility site, a 12.9-acre community park, and a 0.7-acre rose garden. The Chang Development project site is at the northwest corner of Bollinger Canyon Road/Crow Canyon Road, within the San Ramon city limit, and would include 43 single-family, large-lot homes and 18 accessory dwelling units.

Cumulative effects on candidate, sensitive, or special status species. Like the proposed project, potential impacts on candidate, sensitive, or special status plants and animals of the Faria Preserve and Chang Development projects tend to be site-specific. The overall cumulative effect of all three projects would be dependent on the degree to which significant vegetation and wildlife resources are protected on each property. The proposed project could have direct or indirect impacts on seven special status plant species (the bent-flowered fiddleneck, big-scale balsamroot, round-leaved filaree, Mount Diablo fairy-lantern, diamond-petaled California poppy, Diablo helianthela, and common viburnum), 21 special status wildlife species (California tiger salamander, California red-legged frog, Western pond turtle, Alameda whipsnake, Burrowing owl, Long-eared owl, Northern harrier, Golden eagle, White-tailed kite, Vaux's swift, Olive-sided flycatcher, Grasshopper sparrow, Loggerhead shrike, San Joaquin kit fox, San Francisco dusky-footed woodrat, Pallid bat, Western red bat, American badger, and Crotch cumble bee and western bumble bee). However, the proposed project would implement the following mitigation measures, reducing potential impacts to special status species to a less than significant level:

- Mitigation Measure BIO-1: Measures to reduce impact to special status plants
- Mitigation Measure BIO-2a: General Avoidance and Minimization Measures
- Mitigation Measure BIO-2b: California Red-legged frog and California Tiger Salamander Specific Measure
- Mitigation Measure BIO-2c: Habitat Compensation
- Mitigation Measure BIO-3: Alameda Whipsnake Measures
- Mitigation Measure BIO-4: Western Pond Turtle Measures
- Mitigation Measure BIO-5: Golden Eagle Measures
- Mitigation Measure BIO-6: Burrowing Owl Measures
- Mitigation Measure BIO-7: Nesting Bird Surveys
- Mitigation Measure BIO-8: San Joaquin Kit Fox Measures
- Mitigation Measure BIO-9: American Bader Measures
- Mitigation Measure BIO-10: San Francisco Dusky-Footed Woodrat Measures
- Mitigation Measure BIO-11: Roosting Bats Measures
- Mitigation Measure BIO-12: Crotch Bumble Bee and Western Bumble Bee

Likewise, the Faria Preserve and Chang development projects could also have impacts on special status species. The Faria Preserve Initial Study/Mitigated Negative Declaration (IS/MND) found the potential for three special status plants (bent-flowered fiddleneck, diablo fairy lantern, and Congdon's tarplant), and two special status animals (Alameda whipsnake, and the loggerhead shrike) to occur on site. Of the special status plants, only Congdon's tarplant was found to occur on-site in a vegetation survey. The Faria Preserve IS/MND included the following mitigation measures that would reduce impact to special status plants and animals to a less than significant level:

- Mitigation Measure 3.4-1: Develop Mitigation Plan and Implement Strategies to Avoid or Mitigation Impacts on Congdon's Tarplant
- Mitigation Measure 3.4-2: Conduct a Preconstruction Nesting Bird Survey and Implement Protective Actions if Active Nests are Detected
- Mitigation Measure 3.4-3: Complete Compensatory Mitigation Plans Pursuant to the State and Federal Endangered Species Acts and Comply with Conservation Measures.

The Chang Property Development IS/MND determined 5 special status plants have the potential to occur on site (but have not been detected by vegetation surveys surveys): the bent-flowered fiddleneck, Congdon's tarplant, Diablo helianthella, Lobb's aquatic buttercup, saline clover. Only one special status plant was found on the site during plant surveys: the northern California black walnut. The IS/MND also found that two special status animal species are known to occur on site (steelhead and white-tailed kite), one likely occurs on site (California red-legged frog), and 12 have the possibility of occurring on site (western pond turtle, northern harrier, golden eagle, burrowing owl, yellow warbler, Townsend's big-eared bat, pallid bat, western red-bat, western mastiff bat, San Francisco dusky-footed woodrat, badger, and ringtail). The Chang Property Development IS/MND included the following mitigation measures that would reduce impact to special status plants and animals to a less than significant level:

- Mitigation Measure Bio-1: Special Status Plant Species
- Mitigation Measure Bio-2: Impacts to Steelhead
- Mitigation Measure Bio-3: Impacts to California Red-Legged Frogs and Western pond Turtles
- Mitigation Measure Bio-4: Impacts to Western Burrowing Owls
- Mitigation Measure Bio-5: Impacts to nesting raptors and migratory birds, including yellow warblers
- Mitigation Measure Bio-6: Impacts to Bat Nursery Sites or Roosting Bats
- Mitigation Measure Bio-7: Impacts to San Francisco Dusky-Footed Woodrats
- Mitigation Measure Bio-8: Impacts to American Badgers
- Mitigation Measure Bio-10: Potential Impacts to jurisdictional waters and wetland mitigation

Combined, the three projects could contribute to an adverse cumulate effect on these special status species. However mitigation measures in this EIR, the Faria Preserve IS/MND, and Chang Property Development IS/MND, listed above, reduce impact to these species to a less than significant level. Impacts are not expected to substantially affect the distribution, breeding productivity, population viability, or the regional population of any special-status species, or cause a change in species diversity locally or regionally. Additionally, the proposed project would not have a cumulatively considerable contribution to any cumulative impact on special status plants or wildlife species because the Las Trampas Preserve is relatively large and the proposed project would not alter the current status of the proposed project area as parkland and open space. Further, the proposed project would have minimal impacts that will be mitigated through the mitigation measures described above.

Cumulative effects on riparian habitats or other sensitive natural communities. The proposed project site includes three sensitive natural communities: arroyo willow thickets along the Sabertooth Trail, valley oak woodland along the Sabertooth Trail and Warbler Loop Trail, and

creeping rye grass turf along the Calaveras Ridge Trail and Warbler Loop Trail. Construction activities associated with the development of the proposed trials could impact creeping rye grass turf. The proposed project would have limited impacts on riparian habitats, with construction of the Calaveras Ridge Trail only involving the trimming of several riparian trees. However, the proposed project would implement the following mitigation measures, reducing potential impacts to riparian habitats and other sensitive natural communities to a less than significant level:

- Mitigation Measure BIO-13: Reroute trail alignments to reduce impacts to creeping rye grass turf as much as possible, and mitigate any impacted areas through the restoration of creeping rye grass turf onsite.

- Mitigation Measure BIO-14a: Delineate and separate riparian areas from work areas

- Mitigation Measure BIO-14b: Mitigate any impacted riparian trees and shrubs that cannot be avoided at a minimum 3:1 ratio

Likewise, the Faria Preserve and Chang development projects could also have impacts on riparian habitats or other sensitive natural communities. The Faria Preserve IS/MND found two sensitive natural communities on the project site: riparian woodland and seasonal wetland. However, the project would implement the following mitigation measure, which would reduce the permanent loss of riparian and wetland habitat to a less than significant level:

- Mitigation Measure 3.4-4: Preserve, Restore, and Create Adjacent Riparian and Wetland Features through the CWA Section 404/401 permitting process

The Chang Development Project IS/MND found the project would impact riparian woodland habitat with 0.3 acres of permanent impacts. However, the project would implement the following mitigation measure, which would reduce the permanent loss of riparian and wetland habitat to a less than significant level:

- Mitigation Measure BIO-9: Riparian Impacts and 1602 Streambed Alteration Agreement, which requires the replacement of impacted wetlands

All three projects – the proposed project, the Faria Preserve project, and the Chang Property Development – have mitigation measures that would require the replacement of impacted riparian habitat with restored habitat. No net loss of riparian habitat would occur, and therefore there would be no significant cumulative impact on riparian habitats or other sensitive natural communities. Additionally, the proposed project would not have a cumulatively considerable contribution to any significant cumulative impact on riparian or other sensitive habitats because the proposed project would have minimal impacts on these habitats that will be mitigated through implementation of the mitigation measures identified above.

Cumulative effects on wetlands. The proposed project area contains wetlands, drainages, and tributaries that are likely subject to regulation under Section 404 of the Federal Clean Water Act and the California Porter-Cologne Water Quality Control Act. Construction activities would permanently impact up to approximately 1,123 square feet, and temporarily impact an additional 578 square

feet, of these jurisdictional features. However, the proposed project would implement the below mitigation measures, which would reduce impacts to wetlands to a less than significant level. In addition, the proposed project would obtain required permits for impacts to jurisdictional features from the relevant regulatory agencies, including the USACE, CDFW, and the RWQCB and comply with all permit conditions.

- Mitigation Measure BIO-15: Mitigation of permanently impacted wetlands and temporarily impacted wetlands through restoration and enhancement at onsite tributaries and/or wetlands.

Likewise, the Faria Preserve and Chang development projects could also have impacts on riparian habitats or other sensitive natural communities. The Faria Preserve project would permanently modify 0.12 acres of jurisdictional drainage channels. However, the project would implement the following mitigation measure, which would reduce the permanent loss of riparian and wetland habitat to a less than significant level:

- Mitigation Measure 3.4-4: Preserve, Restore, and Create Adjacent Riparian and Wetland Features through the CWA Section 404/401 permitting process

The Chang Development Project IS/MND found the project would have the potential to impact presumed jurisdictional waters to be on the project site: Bollinger Canyon Creek, seasonal tributaries to Bollinger Canyon Creek, and several seeps and wetlands. While the IS/MND did not provide the acreage of temporary or permanent impacts to jurisdictional wetlands, project construction activities were considered to have potentially significant impacts. However, the project would implement the following mitigation measures, which would reduce impact to a less than significant level:

- Mitigation Measure Bio-10: Potential Impacts to jurisdictional waters and wetland mitigation, which required any jurisdictional waters lost or disturbed be replaced or rehabilitated on a no net loss basis.

All three projects – the proposed project, the Faria Preserve Project, and the Chang Property Development – have mitigation measures that would require the replacement of impacted wetlands. No net loss of wetland habitat would occur, and therefore there would be no significant cumulative impact on wetlands. Additionally, the proposed project would not have a cumulatively considerable contribution to any significant cumulative impact on wetlands because the proposed project would have minimal impacts on these habitats that will be mitigated through implementation of the mitigation measures identified above.

4.4 CULTURAL RESOURCES AND TRIBAL CULTURAL RESOURCES

This section describes the regulatory framework, existing conditions, and potential effects of proposed project implementation related to cultural resources, including historic-era resources of the built environment, historic-era and prehistoric archaeological resources, tribal cultural resources (TCRs), and human remains.

It should be noted that after completion of the Initial Study (included in Appendix A), it was determined that the analysis of potential impacts to cultural resources, particularly the potential impacts that were determined to be less than significant with mitigation measures, be included in this Draft EIR. A Historical Resource Evaluation (HRE) and Cultural and Paleontological Resource Report were prepared by Evans & De Shazo (EDS).

4.4.1 Setting

4.4.1.1 Regulatory Setting

For the purposes of CEQA, cultural resources are defined to include architectural resources, archaeological resources, tribal cultural resources, and paleontological resources. CEQA requires that public agencies consider the effects of their actions on cultural resources eligible for listing in the California Register. In addition, CEQA sets specifications for the evaluation of prehistoric cultural resources and requires a records search for identification of paleontological resources. This subsection describes the laws, policies, and regulations that address these resources in the project area.

State Regulations. The following state laws or regulations pertaining to cultural resources and tribal cultural resources are applicable to the proposed project.

California Environmental Quality Act. The State implements provisions in CEQA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, oversees adherence to CEQA regulations. The OHP also maintains the California Historic Resource Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdiction. Typically, a resource must be more than 50 years old to be considered as a potential historical resource. The OHP advises recordation of any resource 45 years or older, since there is commonly a five-year lag between resource identification and the date that planning decisions are made.

CEQA (*codified at Public Resources Code Section 21000 et seq.)* is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources and unique archaeological resources.

Historical Resources. CEQA Guidelines recognize that a historical resource includes: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g); and (3) any object, building, structure,

site, area, place, record, or manuscript, which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC § 21084.1 and CEQA Guidelines § 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of PRC § 21083, pertaining to unique archaeological resources.

Unique Archaeological Resources. As defined in PRC § 21083.2 a "unique archaeological resource" is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The CEQA Guidelines note that if an archaeological resource is not a unique archaeological resource or historical resource, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (CEQA Guidelines § 15064.5[c][4]).

Tribal Cultural Resources. Assembly Bill (AB) 52, enacted in September 2014, recognizes that California Native American tribes have expertise with regards to their tribal history and practices. The bill established a new category of cultural resources known as tribal cultural resources to consider tribal cultural values when determining impacts on cultural resources (PRC § 21080.3.1, 21084.2, and 21084.3). PRC § 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    - included or determined to be eligible for inclusion in the California Register; or
    - included in a local register of historical resources, as defined in PRC § 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC §

5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria of PRC § 21074(a) is also a tribal cultural resource if the landscape is geographically defined in terms of the size and scope. Also, an historical resource as described in PRC § 21084.1, a unique archaeological resource as defined in PRC § 21083.2, or a non-unique archaeological resource as defined in PRC § 21083.2 may also be a tribal cultural resource if it meets the criteria of PRC § 21074(a).

AB 52 requires lead agencies to analyze project impacts on "tribal cultural resources," separately from archaeological resources (PRC § 21074 and 21083.09), in recognition that archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines "tribal cultural resources" in a new section of the PRC (§ 21074, see above), and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC § 21080.3.1, 21080.3.2, and 21082.3). The provisions of AB 52 apply to projects that have a notice of preparation or notice of negative declaration/mitigated negative declaration filed on or after July 1, 2015. As such, AB 52 applies to the project.

Unique Paleontological Resources. As part of the CEQA process, one of the questions that must be answered by the lead agency relates to paleontological resources: "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (CEQA Guidelines § 15023, Appendix G, Section XIV, Part a). CEQA does not define what constitutes a unique paleontological resource; however, the Society of Vertebrate Paleontology (SVP) has developed professional guidelines for identifying significant paleontological resources (see below).

In general, for project sites that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources. For project sites that are directly underlain by geologic units with no paleontological sensitivity, there is no potential for impacts on paleontological resources unless sensitive geologic units which underlie the non-sensitive unit are also affected.

The loss of any identifiable fossil that could yield information important to prehistory, or that embodies the distinctive characteristics of a type of organism, environment, period of time, or geographic region, would be a significant environmental impact. Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information (significant impact). At the project-specific level, direct impacts can be mitigated to a less-than-significant level through the implementation of paleontological mitigation.

California Register of Historical Resources. The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC § 5024.1[a]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places (National Register).

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance. Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register and those formally Determined Eligible for the National Register;

- California Registered Historical Landmarks from No. 770 onward; and

- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);

- Individual historic resources;

- Historic resources contributing to historic districts; and

- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Public Resources Code Section 5097. California PRC § 5097.99, as amended, states that no person shall obtain or possess any Native American artifacts or human remains that are taken from a Native American grave or cairn. Any person who knowingly or willfully obtains or possesses any Native American artifacts or human remains is guilty of a felony, which is punishable by imprisonment. Any person who removes, without authority of law, any such items with an intent to sell or dissect or with malice or wantonness is also guilty of a felony which is punishable by imprisonment. PRC § 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

California Public Resources Code Sections 5097.5 and 30244. Other state requirements for paleontological resource management are included in PRC § 5097.5 and 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (state, county, city, district) lands.

California Native American Historic Resource Protection Act. The California Native American Historic Resources Protection Act of 2002 imposes civil penalties, including imprisonment and fines up to $50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

California Health and Safety Code Section 7050.5. Section 7050.5 of the California Health and Safety Code (HSC) protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. PRC § 5097.98 (and reiterated in CEQA Guidelines § 15064.59[e]) also identifies steps to follow in the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery.

California Penal Code Section 622.5. The California Penal Code § 622.5 sets the penalties for the damage or removal of paleontological resources.

Society for Vertebrate Paleontology. The SVP has established standard guidelines (SVP, 1995; SVP, 2010) that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most state regulatory agencies with paleontological resource specific Laws, Ordinances, Regulations, and Standards accept and use the professional standards set forth by the SVP.

As defined by the SVP (2010:11), significant nonrenewable paleontological resources are:

> *fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).*

As defined by the SVP (1995:26), significant fossiliferous deposits are:

> *A rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information). Paleontologic resources are considered to be older than recorded history and/or older than 5,000 BP.*

Based on the significance definitions of the SVP (1995, 2010), all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

A geologic unit known to contain significant fossils is considered to be "sensitive" to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb or destroy fossil remains. Paleontological sites indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case (SVP, 1995).

Fossils are contained within surficial sediments or bedrock, and are therefore not observable or detectable unless exposed by erosion or human activity. In summary, paleontologists cannot know either the quality or quantity of fossils prior to natural erosion or human-caused exposure. As a result, even in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce significant fossils elsewhere within the same geologic unit (both within and outside of the study area), a similar geologic unit, or based on whether the unit in question was deposited in a type of environment that is known to be favorable for fossil preservation. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken to prevent adverse impacts to these resources.

Paleontological Sensitivity. Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its "Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources," the SVP (2010:1-2) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential:

High Potential. Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcaniclastic formations (e.g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.).

Low Potential. Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule (e.g., basalt flows or Recent colluvium). Rock units with low potential typically will not require impact mitigation measures to protect fossils.

Undetermined Potential. Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.

No Potential. Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

For geologic units with high potential, full-time monitoring is generally recommended during any project-related ground disturbance. For geologic units with low potential, protection or salvage efforts will not generally be required. For geologic units with undetermined potential, field surveys by a qualified vertebrate paleontologist should be conducted to specifically determine the paleontological potential of the rock units present within the study area.

Local Regulations. The following local regulations pertaining to cultural resources and tribal cultural resources are applicable to the proposed project.

Contra Costa County General Plan. The Contra Costa County General Plan's Open Space Element includes goals and policies related to the protection of cultural resources:

- Goal 9-G: Identify and preserve important archaeological and historic resources within the County.
- Policy 9-28: Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership.
- Policy 9-29: Buildings or structures that have visual merit and historic value shall be protected.

Contra Costa County Historic Resources Inventory. Contra Costa County maintains a Historic Resources Inventory. The original inventory was completed in 1976, and updated in 1989 and 2010. No resources listed in the inventory are in or adjacent to the project area.

Town of Danville Historic Sites Inventory. The Town of Danville maintains a Historic Sites Inventory that includes 21 Town-Designated Heritage Resources, including 20 structures and one tree. No resources listed in the survey are in or adjacent to the project area.

East Bay Regional Park District 2013 Master Plan. The Park District preserves a rich heritage of natural and cultural resources and provides open space, parks, trails, safe and healthful recreation and environmental education. According to the East Bay Regional Park District Master Plan 2013, it is the Park District's goal to balance the protection of the rich cultural heritage of artifacts, sites or entire landscapes and still make its parks available to the public. An environmental ethic guides the Park District in all its activities.

Cultural Resource Management (CRM) is addressed in the Master Plan 2013 in Chapter 2 - Natural and Cultural Resources. Six objectives/goals pertaining to cultural resources located within Park District-managed lands are listed. These include:

- CRM1: The District will manage, conserve, and when practical restore parkland cultural and historic resources and sites; to preserve the heritage of the people who occupied this land before the District was established; and continue to encourage the cultural traditions associated with the land today.
- CRM2: The District may acquire cultural and historic resource sites when they are within lands that meet parkland acquisition criteria and will maintain an active archive of its institutional history and the history of its parklands and trails.
- CRM3: The District will maintain a current map and written inventory of all cultural features and sites found on park land, and will preserve and protect these cultural resources and sites "in situ" in accordance with Board policy. The District will evaluate significant cultural

and historic sites to determine if they should be nominated for State Historic landmark status or for the National Register of Historic Places.

- CRM4: The District will determine the level of public access to cultural and historic resources using procedures and practices adopted by the Board of Directors. The District will employ generally accepted best management practices to minimize the impact of public use and access on these resources, and to appropriately interpret the significance of these resources on a regional scale.

- CRM5: The District will notify Native Americans and other culturally associated people in a timely manner of plans which may affect sites and landscapes significant to their culture and will include them in discussions regarding the preservation and land use planning of culturally significant sites and landscapes.

- CRM6: The District will accommodate requests by Native Americans, ranching or farming communities and other groups to help maintain and use cultural sites and to play an active role in their preservation and interpretation.

East Bay Regional Park District Ordinance 38. Portions of the Park District's Ordinance 38 address the disturbance of objects or features of cultural significance on Park District lands. Below are the relevant Ordinance 38 sections.

- Section 805: This section states that no person shall damage, injure, collect or remove earth, rocks, sand, gravel, fossils, minerals, features of caves, or any article or artifact of geological interest or value located on District parklands. Though oriented toward natural features, this ordinance may be construed as applying to objects or features that, while appearing natural, are actually modified by human action (e.g., cave pictographs misperceived as natural discoloration).

- Section 806: This section states that no person shall damage, injure, collect or remove any object of paleontological, archaeological or historical interest or value located on District parklands. In addition, any person who willfully alters, damages, or defaces any object of archaeological or historical interest or value or enters a fenced and posted archaeological or historical site shall be arrested or issued a citation pursuant to California Penal Code § 622.5.

- Section 807: This section states that special permission may be granted to remove, treat, disturb, or otherwise affect plants or animals or geological, historical, archaeological, or paleontological materials for research, interpretive, educational, or park operational purposes.

- Section 808: This section states that no person shall cut, carve, paint, mark, paste, or fasten on any tree, fence, wall, building, monument, or other property in the District any bill, advertisement, directional or informational signs, or inscription whatsoever.

4.4.1.2 Existing Conditions

Definitions.

Architectural Resource. This resource type includes historic buildings, structures (e.g., bridges, canals, roads, utility lines, railroads), objects (e.g., monuments, boundary markers), and districts. Residences, cabins, barns, lighthouses, military-related features, industrial buildings, and bridges are some examples of architectural resources.

Archaeological Resource. This resource type consists of prehistoric and historic-era archaeological resources. Prehistoric archaeological resources consist of village sites, temporary camps, lithic scatters, roasting pits/hearths, milling features, petroglyphs, rock features, and burials. Associated artifacts include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs). Historic-era archaeological resources consist of townsites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military and industrial land uses. Associated artifacts include stone, concrete, or adobe footings and walls; artifact filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If a resource is considered a ruin (e.g., building lacking structural elements, structure lacking historic configuration, etc.), it is classified as an archaeological resource.

Tribal Cultural Resource. This resource type consists of sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be eligible for listing, in the California Register of Historical Resources (California Register) or a local register of historical resources.

Paleontological Resource. This type of resource consists of the fossilized evidence of past life found in the geologic record. Fossils include both body fossils, such as bone, teeth, shell, or wood, and trace fossils, such as footprints, skin impressions, body molds or casts, and leaf impressions. Fossils are preserved in sedimentary rocks, which are the most abundant rock type exposed at the surface of the earth. Despite the abundance of these rocks, and the vast numbers of organisms that have lived through time, preservation of plant or animal remains as fossils can be a rare occurrence. In many cases, fossils of animals and plants occur only in limited areas and in small numbers relative to the distribution of the living organisms they represent. In particular, fossils of vertebrates—animals with backbones—are sufficiently rare to be considered nonrenewable resources.

Unique Geologic Feature. As described above, a geologic feature *(e.g., an ore occurrence, type of igneous rock, particular geologic formation)* is a unique geologic feature if it: is the best example of its kind locally or regionally; embodies the distinctive characteristics of a geologic principle that is exclusive locally or regionally; provides a key piece of geologic information important in geology or geologic history; is a "type locality" of a geologic feature; is a geologic formation regionally or locally exclusive; contains a mineral that is not known to occur elsewhere in the region; or is used repeatedly as a teaching tool. The "type locality" is the place

where a geologic feature was first recognized and described, and from which the feature often takes its name; a type locality is unique and exists at only one location.

Natural Setting. The project area is located on the Las Trampas Ridge and southeast slope of the Rocky Ridge west of the San Ramon Valley. Elevations range from 225 feet above mean sea level (amsl) in San Ramon Valley to 2,025 feet amsl along the crest of Rocky Ridge located 2.7 miles west/northwest of the project area. Las Trampas Ridge, somewhat lower than Rocky Ridge, has an average elevation of about 1,600 feet amsl, and an elevation of 1,827 feet amsl at its peak (Las Trampas Peak) located 3.6 miles northwest of the project area. These two ridges trend northwest/southeast and are divided by Bollinger Canyon that contains Bollinger Canyon Creek.[1]

The San Ramon Valley has a Mediterranean type climate with mild, rainy winters, and hot, dry summers. Annual precipitation along Rocky and Las Trampas Ridges averages 15 to 17 inches with most rainfall occurring between November and April.[2] Temperatures in the summer often reach over 38° C (100° F).[3] The combination of a mild climate and arable soils provides ideal conditions for farming, and the extensive use of the area for agricultural that began in the historic period has resulted in the disappearance of much of the original grassland community.[4]

The project area is crossed by seven seasonal water drainages, two of which flow east from Las Trampas Ridge towards San Ramon Creek in the Town of Danville, two of them drain west from the Las Trampas Ridge to Bollinger Creek, and three of them drain east from the southwest slope of the Rocky Ridge to Bollinger Creek. Bollinger Creek flows south through Bollinger Canyon to San Ramon Creek and bisects a portion of the project area on the Faria Dedication property. San Ramon Creek is located 0.4 miles south of the project area. The small seasonal drainages within the project area flow predominantly during the rainy season and become dry again by mid-summer. Bollinger Creek, which flows through the Faria Dedication property, and San Ramon Creek, are larger drainages with year-round flow.

Vegetation on the southern and western slopes of the Las Trampas and Rocky Ridges consist predominately of black sage, chamise and buck brush that are interspersed with lesser amounts of toyon, manzanita, elderberry, gooseberry, chaparral, currant, sticky monkeyflower, coffeeberry, coyote brush, poison oak, star thistle, California wild oats, hollyleaf red berry, and deer weed. There is also dogwood along Bollinger Creek. The dominant trees include several varieties of oak (coast live oak, black oak, scrub oak, canyon like oak), California buckeye, California bay laurel, and big leaf maple (http://www.ebparks.org/parks/las_trampas).

Some species of fauna that occupy the Las Trampas and Rocky Ridges include deer, mountain lion, raccoon, fox, opossum, bobcat, skunk, squirrel, voles, and pocket mice and gophers, and a variety of

1 Ham, Cornelius K. 1952. Geology of Las Trampas Ridge, Berkeley, California. Division of Mines, Special Report 22, September 1952. San Francisco, California.
2 Ham, Cornelius K. 1952. Geology of Las Trampas Ridge, Berkeley, California. Division of Mines, Special Report 22, September 1952. San Francisco, California.
3 Brown, L. (editor). 1985. The Audubon Society Nature Guides. Grasslands. Alfred A. Knopf, New York, NY.
4 Brown, L. (editor). 1985. The Audubon Society Nature Guides. Grasslands. Alfred A. Knopf, New York, NY.

birds including red-tailed hawk and turkey vulture. Animals such as Pronghorn sheep, Antelope, Tule Elk, Mule and Black-tail deer, and Grizzly bear also occupied the area in the past.

Prehistoric Context. Categorizing the prehistoric or pre-contact period into cultural stages allows researchers to describe a range of archaeological resources with similar cultural patterns and components during a given time frame, creating a regional chronology. This section provides a brief discussion of the prehistoric chronology for the project site.

The natural marshland communities along the edges of bays and channels were the principal source for subsistence and other activities during the pre-contact history of the San Francisco Bay region. Many of the original surveys of archaeological sites in the Bay region were conducted between 1906 and 1908 by U.C. Berkeley archaeologist N.C. Nelson. Such surveys yielded the initial documentation of nearly 425 "earth mounds and shell heaps" along the littoral zone of the bay.[5] From these beginnings, the most notable sites in the region were excavated scientifically, such as the Emeryville shellmound (CA-ALA-309), the Ellis Landing Site (CA-CCO-295) in Richmond, and the Fernandez Site (CA-CCO-259) in Rodeo Valley.[6] These dense midden sites, such as CA-ALA-309, have been dated to be 2,310 ± 220 years old, but other evidence suggests that human occupation in the region is of greater antiquity, perhaps as early as 7000 B.C.[7]

Milliken *et al*.[8] has provided a framework for the interpretation of the San Francisco Bay Area and divided human history into four periods: the *Paleoindian Period* (11,500 to 8000 B.C.), the *Early Period* (8000 to 500 B.C.), the *Middle Period* (500 B.C. to A.D. 1050), and the *Late Period* (A.D. 1050 to 1550). Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

The *Paleoindian Period* (11,500 to 8000 B.C.) was characterized by big-game hunters occupying large geographic areas. Evidence of human habitation during the *Paleoindian Period* has not yet been discovered in the San Francisco Bay Area. During the *Early Holocene* (*Lower Archaic*, 8000 to 3500 B.C.), geographic mobility continued from the *Paleoindian Period* and is characterized by the milling slab and handstone as well as large wide-stemmed and leaf-shaped projectile points. The first cut shell beads and the mortar and pestle are first documented in burials during the *Early Period* (*Middle Archaic*, 3500 to 500 B.C.), indicating the beginning of a shift to sedentism. During the *Middle Period*, which includes the *Lower Middle Period* (*Initial Upper Archaic*, 500 B.C. to A.D. 430), and *Upper Middle Period* (*Late Upper Archaic*, A.D. 430 to 1050), geographic mobility may have continued, although groups began to establish longer term base camps in localities from which a

5 Nelson, N.C. 1909. Shellmounds of the San Francisco Bay Region, University of California Publications, American Archaeology and Ethnology.

6 Moratto, M.J. 1984. California Archaeology, Smithsonian Press: San Diego.

7 Moratto, M.J. 1984. California Archaeology, Smithsonian Press: San Diego.

8 Milliken, R., R. Fitzgerald, M.G. Hylkema, R. Groza, T. Origer, D.G. Bieling, A. Leventhal, R.S. Wiberg, A. Gottsfield, D. Gillette, V. Bellifemine, E. Strother, R. Cartier, and D.A. Fredrickson. 2007. Punctuated Culture Change in the San Francisco Bay Area. Chapter 8 in California Prehistory: Colonization, Culture, and Complexity, edited by Terry L. Jones and Kathryn A. Klar. Altamira Press, Lanham, Maryland.

more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian, and chert concave-base projectile points, as well as the occurrence of sites in a wider range of environments, suggest that the economic base was more diverse. By the *Upper Middle Period*, mobility was being replaced by the development of numerous small villages. Around A.D. 430, a dramatic cultural disruption occurred as evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the *Initial Late Period* (*Lower Emergent*, A.D. 1050 to 1550), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

Ethnographic Setting. The project area is situated within a territory that was occupied by the Bay Miwok. The Bay Miwok occupied most of present-day Contra Costa County not including areas bordering San Francisco Bay or San Pablo Bays[9]. The Bay Miwok were comprised of tribelets with lineages named for specific locations within the area they permanently occupied[10]. People were united by language but broken into tribal groups (independent political entities including the *Chupcan, Jalquin, Saclan, Tatcan and Volvon*) that occupied defined territories. The name of each tribelet came from the location of their village site. Each tribelet controlled access to the natural resources within their own territory, which typically required that there be one or more primary villages and numerous smaller villages used seasonally for resource procurement. The project area appears to have been controlled by the *Tatcan*, who "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"[11]. The *Tatcan* controlled Bollinger, Sycamore, and Green Valley Creeks, the western part of Mount Diablo and most of the Las Trampas Ridge.

The *Tatcan* tribe lived in mixed nuclear family groups with *Carquins* and *Chupcans*. Village sites were established next to streams and creeks with seasonally occupied sites also located in the foothills of Mount Diablo. Villages consisted of structures that included domed, conical dwellings built of thatched grass, sweat houses, and secret society dance houses. Residential structures ranged in size from six to twenty feet wide and housed an entire family that consisted of several generations.

The Bay Miwok were successful hunter/gatherers who utilized a wide range of resources in a very favorable environment. A variety of plant foods were gathered on a seasonal basis, with acorns being the most important vegetal staple since they could be collected and stored in great quantities. Deer, elk, and antelope were the major game hunted, while rabbits and other small animals, game birds, waterfowl, and fish were also hunted. Stone, bone, and shell tools and ornaments were manufactured, and the fiber crafts, especially basketry, were well developed.

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9 Milliken, Randall. 1995. A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1969-1810. Menlo Park, California: Balena Press.

10 Levy, Richard. 1978. Eastern Miwok. *In* Handbook of North American Indians, Vol. 8: California. R.F. Heizer, ed. Pp. 398-413. Washington, D.C.: Smithsonian Institution.

11 Milliken, Randall. 1995. A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1969-1810. Menlo Park, California: Balena Press.

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.[12, 13]

Historic Setting.

The Spanish Period (1772 - 1821). The Spanish entered present day Contra Costa County as early as 1769 with the Portola expedition, which was soon followed by the Fages-Crespi expedition in 1772 that traveled from Monterey through present-day Milpitas, San Lorenzo, Oakland, and Berkeley, reaching the area near present day Pinole on March 28, 1772.[14] From there they traveled through Rodeo and Crocket to Martinez on their way towards the delta region of the Central Valley before stopping to camp near present-day Pittsburg in Contra Costa County. On March 31st, they began their journey back to Monterey via Walnut Creek and Danville, and on April 1st they passed through the area of San Ramon, Dublin and Pleasanton.[15] The expedition of Juan Bautista de Anza accompanied by Father Pedro Font (Anza-Font expedition) traveled through the same area in 1776. The Anza-Font expedition consisted of Lieutenant Jose Moraga, Father Crespi, eleven soldiers and two servants.[16] These expeditions resulted in establishment of the Presidio of San Francisco and Mission San Francisco de Asis (1776) in present-day San Francisco, Mission Santa Clara de Asis (1777) in present-day Santa Clara, and the Mission San Jose de Guadelupe (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.

The indigenous Native American tribes were significantly impacted 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.[17] 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.[18]

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12 Bennyhoff, James A. 1977. Ethnogeography of the Plains Miwok. Center for Archaeological Research at Davis, Publication Number 5.

13 Levy, Richard. 1978. Eastern Miwok. *In* Handbook of North American Indians, Vol. 8: California. R.F. Heizer, ed. Pp. 398-413. Washington, D.C.: Smithsonian Institution.

14 Cook, R. F. 1957. The Aboriginal Population of Alameda and Contra Costa Counties, California. *University of California Anthropological Records* 16(4).

15 Ibid.

16 Mildred, Douglas E. Kyle, Brooke Hoover, Hero Eugene Rensch, Ethel Grave Rensch, and William A. Aboloe. 2002. Historic Spots in California, Fifth Edition. Stanford University Press, Stanford.

17 Milliken, Randall. 1995. A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area 1969-1810. Menlo Park, California: Balena Press.

18 Ibid.

The 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". Many changes occurred throughout California under Mexican rule due to the lack of strong oversight and military rule imposed by the Spanish. New opportunities for trade arose, as foreign ships that had previously been held off by Spanish guarded military ports were allowed to dock and provide a variety of provisions to local settlers. As a result, tea and coffee, as well as manufactured goods made their way to the region. The Mexican colonial authorities also permitted and encouraged foreigners to relocate and settle in Alta California. The missions were also "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, which had previously been owned and used by Mission San Jose for grazing cattle and sheep, was broken up into two large land grants, both called Rancho San Ramon. The southern part of Rancho San Ramon was granted by the Governor of Alta California, Jose Figueroa, to Jose Maria Amador, the son of Pedro Amador who came to California with Portola in 1769; and 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. All three of these men had been soldiers in the Mexican army and were descendants of first generation Spanish settlers in Alta California.[19]

The project area is located within the northern Rancho San Ramon, owned by Castro and Pacheco, which then covered two leagues (about 18,000 acres) in the northern part of the San Ramon Valley. 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 (diseno) 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 the area as "*Cuchilla de las Trampas,*" which translates to blade 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.[20]

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19 Lane, Beverly. 1994. Ranchos and Ranches: The San Ramon Valley from 1830 to 1870. Electronic document edited 2014, http://www.srvhistoricalsociety.org/histarticles/Ranchos_&_Ranches__Edited_in__2014. Accessed September 6, 2016.

20 Bright, William and Erwin G. Gudde.2010 California Place Names: The origin and Etymology of Current Geographical Names. Fourth edition. University of California Press, Berkeley, California

Early American Period (1846 - 1900). The beginning of the American Period in California is marked by the end of the Mexican-American War in 1848 when the U.S. signed the Treaty of Guadalupe Hidalgo and took possession of the territories that included California and New Mexico. The Treaty of Guadalupe Hidalgo provided the resident Californios (Mexicans citizens living in California) their American citizenship and guaranteed title to land granted in the Mexican period; although, with the excitement of the Gold Rush from 1848 to 1850, land claims were temporarily put aside. However, 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.[21] 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.

At the time California was admitted as a state, Contra Costa County, one of the original 27 counties created, also included present-day Alameda County. Within the San Ramon Valley, three small towns were established, including Alamo (1852), San Ramon (1852) and Danville (1860); and post offices, stores, churches and schools were established in each of them. In 1852, what is now San Ramon Valley Boulevard, but previously referred to as Highway 21, County Road No. 2, the Limerick Road, and the San Jose/Martinez Road, was established as the main north/south transportation route through the Valley. The Valley's settlers were focused on making a living as farmers and ranchers. In 1859, the Contra Costa Agricultural Society was formed to address the "need for a railroad, the lively week-long annual evangelical meetings at the Alamo-Danville border, Fourth of July and May Day parties, and land title controversies in the former Castro-Pacheco rancho."[22]

"The years from 1870 to 1910 saw the start of the Grange, arrival of new immigrants, and construction of new schools, churches, warehouses, roads, livery stables and shops" in San Ramon. San Ramon also went through several name changes during this time, including Brevensville (for blacksmith Eli Breven), Lynchville (for rancher William Lynch) and Limerick (for the many Irish settlers south of San Ramon Creek) before being officially named San Ramon when a permanent post office was finally established in 1873. The name San Ramon was derived from the name of an Indian vaquero, Ramon, who tended mission sheep in the San Ramon

[21] Olmsted, Nancy. 1986 Vanished Waters: A History of San Francisco's Mission Bay. Mission Creek Conservancy, San Francisco.

[22] Lane, Beverly. 1994. Ranchos and Ranches: The San Ramon Valley from 1830 to 1870. Electronic document edited 2014, http://www.srvhistoricalsociety.org/histarticles/Ranchos_&_Ranches__Edited_in__2014. Accessed September 6, 2016.

Valley.[23] In 1864 a stage line was established by Brown and Company that ran from San Ramon through the San Ramon Valley to Oakland, and by 1865 Crow Canyon Road allowed access to Hayward where a train could be caught to Oakland and the ferries to San Francisco. A general store was built in 1863. Saloons, a jail, Chinese wash houses, the Thorup Shoe Shop, and blacksmith shops lined County Road No. 2 (later called San Ramon Valley Boulevard).

Danville was originally established within a 400-acre property purchased by Daniel and Andrew Inman in 1854 with the money they made gold mining, and by 1858 the settlement boasted a blacksmith, a hotel, a wheelwright and a general store. In 1860 a post office was established, and the town was given the official name of Danville. The first postmaster was Henry W. Harris who reported in 1862 that there were 20 people living in Danville.[24] Over the next few decades people from the mid-west and eastern U.S. settled in Danville, San Ramon and in other areas throughout the Valley. "Most new residents had been farmers and observed that the valley land was fertile and the weather benign, altogether an ideal place to settle".[25] As such, the major business in the San Ramon Valley was agriculture during this time, and the San Ramon Valley consisted of several large and well-known local ranches that included the Wiedemann Ranch, Wood Ranch, Bishop Ranch, Magee Ranch Nielsen Ranch, Henry Ranch, Blackhawk Ranch, Norris's ranch, Elsworthy Ranch, Rasmussen Ranch, and Lynch Ranch.[26] Settlers raised cattle and sheep and the main crops grown included wheat, barley, and onions.

> *"Cattle increased four-fold from 1848 to 1860. Again the weather came into play. First came a dry year in 1860-61, then huge floods in 1861-62 and a severe drought in 1863-64. Ranchers and farmers looked to raise other crops as California's "age of grass" became the "age of grain." Valley ranchers grazed livestock and farmed, choosing crops which would sell successfully. They often planted crops on the valley floor and put grain, hay, sheep and cattle on the hills. A three-year crop rotation between grain, hay and pasture became the practice. Crops including barley, wheat, hay were profitable, followed by fruit orchards, beets, grapes, and tomatoes; in the twentieth century, groves of walnut trees and pear orchards dominated the valley floor".*[27]

During this time, San Ramon Valley farmers and ranchers continued to haul their cattle, grain, hay and fruit over dirt roads, which were often impassable during the winter rains. "So, they dreamed, lobbied and planned for rail service, with Grangers prominent in the effort".[28] Although during the 1870s and 1880s, the local Danville Grange No. 85, which included farmers

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23 Lane, Beverly. 1995. The Era of the Iron Horse: The San Ramon Valley 1870 - 1910. Edited in 2014. San Ramon Valley Historical Society. Electronic documented edited in 2014, http://www.srvhistoricalsociety .org/histarticles/Era_of_Iron_Horse.pdf. Accessed September 7, 2016.

24 Town of Danville. 2017. Historic Danville. Electronic document, http://www.danville.ca.gov/About-Danville/Community-Profile/Historic-Danville/. Accessed October 20, 2017.

25 Ibid.

26 Museum of the San Ramon Valley. 2014. Cowboys and Cattlemen. Ranching in the San Ramon Valley. Electronic document, http://museumsrv.org/. Accessed November 10, 2017.

27 Lane, Beverly. 2000. The Complete Yesteryear in the San Ramon Valley. Publisher unknown.

28 Museum of the San Ramon Valley. 2014. Cowboys and Cattlemen. Ranching in the San Ramon Valley. Electronic document, http://museumsrv.org/. Accessed November 10, 2017.

and ranchers from Danville, San Ramon, Alamo and the Tassajara Valley areas, lobbied hard for rail service, the San Ramon Valley railroad did not arrive until 1891, and "local ranchers celebrated when it arrived."

When the Southern Pacific's San Ramon Branch Line was opened in 1891, the name San Ramon replaced the previous name of Limerick.[29] A depot was located one-half mile east of San Ramon village and boasted a two-story depot, an engine house and a turntable for locomotives. Hotel owners in San Ramon had carriages meet the trains and transport passengers via the Depot Road (now Fostoria Way/Deerwood Road) to the various hotels in the village. The depot in San Ramon was the terminus of the Southern Pacific's Oakland-Antioch-Eastern line until 1909 when it was extended to Pleasanton.[30] Danville also had a depot that was established on an 8.65-acre property owned by John Hartz. Hartz donated the land for the depot then subdivided and sold lots east of the depot, which sifted the downtown area from Front Street to Hartz Avenue where a bank, drug store, saloon, doctor's office and Chinese laundry were constructed.[31]

20th Century (1900-present). The first half of the Twentieth Century saw changes due to "woman suffrage, two world wars, the automobile revolution, a depression, broad use of electricity and electric trails, the progressive political movement and the fabulous Treasure Island Fair".[32] The San Ramon Valley, previously dominated by wheat crops, became known for its walnut and pear orchards, with the surrounding hills used to grow grain and hay, and for grazing livestock. Thomas Bishop who purchased 1,859 acres of Norris' land in 1895 possessed the single largest orchard of Bartlett pears in the world. "The Valley became a melting pot of Chinese, Portuguese, German, and Japanese immigrants. They often began working in the hay fields or as cooks and gardeners, later becoming blacksmiths, landowners, teachers and storekeepers".[33]

In 1940 the population of the San Ramon Valley was 2,126; however, in the 50-year period between 1940 to 1990 the population of San Ramon Valley swelled to 85,085 residences, and during this time San Ramon Valley was transformed from a rural community to a suburban center as soldiers returned home from World War II, new people moved in, and new houses, roads, water and sewer systems were built.[34] In 1957, Bollinger Canyon Road (named after

[29] Lane, Beverly. 1995. The Era of the Iron Horse: The San Ramon Valley 1870 - 1910. Edited in 2014. San Ramon Valley Historical Society. Electronic documented edited in 2014, http://www.srvhistoricalsociety.org/histarticles/Era_of_Iron_Horse.pdf. Accessed September 7, 2016.

[30] Lane, Beverly. 1987. San Ramon Residents almost wound up living in Limerick. Valley Pioneer, 21 January 1987.

[31] Town of Danville. 2017. Historic Danville. Electronic document, http://www.danville.ca.gov/About-Danville/Community-Profile/Historic-Danville/. Accessed October 20, 2017

[32] Lane, Beverly. 1996. Good Times, Hard Times: The San Ramon Valley -- 1910 to 1945. San Ramon Valley Historical Society. Electronic documented edited in 2014, http://www.srvhistoricalsociety.org/histarticles/Era_of_Iron_Horse.pdf. Accessed September 8, 2016.

[33] Town of Danville. 2017. Historic Danville. Electronic document, http://www.danville.ca.gov/About-Danville/Community-Profile/Historic-Danville/. Accessed October 20, 2017

[34] Lane, Beverly. 1997. City Close, Country Quiet: The San Ramon Valley 1945-85. San Ramon Valley Historical Society. Electronic documented edited in 2014, http://www.srvhistoricalsociety.org/histarticles/Era_of_Iron_Horse.pdf. Accessed September 8, 2016.

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.[35]

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.

4.4.2 Research Methodologies

4.4.2.1 Cultural Resources Record Search and Review

EDS conducted a record search and review of the project area. The record search included a review of information on file at the Northwest Information Center (NWIC) of the California Historical Resources Information Systems (CHRIS) that included previous cultural resource studies and Primary resource records pertaining to properties located within a half-mile radius of the project area, as well as a review of the *California Inventory of Historic Resources* (California Department of Parks and Recreation 1976) and the Office of Historic Preservation's (OHP) *Five Views: An Ethnic Sites Survey for California* (1988), *California Historical Landmarks* (1990), *California Points of Historical Interest* (1992), *California Register of Historical Resources* (1998), and the Directory of Properties in the *Historic Property Data File* for Contra Costa County (dated 4/5/2012). The Historic Property Data file includes updated listing of the CRHR, NRHP, California Historical Landmarks, and the California Points of Historical Interest. The record search also consisted of a review of Park District documents and other data, as well as a review of appropriate ethnographic, prehistoric and historic references, including various maps dating from 1857 to 1959 to provide context for the Southern Las Trampas area. Soils and geologic data was also reviewed to identify the potential for buried archaeological sites to be present within the project area that may require identification measures beyond a pedestrian archaeological reconnaissance.

EDS Archaeologist, Sally Evans, M.A., RPA completed a record search at the NWIC on September 6, 2017 (NWIC File #17-0754). The results of the record search are summarized below, beginning with previous cultural resources studies of the project area, followed by those pertaining to the Podva Dedication property and the Faria Development property.

[35] Sebby, Daniel. 2016. San Francisco Defense Area Site SF-25 (Bollinger Canyon/Rocky Ridge). Historic California Posts, Camps, Stations and Airfields. Electronic document, http://www.militarymuseum.org/SF25.html. Accessed November 10, 2017.

Previous Cultural Resource Studies within the Project Area. There have been four cultural resource studies previously conducted that have included various portions of the project area. Each of these studies is described below in chronological order.

S-563: This study included a 1.5-mile long section of Bollinger Canyon Road that was surveyed in 1976 as part of a Central Contra Costa Sanitary District sewage pipeline that was placed six to thirty feet to the west of the existing pavement of Bollinger Canyon Road.[36] The survey included a 50 to 60-foot-wide corridor adjacent to the west side of Bollinger Canyon Road that extended into the Faria Dedication property. The location was identified as sensitive for containing prehistoric archaeological resources due to the presence of Bollinger Creek immediately west of the roadway and the presence of oak trees and other resources utilized by prehistoric inhabitance of the area; but despite the high sensitivity, no archaeological resources were identified.[37]

S-2632: This study included the Braddock and Logan (Peters Ranch) property and portions of the Elworthy Inc. property, including part of APN 208-230-032 and the entirety of APN 208-230-033, that were surveyed in 1979 as part of the proposed subdivision of the Peters Ranch property.[38] The subdivision project included 250 acres of previous grazing land, as well as the remains of a house, a barn, a 10-acre orchard, spring-fed ponds, dirt access roads, and foundation from two previous buildings.[39] A mixed-strategy reconnaissance field survey was conducted, whereby the flat areas and drainages that are more likely to contain archaeological resources were examined more closely than the steep areas and ridgetops. Although no archaeological resources were identified, archaeological monitoring was recommended during ground-disturbing activities due to the potential for buried archaeological resources to be present within the flat areas and along the drainages.[40]

Pastron 1997 (Study not on file at the NWIC): This study included the entire Elworthy Inc. property (APNs 208-230-046, 208-230-032 and 208-230-033), including the Elworthy Inc. property within the project area and the Elworthy Development property that were evaluated in 1997 as part of the proposed 458-acre Elworthy Ranch Residential Development project.[41] The study included a record search, field survey, limited sub-surface excavation, and preparation of a report that was submitted to the project sponsor, but not submitted to the NWIC; however, a copy of the report was found with study S-21681. The record search for the 458-acre Elworthy Ranch project area identified a prehistoric archaeological site, CA-CCO-365 (P-07-000719), adjacent to the property on the

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36 Chavez, David. 1976. An Archaeological Field Reconnaissance of the Bollinger Canyon Road Pipeline Route. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

37 Ibid.

38 Holman, Miley P. 1979. Archaeological Reconnaissance of the Proposed Subdivisions of the Peter's Ranch property in the San Ramon Valley in Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

39 Ibid.

40 Ibid.

41 Pastron, Alan. 1997. Archival Literature Review, On-site Archaeological Surface Reconnaissance and Limited Subsurface Evaluation of the Elworthy Ranch property, a 458 Acre Parcel of Land Located on the west side of San Ramon Valley Road, within the Town Limits of Danville, Contra Costa County, California. Letter report attached to Study 21681 on file at the Northwest Information Center, Rohnert Park, California.

northeast; and the field survey resulted in the identification of five prehistoric artifacts in three different locations throughout the 458-acre study area, referred to in the report as "Surface Area 1", "Surface Area 2" and "Surface Area 3". Surface Area 1 was located outside of the LUPA project area and contained a single fragment of ground sandstone (possibly a mortar fragment) and a chert flake. Surface Area 2 was located within the LUPA project area and contained one chert flake and one retouched obsidian flake (from the Napa Valley obsidian source) that were separated 30 meters apart. Surface Area 3 was located within the LUPA project area and contained a single chert flake. To determine if further artifacts were in these areas and if the adjacent site CA-CCO-365 (P-07-000719) extended into the property, limited subsurface testing was conducted that consisted of the excavation of 12 exploratory shovel test pits; however, no further artifacts were identified. It was concluded that CA-CCO-365 (P-07-000719) did not extend into the property and that the isolated artifacts observed were indicative of greater use of the property by Native American peoples.[42]

S-34271: This study included the entire 459-acre Elworthy Ranch property, including the Elworthy Inc. property within the project area and the Elworthy Development property that were surveyed in 2007 as part of the Elworthy Ranch Residential Development project.[43] The study included a record search of the entire 459-acre property, a field survey of the proposed 12-acre development area, and a paleontological resource assessment.[44] The study resulted in the identification of two previously recorded barns (P-07-002572), additional ranch buildings at 1409 and 1411 San Ramon Valley Boulevard, and a ranch road (all located outside of the LUPA project area) that were determined not eligible for listing on the CRHR. No prehistoric resources were identified in the project area; however, paleontological resources were identified, including bivalve shell fossils in the San Pedro Group bedrock exposed in the base of drainages within the 459-acre project area (including within the LUPA project area).[45] Monitoring for paleontological resources was recommended.

Previous Cultural Resources Studies of the Podva Dedication Property.

S-2829: This study included a portion of the Podva Dedication property that evaluated in 1982 as part of a proposed 80-acre land development project called "Woodknoll".[46] The field survey strategy consisted of an inspection of the ground surface and all exposed creek banks. No archaeological resources were identified, but it was recommended that if any buried archaeological resources were discovered during development that work be halted, and an archaeologist be contacted to evaluate the discovery.[47]

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42 Ibid.

43 Jones E. Timothy, and Ben Matzen. 2007. A Cultural and Paleontological Resources Study for the Elworthy Ranch Residential Development Project, Danville, Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

44 Ibid.

45 Ibid.

46 Banks, Peter M. 1981. An Archaeological Reconnaissance of Woodknoll, a Proposed Land Development in Danville, Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

47 Ibid.

S-44230: This study included the entire Podva Dedication property (APN 208-160-014) that was surveyed for cultural resources in 2012 as part of the Podva Property Residential Development Project.[48] The identification effort included archival research, a record search and review, an archaeological field inventory, a peer review field reconnaissance, and consultation with the NAHC and local Native American tribes. No archaeological resources were identified within the Podva property; however, a wood-frame barn that was constructed by rancher Roger Podva ca. 1915-1920 was identified and recorded on DPR 523 forms (P-07-003121). The barn was evaluated to determine eligibility for listing on the NRHP and was found to be ineligible due to lack of integrity.[49]

Previous Cultural Resources Studies of the Faria Development Property.

S-13460: This study included approximately 30 acres in the southern portion of the Faria Development property that was surveyed for cultural resources in 1991 as part of proposed project to import fill.[50] The cultural resource study included a record search and a field survey. No cultural resources were identified.

S-28018: This study included the entire Faria Development property that was evaluated in 2002 as part of the planned Faria Ranch residential housing project.[51] The study included a record search and field survey of 200 acres, which did not include the Faria Dedication property that will be dedicated to the Park District (part of project area). No potentially significant cultural resources were identified within the 200-acres that were surveyed as part of the study.

S-39044: This study included the portion of the Faria Development property that was evaluated in 2008 as part of a 354-acre Faria Preserve Community residential development project.[52] Previous evaluations of this area were conducted by Basin Research Associates in 1991, 2002, and 2004. The study included a record search and Native American Sacred Sites inventory for the entire 354-acre project area; however, because the project area had been previously surveyed with negative findings, no additional survey was conducted.[53] While the Faria Dedication property was included in this study, it was not physically surveyed.

Previous Cultural Resources Studies within a 1/2-Mile of the Project Area. In addition to the nine cultural resources studies described above that included portions of the project area, the Podva

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48 Basin Research Associates. 2008. Historic Properties Survey Report/Finding of Effects, Faria Preserve Project, San Ramon, Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

49 Ibid.

50 Garaventa, Donna M, and Stuart A. Guedon and Steven J. Rossa. 1991. Cultural Resources Assessment of the Faria Property, Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

51 Busby, Colin. 2002. Archaeological Resources Assessment – Faria Ranch, Adjacent to Danville, San Ramon, and Unincorporated Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

52 Basin Research Associates. 2008. Historic Properties Survey Report/Finding of Effects, Faria Preserve Project, San Ramon, Contra Costa County, California. Confidential report on file at the Northwest Information Center, Rohnert Park, California.

53 Ibid.

Dedication property, the Faria Dedication property, and the Elworthy property, there have been seventeen additional studies conducted on lands located within a 1/2-mile radius of the project area that are listed below in Table 4.4.A.

Table 4.4.A: Previous Cultural Resources Studies within a 1/2-Mile of the Project Area

NWIC #	Year	Title	Author(s)	Results
521	1977	An Archaeological Survey of the Podva and Otto Ranch Properties in Danville	David Chavez	Negative
727	1977	An Archaeological Reconnaissance of two New Proposed Waste Water Pipeline Routes, Livermore-Amador Valley Water Management Agency, Alameda County, California.	Miley Holman David Chavez	Negative
1730	1979	Cultural Resources Survey of Subdivision 5475, a parcel at 2500 Crow Canyon Road, San Ramon, California.	Cris D. Porter	Negative
1785	1979	Archaeological Field Reconnaissance of Subdivision Property (5583) in Danville.	David Chavez	Negative
5679	1982	An Archaeological Survey of the Proposed Rocky Ridge General Plan Amendment, San Ramon, Contra Costa County, California.	Roger H. Werner	Negative
5749	1982	Archaeological Survey -680 04224-908008 (Caltrans)	Mara Melandry	Negative
13207	1991	Cultural Resources Assessment, Supplement to Northwest Information Center Records Search, 1911 San Ramon Valley Boulevard, San Ramon, Contra Costa County, California (letter report)	Donna Garaventa Steven J. Rossa Stuart A. Guedon James Bard	Negative
20030	1997	Cultural Resources Assessment Report EBMUD Southern Loop Pipeline Alignment Study, Contra Costa and Alameda Counties, California.	William Self	Negative
21681	1999	Cultural Resources Assessment Report Elworthy Ranch Development, Town of Danville, Contra Costa County, California	William Self Associates	P-07-002572
26299	2002	Historic Property Survey report, Interstate 680 Auxiliary Lanes project in the Cities of Danville and San Ramon within Contra Costa County, California.	Leigh A. Martin Kimberley Popetz William Self	Negative
33013	2006	Archaeological Field Review – Parcel Map MS 851-2004, Former Navlets' Garden Center, 800 Camino Ramon, Danville, Contra Costa County.	Colin Busby	Negative
36964	2010	Cultural Resources Investigation for Clearwire CA-SFO0139B "Fire Station" 811 San Ramon Valley Boulevard, Danville, Contra Costa County, California 94526	Carolyn Loosee	P-07-003005
40049	2013	Cultural Resources Investigation for Sprint FN25XC172 "San Ramon Valley" 811 San Ramon Valley Boulevard, Danville, Contra Costa County, California 95426	Carolyn Loosee	Negative
43619	2014	Historic Property Survey report for the MTC Interstate 680 Express Lane Phase I Project, Alameda and Contra Costa Counties, California.	Laura Leach-Palm Chandra Miller	P-07-004524 P-07-004525
43856	2012	Archaeological Sensitivity Assessment Ensite #11267 (249218) / Sycamore Valley Road 815 Camino Ramon (Caltrans Right of Way), Danville, Contra Costa County, California 94526.	Aniela Travers	Negative
45819	2014	Cultural Resources Assessment Report, 841 Podva Road, Danville, Contra Costa County, California.	William Self Associates	P-07-004681
47968	2015	Section 106 FCC Submission for 377 Elworthy Ranch Circle, Danville, Contra Costa County, California 94526.	Carrie D. Wills	Negative

Source: Evans, Sally. 2019. Cultural and Paleontological Resources Study for the East Bay Regional Park District Southern Las Trampas Land Use Plan Amendment (LUPA) Project, Contra Costa County, California. Report on file at Evans & De Shazo, Inc., Sebastopol, California.

Cultural Resources Recorded within a 1/2-Mile of the Project Area. The record search revealed six previously recorded cultural resources located within a half-mile of the project area.

A check of the OHP's Directory of Properties in the Historic Property Data File for San Ramon and Danville, Contra Costa County (dated 4/5/2012) lists 27 resources in San Ramon and 15 in Danville. None are located within or adjacent to the project area. The California Inventory of Historic Resources (DPR 1976:228) lists one resource in the towns of Danville and San Ramon, including the Captain Pedro Fages Trail at 856 Danville Boulevard in Danville. The resource is listed as California Historical Landmark Number 853.

The Historic Resource Inventory of Contra Costa County (Preliminary Draft 1976, Draft Update in 1989, and Draft Update 2010) and the Town of Danville Historic Sites Inventory (August 2017) do not list any historic or heritage resources in the immediate vicinity of the project area. The Contra Costa County (CCC) General Plan Open Space Element (Chapter 9, Figure 9-2) provides an archaeological sensitivity map that identifies portions of the project area (portions outside the city limits of Danville and San Ramon) as having areas of medium and high sensitivity for containing archaeological resources.[54]

Review of Soil and Geology. The potential for the project area to contain buried archaeological resources was assessed based on the location of known cultural resources, and the geologic setting and soils within the project area. An understanding of the geologic setting and soils within the project area is important for determining the potential for buried prehistoric sites because according to Meyer and Rosenthal (2007), most Pleistocene-age landforms (1.8 million years to 11,800 cal BP) have little or no potential to contain buried prehistoric archaeological resources because they formed prior to occupation of the area by humans; however, most Holocene-age (post 11,800 cal BP) landforms have the potential for buried sites because they formed when people occupied the region.[55]

According to the *Geologic Map of the Las Trampas Ridge Area*[56], recent Holocene-age (11,7000 years to the present) terraces occur along Bollinger Creek within the Faria Dedication property; however, the remaining portions of the project area are characterized by Miocene age (23.03 to 5.333 million years ago) and middle to upper Pleistocene-age (2,588,000 to 11,700 years ago) sedimentary landforms. The soil unit associated with these Holocene-age terraces includes Botella clay loam (BaC) located along Bollinger Creek within the Faria Dedication property (USDA 2017). The Botella series consists of very deep, well drained soils that formed in alluvial material from sedimentary rocks. Botella soils occur in valley bottoms and on alluvial fans and have slopes of 0 to 15 percent sand have the potential to contain buried prehistoric archaeological sites.

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54 Contra Costa County. 2017. Contra Costa County General Plan. Chapter 9: Open Space Element. Electronic document, http://www.co.contra-costa.ca.us/DocumentCenter/View/30919.

55 Meyer, Jack and Jeffrey Rosenthal. 2007. Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4. Report on file at the Northwest Information Center, Rohnert Park, California under S-33600.

56 Ham, Cornelius K. 1952. Geology of Las Trampas Ridge, Berkeley, California. Division of Mines, Special Report 22, September 1952. San Francisco, California

Numerous buried prehistoric period archaeological sites have been identified in the San Ramon Valley and along San Ramon Creek that are associated with middle-to-late Holocene-age alluvium.[57, 58, 59, 60, 61] There are at least two buried prehistoric period sites located one mile to the south and southeast of the project area, including P-07-00717 (CA-CCO-363) and P-07-000718 (CA-CCO-364), both of which are midden sites that contain lithic, groundstone, shell and bone artifacts, as well as multiple human burials.[62, 63]

Historic Map Review. Various maps dating from 1857 to 1959 were reviewed to determine the presence of former built-environment resources and historic uses of the project area that could indicate the potential for there to be historic-era resources within the project area.

Overall, in the historic period the project area trended toward relatively large parcels that were likely used for agricultural activities, such as cattle grazing. The rugged topography and absence of perennial streams within the majority of the project area (except for within the Faria Dedication property) probably precluded development in the historic period. According to historic maps, there was minimal development along Bollinger Canyon Road by the late nineteenth century. According to the 1897 and 1915 USGS 15-minute Concord, Calif. quadrangle maps, there were two buildings located on the southwest side of present-day Bollinger Canyon Road and adjacent to Bollinger Creek on the north that were near, but not within, the Chen et al. property. One of the buildings shown on the 1897 and 1915 maps was still present in 1943, but the other was not. The 1943 USGS 15-minute Concord, Calif. quadrangle map also shows another building located on the east side of Bollinger Creek within the current Faria Dedication property. On the 1959 quadrangle, three buildings are shown on the west side of Bollinger Canyon Road within the Faria Dedication property.

4.4.2.2 Paleontological Record Search and Review

EDS conducted a paleontological records search, pursuant to CEQA for the proposed project area. The paleontological record search was required to determine whether previously recorded fossil localities, or fossiliferous geologic units known to contain fossils, are present in the project area. To develop a baseline paleontological resource inventory of the project area and to establish the paleontological sensitivity (potential) of each geologic unit present within and adjacent to the project area, the following tasks were completed:

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57 Fredrickson, D. A. 1966. CCO-308: The Archaeology of a Middle Horizon Site in Interior Contra Costa County, California. Unpublished Master's Thesis, University of California, Davis.

58 Fredrickson, D. A. 1968. Archaeological Excavations at CCo-30 near Alamo, Contra Costa County, California. Center for Archaeological Research at Davis, Publication #1.

59 Stillinger, Robert. 1977a. Archaeological site record for P-07-000716 (CA-CCO-362). Confidential record on file at the Northwest Information Center, Rohnert Park, California

60 Stillinger, Robert. 1977b. Archaeological site record for P-07-000717 (CA-CCO-363). Confidential record on file at the Northwest Information Center, Rohnert Park, California

61 Stillinger, Robert. 1977c. Archaeological site record for P-07-000718 (CA-CCO-364). Confidential record on file at the Northwest Information Center, Rohnert Park, California

62 Stillinger, Robert. 1977b. Archaeological site record for P-07-000717 (CA-CCO-363). Confidential record on file at the Northwest Information Center, Rohnert Park, California

63 Stillinger, Robert. 1977c. Archaeological site record for P-07-000718 (CA-CCO-364). Confidential record on file at the Northwest Information Center, Rohnert Park, California

- Geologic maps and available published and unpublished geological and paleontological literature covering the bedrock and surficial geology and paleontology of the project area and surrounding area were reviewed to determine what exposed and/or subsurface rock units are present, and to assess the potential paleontological productivity of each rock unit in respect to the project area. This research identified the geologic units, previous paleontological studies, fossil localities (i.e., locations at which paleontological resources have been documented), and types of fossils in geologic units that may be within or adjacent to the project area.

- EDS conducted an online fossil locality record search utilizing the University of California Museum of Paleontology (UCMP) online fossil database.

- EDS supplemented the UCMP records search with one from the San Diego Natural History Museum (SDNHM) online fossil database, as well as personal communication with the staff paleontologist at SDNHM.

After completing the previously described tasks, each geologic unit mapped within or near the project area was assigned a paleontological potential based on the number of previously recorded fossil sites it contains and the scientific importance of the fossil remains recorded. These methods are consistent with SVP (2010) criteria and guidelines for assessment and mitigation of adverse impacts to paleontological resources in areas of potential environmental effect and areas of critical environmental concern.

According to the *Geologic Map of the Las Trampas Ridge Quadrangle*[64] and *Preliminary Geologic Map of the Diablo Quadrangle*,[65] Contra Costa and Alameda Counties, California, five geologic units are mapped within the project area. The units, from youngest to oldest are: Quaternary (Holocene) surficial sediments (Qa); inter-fingered with Quaternary (Pleistocene) older surficial sediments (Qoa); Pliocene age Orinda Formation (Tor); late Miocene age Briones Formation (Tbr); and late to middle Miocene age Monterey Formation (Tmc).

The Qa surficial sediments, described by Dibblee and Minch (2005), consist of alluvial gravels, sand and clay in valley areas. The Qoa are older surficial and dissected terrace deposits of alluvial gravels and sand and are underlain by an unconformity. The Tor consists of pebble conglomerate, sandstone and claystone that is interbedded, gray to greenish gray in color, fluvial deposits with bedded claystone in the upper part that is locally referred to as Mulholland Formation by Ham (1952), which may be lacustrine in origin. The Tbr are marine clastics that are lithified, light gray, medium grained arkosic sandstones that are thickly bedded, and locally fossiliferous with limestone

64 Dibblee, T.W., and J.A. Minch. 2005. Geologic map of the Las Trampas Ridge Quadrangle, Contra Costa and Alameda Counties, California: Dibblee Foundation Map DF-161. Scale 1:24,000.

65 Dibblee, T.W. 1980. Preliminary geologic map of the Diablo quadrangle, Alameda and Contra Costa Counties, California. Department of the Interior, United States Geological Survey Open-File Report 80-546. Scale 1:24,000.

beds.[66, 67] The Tmc consists of lithified marine biogenic and clastic sediments of clay shale, and argillaceous to sandy siltstones and fine grained Hambre sandstone that is faintly bedded.

According to the UCMP online fossil database search conducted by EDS, there is a total of eighteen thousand four hundred fifty-nine (18,459) fossils recorded by the UCMP for all of Contra Costa County, with three hundred forty-one (341) recorded within specific rock units that are mapped within the project area; Tbr-Briones Formation (91 fossils), Tor-Orinda Formation (220 fossils), and Tmc-Monterey Formation (30 fossils). The UCMP records also show a total of two thousand five hundred sixty-five (2,565) fossils recorded in Alameda County, with two hundred thirty-seven (237) within project specific rock units; Briones Formation (14 fossils), Orinda Formation (213 fossils), and Monterey Formation (10 fossils). The SDNHM has no fossil records for Contra Costa or Alameda counties.

The Briones formation contains forty-eight (48) vertebrate and forty-three (43) invertebrate fossils recorded in Contra Costa County, and three (3) vertebrate and eleven (11) invertebrate fossils in Alameda County. The Orinda Formation contains two hundred nine (209) vertebrate, six (6) invertebrate, and five (5) microfossils recorded within Contra Costa County, and two hundred eight (208) plant and five (5) vertebrate fossils recorded within Alameda County. The Monterey Formation contains one (1) vertebrate, one (1) microfossil and twenty-eight (28) invertebrate fossils within Contra Costa County, and ten (10) vertebrate fossils recorded within Alameda County.

Informally, the Las Trampas Regional Wilderness pamphlet (East Bay Regional Park District 2015) states, *"Fossil deposits at Las Trampas represent a fauna that is thought to be about ten million years old. One of the more interesting finds were two complete lower jaws of an ancient elephant known as Gomphotherium, found just northwest of the present boundaries of the park. The most common remains found in the vicinity of the park are teeth from an extinct three-toed horse. Remains of ancient camels, small squirrels, toads, and the honey badger have also been found, along with a variety of fossilized marine clams".*

In summary, the Monterey, Briones and Orinda Formations, which cover a high percentage of the project area, possess a High Potential paleontological resource sensitivity (potential) for fossil remains that are significant and unique because the fossils and sediments can provide important paleoclimatic, paleoecological, and paleontological data and information. The Quaternary Holocene and Pleistocene sedimentary deposits are surrounded by high potential rock units. Given this, the fine grained, middle to early Holocene portions of the Qa unit, and the fine-grained facies of the Qoa unit have a High Potential for the presence of paleontological resources.

4.4.2.3 Native American Outreach

Pursuant to State law under AB 52 (codified at PRC § 21080.3.1), the Park District, as part of CEQA review for the project, reached out to California Native American Tribes listed in the NAHC's contact

[66] Chetelat, Guy Felix. 1995. Provenance of the upper-miocene briones formation in the central Diablo Range, California". Master's Theses. 981. http://scholarworks.sjsu.edu/etd_theses/981.

[67] Dibblee, T.W. 1980. Preliminary geologic map of the Diablo quadrangle, Alameda and Contra Costa Counties, California. Department of the Interior, United States Geological Survey Open-File Report 80-546. Scale 1:24,000.

list. The goal of this outreach was to provide information on the project and determine if any tribal cultural resources may be impacted by the project.

The Park District contacted the NAHC on March 26, 2019 in request of a search of the NAHC's Sacred Lands File (SLF) and a list of Native American representatives who may have interest in the project. The NAHC replied to the Park District on March 27, 2019. The NAHC reply indicated that the SLF has no record of cultural resources in the project area. The NAHC also included a list of Native American representatives to contact regarding these resources and who may be interested in the project. On July 29, 2019, the Park District sent letters to each contact provided by the NAHC. On July 31, 2019, pursuant to AB 52, the Park District, as part of CEQA review for the Project, sent letters to those California Native American Tribes listed in the NAHC's contact list regarding the project.

The letters from the Park District provided information on the project and requested that the contacts share 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.

None of the Native American representatives contacted responded with any information on the project. Appendix D of this EIR, Project Correspondence with Native American Representatives, provides documentation of the project correspondence with Native American representatives.

4.4.2.4 Cultural Resources Field Survey

A cultural resources field survey was conducted of the proposed 1.1-mile long Sabertooth Trail and 0.62-acre Old Corral Staging Area and the 0.5-acre alternative staging area within the Chen et al. property, the 0.9-mile long Calaveras Ridge Trail extension within the Braddock and Logan (Peters Ranch) property, the 0.8-mile Warbler Loop Trail, and the 0.5-mile-long Connector Trail within the existing Las Trampas Wilderness Regional Preserve. The field survey was led by EDS Archaeologist Gilbert Browning, M.A., RPA, who is a Secretary of Interior Qualified Archaeologist, with the assistance of EDS Archaeologists Ryan Poska, M.A. (candidate), and Erica Thompson, M.A. Surveys were conducted on September 28th and October 19th, 2017. The field strategy included an on-foot visual inspection of each of the proposed new trails, staging areas and trailhead parking lots to look for the presence of any potentially significant cultural and paleontological resources. Proposed trails within the Podva Dedication property and the Faria Dedication property were previously surveyed, and these areas were not re-surveyed as part of this study.

On September 28 and October 18, 2017, an intensive level field survey was conducted of the proposed Sabertooth Trail and Old Corral Staging Area within the Chen et al. property, the Calaveras Ridge Trail extension within the Braddock and Logan (Peters Ranch) property, and the Connector Trail within the existing Las Trampas Wilderness Regional Preserve. Below is a description of each area, the methods used to survey each of the proposed activity areas and the results of the survey.

Old Corral Staging Area and Alternative Staging Area. The 0.62-acre proposed Old Corral Staging Area and the approximately 0.5-acre alternative staging area were surveyed on September 28, 2017 by EDS Archaeologists Gilbert Browning, M.A., RPA, and Ryan Poska, M.A. (candidate). The proposed Old Corral Staging Area is located on the east side of Bollinger Canyon Road where there is a dirt

access road (a former ranch road) that currently serves as an access into the property. The proposed Old Corral Staging Area is characterized by four cattle corrals and a loading chute within a larger fenced-in area that is covered in low-lying vegetation. Both staging area locations were surveyed by walking a series of linear transects spaced three to five meters apart. The soil visibility within both locations was good, approximately 50 percent. No archaeological or paleontological resources were observed. The corrals and loading chute within the proposed Staging Area, and barn located 300 feet northeast of the proposed Old Corral Staging Area and adjacent to the alternative staging area are over 45 years of age, and were therefore evaluated by EDS Architectural Historian, Stacey De Shazo, M.A. to determine eligibility for listing on the CRHR (De Shazo 2019).

Sabertooth Trail. The 1.1-mile-long proposed Sabertooth Trail was surveyed on September 28, 2017 by EDS Archaeologists Gilbert Browning, M.A., RPA and Ryan Poska, M.A. (candidate). The trail extends from the proposed Old Corral Staging Area at Bollinger Canyon Road northward along the eastern slope of Las Trampas ridge for 1.1-miles and terminates at an existing trail within Las Trampas Regional Wilderness parkland. The route of the proposed trail was marked with pink pin flags by the Park District prior to the survey. The proposed trail was surveyed by walking two linear transects spaced two meters apart. Overall, the soil visibility was moderate, approximately 30 percent.

No archaeological or paleontological resources were observed. However, a historic-era stock pond and spring box were observed on the east side of the ranch road within 200 feet of the proposed Sabertooth Trail. The stock pond measures approximately 120 feet northwest/southeast by 40 feet northeast/southwest and did not contain any water at the time of the survey. The stock pond is related to use of the property for cattle grazing. The stock pond and associated spring box were recorded as a feature within the DPR 523 forms that were prepared for the barn and other associated cattle ranching structures and features within the Chen et al. property.[68]

Calaveras Ridge Trail Extension. The 0.8-mile-long proposed Calaveras Ridge Trail Extension was surveyed on September 28, 2017 by EDS Archaeologists Gilbert Browning, M.A., RPA and Ryan Poska, M.A. (candidate). The trail extends through a ravine and along the western slope of Las Trampas ridge from the Faria Development property northward through the Braddock and Logan (Peters Ranch) property and terminates at an existing dirt access road. The route of the proposed trail was marked with pink pin flags by the Park District prior to the survey. The proposed trail was surveyed by walking two linear transects spaced one meter apart. Due to the height of the grasses and brush along the trail alignment, the ground visibility was moderate, approximately 40 percent. No cultural or paleontological resources were observed.

On April 22, 2019 EDS Senior Archaeologist Gilbert Browning, M.A., RPA and Archaeologist Bee Thao, M.A. (candidate) returned to the project area and conducted a survey of three alternative trail alignments, including the 0.8-mile Warbler Loop Trail. The field strategy included an on-foot visual inspection of the proposed alternative alignments to look for the presence of any potentially significant cultural and paleontological resources.

[68] De Shazo, Stacey. 2019. Historic Resources Evaluation for the East Bay Regional Park District Southern Las Trampas Land Use Plan Amendment (LUPA) Project, Unincorporated Contra Costa County, California. Report on file at Evans & De Shazo, Inc., Sebastopol, California.

The 0.8-mile Warbler Loop Trail is located within the Chen et al. property and extends from the proposed Old Corral Staging Area through the southern portion of the Chen et al. property then loops back around to the north where it connects with the 1.1-mile Sabertooth Trail. The methods used to survey the proposed Warbler Loop Trail included walking the proposed trail alignment utilizing two transects spaced approximately two to three meters apart.

The ground visibility along the proposed Warbler Loop Trail was good, approximately 50 percent, due to soil disturbance caused by cattle grazing and bioturbation. Where the soils were observed they consisted of brown colored (Munsell 7.5YR 5/4) clay loam. Vegetation consisted of various low-lying grasses, live oak, black oak and bay laurel.

A modern barbed wire and metal post cattle fence crosses the trail alignment; however, no cultural resources were identified along the proposed Warbler Loop Trail.

4.4.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would have a significant impact to cultural resources if it would:

a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5;

c. Disturb any human remains, including those interred outside of formal cemeteries; or

d. Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. According to the CEQA Guidelines, "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (CEQA Guidelines Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as "unique archaeological resources" (California PRC Section 21083.2). No archaeological resources were identified in the project site. However, there is a potential for unknown archaeological resources to be discovered during construction. Mitigation Measure CUL-1 requires that if unknown archaeological resources are discovered during construction, work in the area would halt and a qualified archaeologist would be contacted. Therefore, adherence to the requirements in Mitigation Measure CUL-1a, and CUL-1b would reduce potential impacts to archaeological resources to less-than-significant with mitigation. This topic is not discussed further in this EIR.

4.4.4 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to cultural resources that would result from implementation of the proposed project.

4.4.4.1 Project Impacts

Potential impacts related to cultural resources and tribal cultural resources are discussed below.

a. Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

A historical resource defined by CEQA includes one or more of the following criteria: 1) the resource is listed, or found eligible for listing in, the California Register of Historical Resources (CRHR); 2) listed in a local register of historical resources as defined by Public Resources Code (PRC) Section 5020.1(k); 3) identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or 4) determined to be a historical resource by the project's lead agency (PRC Section 21084.1; CEQA Guidelines Section 15064.(a)). Under CEQA, historical resources include built-environment resources and archaeological sites.

Historical Resource Evaluation. The HRE was prepared in compliance with CEQA regulations and the Park District Master Plan policies. EDS utilized research obtained at the Northwest Information Center (NWIC) of the California Historical Information Systems (CHRIS), San Ramon Valley Historical Society, and Contra Costa County Historical Society, as well as various online sources to obtain details regarding previous property ownership and to develop a historic context in which to evaluate the historic significance of the existing built environment resources within the Chen property. EDS also conducted an intensive level field survey to document the collapsed circa 1950 barn and corrals to formulate assessments within the current setting. In addition, Ms. De Shazo completed Department of Parks and Recreation (DPR) 523 forms for the circa 1950 barn, corrals, and associated features.

Record Search. EDS completed a record search at the NWIC on September 6, 2017 (NWIC File #17-0754). According to information on file at the NWIC, the built-environment resources in the Chen property have not been previously identified or evaluated for their historical significance and are not listed in the State Office of Historic Preservation's (OHP) Directory of Properties in the Historic Property Data File for unincorporated areas of Contra Costa County (dated 4/5/2012), or in the Historic Resource Inventory of Contra Costa County (Preliminary Draft 1976, Draft Update in 1989, and Draft Update 2010).

EDS also utilized research obtained at the San Ramon Valley Historical Society, and Contra Costa County Historical Society, as well as various online sources to obtain details regarding previous property ownership and to develop a historic context in which to evaluate the historic significance of the existing built-environment resources within the Chen property.

Historic Architectural Field Survey. On September 11, 2017, EDS Architectural Historian, Stacey De Shazo, M.A., completed a field survey and assessment of the built-environment resources within the Chen property. The Chen property consists of a former ranching complex that includes a circa 1950 collapsed barn, corrals, and associated features that include a ranch road,

livestock pond and spring box. The survey and assessment were completed in compliance with CEQA and the East Bay Regional Park District's Master Plan Policies.

Conclusions. Based on the results of the record search and field survey, it was determined that the built-environment resources within the Chen property are not included in a local register of historical resources, and do not qualify for listing on the CRHR. Therefore, the resource does not meet the definition of a Historical Resource under CEQA. Therefore, this impact would be less than significant.

Cultural Resources Record Search and Review. A Cultural and Paleontological Resource Report was prepared by EDS. As part of this evaluation, EDS conducted a record search and review of the project area.

Record Search. The record search included a review of information on file at the NWIC of the CHRIS that included previous cultural resource studies and primary resource records pertaining to properties located within a 0.5-mile radius of the project area, as well as a review of the California Inventory of Historic Resources (California Department of Parks and Recreation 1976) and the Office of Historic Preservation's (OHP) Five Views: An Ethnic Sites Survey for California (1988), California Historical Landmarks (1990), California Points of Historical Interest (1992), California Register of Historical Resources (1998), and the Directory of Properties in the Historic Property Data File for Contra Costa County (dated 4/5/2012). The Historic Property Data file includes updated listing of the CRHR, NRHP, California Historical Landmarks, and the California Points of Historical Interest. The record search also consisted of a review of Park District documents and other data, as well as a review of appropriate ethnographic, prehistoric and historic references, including various maps dating from 1857 to 1959 to provide context for the Southern Las Trampas area. Soils and geologic data was also reviewed to identify the potential for buried archaeological sites to be present within the project area that may require identification measures beyond a pedestrian archaeological reconnaissance.

Cultural Resources Field Survey. A cultural resources field survey was conducted of the proposed 1.1-mile Sabertooth Trail and 0.62-acre Old Corral Staging Area and the 0.5-acre alternative staging area within the Chen property, the 0.9-mile extension of the Calaveras Ridge Trail within the Braddock and Logan (Peters Ranch) property, and the 0.5-mile-long Connector Trail within the existing Las Trampas. The field survey was led by EDS Archaeologist Gilbert Browning, M.A., RPA, who is a Secretary of Interior Qualified Archaeologist, with the assistance of EDS Archaeologists Ryan Poska, M.A. (candidate), and Erica Thompson, M.A. Surveys were conducted on September 28th and October 19th, 2017. A cultural resources field survey was also conducted on April 22, 2019 of the proposed 0.8-mile Warbler Loop Trail within the Chen property. This field survey was led by EDS Senior Archaeologist Gilbert Browning, M.A., RPA, who is a Secretary of Interior Qualified Archaeologist, with the assistance of EDS Archaeologist Bee Thao, M.A. (candidate). The field strategy included an on-foot visual inspection of each of the proposed new trails, and staging areas to look for the presence of any potentially significant cultural resources and paleontological resources. Proposed trails within the Podva Dedication property and the Faria Development property were previously surveyed, and these areas were not re-surveyed as part of this study.

Conclusions. No cultural resources were observed within the project area, and the built-environment resources within the Chen property were determined to be not eligible for listing on the CRHR; therefore, it is concluded that the proposed activities will not impact any Historical Resources as defined by CEQA. However, it was determined that recent Holocene-age (11,700 years to the present) terraces along Bollinger Creek within the Faria parcel have the potential for buried prehistoric resources. Due to this potential, project-specific recommendations, included in Mitigation Measures CUL-1a and CUL-1b, are warranted for earth-moving activities. Adherence to the requirements in Mitigation Measure CUL-1a and CUL-1b would reduce potential impacts to unknown archaeological historical resources to less-than-significant with mitigation.

Mitigation Measure CUL-1a Due to the potential for buried archaeological resources to be encountered during earth-moving activities within the Faria Dedication property, if any prehistoric or historic material is encountered by equipment operators during earth-moving activities, work shall be halted within 50-feet of the discovery area until a qualified professional archaeologist is retained to inspect the material and provide further recommendations for appropriate treatment of the resource. To ensure that project supervisors, contractors, and equipment operators are familiarized with the types of artifacts that could be encountered and the procedures to follow if archaeological resources are unearthed during construction, it is recommended that a professional archaeologist shall conduct a preconstruction meeting prior to commencement of earth-moving activities to familiarize the team with the potential to encounter prehistoric artifacts or historic-era archaeological deposits, the types of archaeological material that could be encountered within the project area, and procedures to follow in the event that archaeological deposits and/or artifacts are observed during construction.

Mitigation Measure CUL-1b The measures below are provided in the event of an unanticipated discovery of cultural resources within the project area during construction. If any prehistoric or historic-period artifacts are encountered by equipment operators during earth-moving work shall be halted in the immediate vicinity (within 50 feet) of the discovery area and a qualified archaeologist shall be retained to inspect the material and provide further recommendations for appropriate treatment of the resource pursuant to CEQA regulations and guidelines.

- In accordance with current Park District policies, the following recommendation also applies: In the event that prehistoric, archaeological or paleontological artifacts or remains are encountered during project construction, all ground disturbing

activities shall be halted within at least 50 feet and artifacts shall be protected in place. In the event that prehistoric, archaeological or paleontological artifacts or remains are encountered during project construction, all ground disturbing activities shall be halted within at least 50 feet and artifacts shall be protected in place (in accordance with EBRPD Board Resolution No. 1989-4-124 and State and federal law) until the find is evaluated by a monitor/archaeological consultant, and appropriate mitigation, such as curation, preservation in place, etc., if necessary, is implemented.

- Historic-era resources potentially include all by-products of human land use greater than 50 years of age, including alignments of stone or brick, foundation elements from previous structures, minor earthworks, brick features, surface scatters of farming or domestic type material, and subsurface deposits of domestic type material (glass, ceramic, etc.).

- Artifacts that are typically found associated with prehistoric sites in the area include humanly modified stone, shell, bone or other materials such as charcoal, ash and burned rock that can be indicative of food procurement or processing activities. Prehistoric domestic features include hearths, fire pits, house floor depressions and mortuary features consisting of human skeletal remains.

With implementation of Mitigation Measure CUL-1a and Mitigation Measure CUL-1b, project construction would have a less-than-significant impact on prehistoric or historical archaeological resources.

Significance after Mitigation: Less than Significant.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Disturbance of human remains interred outside of formal cemeteries would result in a significant impact. If human remains are identified during project construction, Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code shall apply, as appropriate. In addition, Mitigation Measure CUL-2 would reduce potential impacts to unknown human remains to less-than-significant with mitigation.

Mitigation Measure CUL-2 If human remains are encountered within the project area during construction, all work shall stop in the immediate vicinity of the discovered remains and the County Coroner shall be notified immediately. If the remains are suspected to be those of a pre-contact Native American, then the Native American Heritage

Commission shall be contacted by the Coroner so that a "Most Likely Descendant" can be designated to provide further recommendations regarding treatment of the remains. An archaeologist should also be retained to evaluate the historical significance of the discovery, the potential for additional remains, and to provide further recommendations for treatment of the site.

With implementation of Mitigation Measure CUL-2, project construction would have a less-than-significant impact related to the disturbance of any human remains.

Significance after Mitigation: Less than Significant.

d. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?

An HRE was prepared in compliance with CEQA regulations and the Park District Master Plan policies. EDS utilized research obtained at the Northwest Information Center (NWIC) of the California Historical Information Systems (CHRIS), San Ramon Valley Historical Society, and Contra Costa County Historical Society, as well as various online sources to obtain details regarding previous property ownership and to develop a historic context in which to evaluate the historic significance of the existing built environment resources within the Chen property. EDS also conducted an intensive level field survey to document the existing circa 1950 barn and corrals to formulate assessments within the current setting. In addition, Ms. De Shazo completed Department of Parks and Recreation (DPR) 523 forms for the circa 1950 barn, corrals, and associated features.

Based on the results of the record search and field survey, it was determined that the built-environment resources within the Chen property are not included in a local register of historical resources, and do not qualify for listing on the CRHR. Therefore, the resource does not meet the definition of a Historical Resource under CEQA. Therefore, this impact would be less than significant.

If such resources were identified during construction and found to be a tribal cultural resource, any impacts to the resource resulting from implementation of the project would be potentially significant. However, implementation of Mitigation Measures CUL-1a, CUL-1b, and CUL-2 as described above would protect previously unrecorded or unknown cultural resources, including Native American artifacts and human remains, should these be encountered during project construction. As a result, the project would result in a less-than-significant impact to tribal cultural resources.

Significance after Mitigation: Less than significant.

4.4.4.2 Cumulative Impacts

The geographic scope of analysis for cumulative impacts on historical resources, archaeological resources, paleontological resources, TCRs, and human remains encompasses areas where development would occur in the vicinity of the project site. Projects in the geographic scope include the Faria Preserve Residential Project and the Change Residential Project.

A cumulatively significant impact would result if incremental effects of the project, after implementation of mitigation, combined with the impacts of one or more cumulative projects, after implementation of their mitigation, were to cause a substantial adverse effect on the same cultural or paleontological resource.

There are no known archaeological resources in the project site; therefore, the project would not contribute to a significant cumulative effect on archaeological resources.

The project would have the potential to affect unknown historic resources, tribal cultural resources, and human remains. However, there would not be the potential for the project and cumulative projects to affect the same undiscovered cultural resources.

Federal, State, and local laws can generally protect cultural resources. Development in the geographic scope would be required to comply with the same provisions of CEQA and implement measures similar to those identified above (i.e., Mitigation Measures CUL-1a, CUL-1b, and CUL-2). These measures would require preconstruction training, monitoring in the vicinity of sensitive areas, and protocols for responding in the event of inadvertent discovery of archaeological resources, paleontological resources, or human remains.

Through compliance with applicable regulations and implementation of associated avoidance and minimization measures, the project would not have a considerable contribution to adverse effects on cultural resources of the region. This cumulative impact would be *less than significant* and no mitigation is required.

Significance without Mitigation: Less than significant.

4.5 GEOLOGY AND SOILS

This section describes the regulatory framework, existing conditions, and potential project impacts related to geology and soils.

It should be noted that after completion of the Initial Study (included in Appendix A), it was determined that the analysis of potential impacts pertaining to geology and soils, particularly the potential impacts that were determined to be less than significant with mitigation measures, be included in this Draft EIR.

4.5.1 Setting

4.5.1.1 Regulatory Setting

State Regulations. The following state laws or regulations pertaining to geology and soils are applicable to the proposed project.

California Alquist-Priolo Earthquake Fault Zoning Act. The Alquist-Priolo Earthquake Fault Zoning Act was signed into State law in 1972. Its primary purpose is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. This Act delineates "Earthquake Fault Zones" along faults that are "sufficiently active" and "well defined." This Act also requires that cities and counties withhold development permits for sites within an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this Act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

Seismic Hazard Mapping Act. The Seismic Hazard Mapping Act (SHMA) was adopted by the State in 1990 to protect the public from the effects of non-surface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, or other ground failure caused by earthquakes. The goal of the SHMA is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey prepares and provides local governments with seismic hazard zone maps that identify areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures.

California Building Code. The California Building Code (CBC) provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock on-site, and the strength of ground shaking with specified probability of occurring at a site.

California Environmental Quality Act. The California Environmental Quality Act (CEQA), as codified in Public Resources Code (PRC) Sections 21000 et seq., is the principal statute governing the environmental review of projects in the state. Paleontological resources are afforded protection under CEQA. The Society of Vertebrate Paleontology (SVP) has set significance

criteria for paleontological resources (1995).[1] Most state regulatory agencies with paleontological laws, ordinances, regulations, and standards accept and use the professional standards set forth by the SVP.

California Public Resources Code Section 5097. PRC Section 5097.5 prohibits the removal of any paleontological site or feature from public lands without the permission of the jurisdictional agency.

District Regulations. The following District regulations pertaining to geology and soils are applicable to the proposed project.

2013 East Bay Regional Park District Master Plan. The Master Plan, adopted July 16, 2013, provides policy direction for resource stewardship and development of parks within the jurisdiction of the Park District. The Master Plan also includes a vision, a mission statement, as well as policies and goals protecting geologic resources and soils, in the Natural and Resources Management section.

> *NRM 13: Geology, Soils and Paleontology* – The District will identify existing and potential erosion problems and take corrective measures to repair damage and mitigate its causes. The Park District will manage the parks to assure that an adequate cover of vegetation remains on the ground to provide soil protection. Where vegetative cover has been reduced or eliminated, the Park District will take steps to restore it using native or naturalized plants adapted to the site. The Park District will minimize soil disturbance in areas with unstable soils whenever possible. The Park District will arrest the progress of active gully erosion where practical and take action to restore these areas to stable conditions. The Park District will notify adjacent property owners of potential landslide situations and risks on District lands and will conform with applicable law. The Park District will protect important geological and paleontological features from vandalism and misuse.

East Bay Regional Park District Ordinance 38. Section 805 of Park District Ordinance 38 addresses protection geological resources and states that, "no person shall damage, injure, collect or remove earth, rocks, sand, gravel, fossils, minerals, features of caves, or any article or artifact of geological interest or value located on District parklands."

East Bay Regional Park District Technical Specifications and Supplementary Conditions. The Park District's Standard Technical Specifications and Supplementary Conditions contain provisions that are intended to ensure, among other things, the safety of the construction workers, staff and the public, and the protection of wildlife, site resources, and water quality during construction and operation of site amenities. Relevant sections are provided in Table 4.5.A, below.

[1] Society of Vertebrate Paleontology, 2010, Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology. Impact Mitigation Guidelines Revision Committee.

Table 4.5.A: Relevant Technical Specifications – Geology and Soils

Site Set-up - Execution
● Work on site shall only take place between June 15 and October 31. ● Confine work activities to approved construction work areas, staging areas and access routes. ● Excavations shall not be left open overnight. Where not backfilled, excavations shall be tightly covered. Perimeters of plywood panels or other covers shall be edged with dirt to prevent intrusion of small animals. ● Excavations shall include a ramp with a maximum slope of 1:1 to allow animals to escape the excavation when not covered. ● Storage of equipment and vehicles shall be a minimum of 100 feet from the top of the creek bank. ● Fueling of equipment and vehicles shall take place a minimum of 200 feet from the top of the creek bank.
Erosion Control SWPPP Requirements
In addition to the requirements of the CASQA or Caltrans standard, the SWPPP shall contain an Erosion Control Plan that includes the following provisions: ● Fiber rolls and erosion control blankets shall not contain netting that could trap small animals. ● Photodegradable products are not acceptable. ● All erosion control products shall be weed and seed free. ● All temporary erosion control measures shall be immediately removed when no longer needed. ● All temporary erosion control measures shall be removed and legally disposed of prior to project completion.
Clearing and Grubbing
● All cut and fill areas: Strip topsoil to 2 inches minimum below existing grade where vegetation occurs. Additional depth may be required to remove organic materials. ● Stripped material shall be disposed of off-site and in a legal manner or stockpiled for reuse as directed by the District. ● Upon completion of clearing and grubbing, areas shall be left in a neat, clean condition ready to receive subsequent work.
Excavated Material
● All excavated material shall be piled in a manner which will not endanger the work and which will avoid completely obstructing access. Culverts, swales, and natural drainage patterns shall be kept clear. ● The excavations and support system shall comply in all respects with the requirements of Article 6, of the Construction Safety Orders of the Division of Industrial Safety. ● At no time shall trenches be left open during the Contractor's non-working hours. Trenches shall be backfilled to grade and/or covered with plywood or traffic-rated metal plates and pipe ends securely closed with a tight-fitting plug or cover at the end of each work day. ● All open excavations 5 feet or greater in depth shall be constructed with bracing, sheeting, shoring, or other equivalent method designed for the protection of life and limb in accordance to Section 6705 of the State Labor Code. ● The trench excavations and support system shall comply in all respects with the requirements of Article 6, of the ● Construction Safety Orders of the Division of Industrial Safety.
Site Set-up - Execution
● Work on site shall only take place between June 15 and October 31. ● Confine work activities to approved construction work areas, staging areas and access routes. ● Excavations shall not be left open overnight. Where not backfilled, excavations shall be tightly covered. Perimeters of plywood panels or other covers shall be edged with dirt to prevent intrusion of small animals. ● Excavations shall include a ramp with a maximum slope of 1:1 to allow animals to escape the excavation when not covered. ● Storage of equipment and vehicles shall be a minimum of 100 feet from the top of the creek bank. ● Fueling of equipment and vehicles shall take place a minimum of 200 feet from the top of the creek bank.
Protection of Existing Trees and Shrubs
● When it is necessary to excavate adjacent to existing trees and shrubs, Contractor shall use all possible care to avoid injury to these plants and their roots. No roots three (3) inches or larger in diameter shall be cut without the prior approval of the District. ● In no case shall any limbs be cut or trees and shrubs removed without first obtaining approval from the District.

Table 4.5.A: Relevant Technical Specifications – Geology and Soils

Supplementary Conditions
● The California State Water Resources Control Board, San Francisco Bay Region, Oakland, California has jurisdiction over the project stormwater discharges within the Project area. Accordingly, the following actions will be required prior to initiating implementation of the Project: 1) the District will submit a Notice of Intent (NOI) and obtain a waste discharger identification number (WDID) from the above agency; 2) a Receipt of NOI will be obtained by the District from SWRCB prior to the start of construction; and 3) the Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) in conformance with California State Water Resources Control Board No. 92-08 DWQ for discharges of stormwater runoff associated with construction activity.

Source: East Bay Regional Park District, Technical Specifications (September 10, 2014; Updated 2017).

Local Regulations. The following local laws or regulations pertaining to geology and soils are applicable to the proposed project.

Contra Costa County Local Hazard Mitigation Plan. Contra Costa County Office of Emergency Services and 12 incorporated cities in the County created a county-wide Local Hazard Mitigation Plan. The purpose of the Local Hazard Mitigation Plan is to enable the County to take ongoing action to reduce or eliminate long-term risks to human life, property, and the environment from many types of natural hazards, such as earthquakes.

4.5.1.2 Existing Conditions

Fault Rupture. The project site is located within the northern portion of the Coast Ranges geomorphic province, which includes numerous active faults identified by the California Geologic Survey (CGS) under the Alquist-Priolo Earthquake Fault Zoning Act. CGS defines an active fault as one that has ruptured during the Holocene Epoch (i.e., the last 11,000 years). The probability of one or more large earthquakes (magnitude 6.7 or greater) occurring in the Bay Area between 2014 and 2044 is about 72 percent.[2]

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. Surface rupture generally occurs along an existing (usually active) fault trace. Areas susceptible to surface fault rupture are delineated by Alquist-Priolo Earthquake Fault Zones mapping performed by CGS. The Alquist-Priolo Earthquake Fault Zone for the Calaveras Fault passes through the eastern portion of the project area.[3]

Ground Shaking. Seismic ground shaking generally refers to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity scale is the

[2] United States Geological Survey, 2015. *UCERF3: A New Earthquake Forecast for California's Complex Fault System*, March.

[3] California, State of, 1982. Special Studies Zones, Diablo, Revised Official Map. January 1.

most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII.[4] The Association of Bay Area Governments (ABAG) has mapped the likely shaking intensities in the Bay Area that would have a 10 percent chance of occurring in any 50-year period. A large earthquake (magnitude 6.7 or greater) on one of the major active faults in the region could generate moderate (MMI VI) to very strong (MMI VIII) ground shaking at the project site, and a magnitude 7 earthquake on the Calaveras Fault could generate violent (MMI IX) ground shaking at the project site.[5]

Liquefaction. Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. These soils lose strength during ground shaking. Due to the loss of strength, the soil may move both horizontally and vertically. In areas where sloping ground or open slope faces are present, this mobility can result in lateral spreading. Soils that are most susceptible to liquefaction are clean, loose, uniformly graded, saturated, fine-grained sands that are relatively close to the ground surface. However, loose sands that contain a significant amount of fines (silt and clay) may also liquefy. Mapping of liquefaction susceptibility maintained by ABAG indicates that the proposed Chen property staging area, which is located near a creek bed, has moderate liquefaction potential, and all other areas within the project area have low or very low liquefaction potential.[6]

Lateral Spreading. Lateral spreading, the horizontal/lateral ground movement of relatively flat-lying soil deposits toward a free face, is typically associated with liquefaction of subsurface layer(s) near the bottom of an exposed slope. No significant free faces or slopes within the area of moderate liquefaction potential are identified within the project area.

Seismic Settlement. Seismic settlement (also referred to as cyclic densification) can occur when non-saturated, cohesionless sand or gravel soil is densified by earthquake vibrations. Based on the probability of ground shaking in the region, soil beneath the project site could potentially be susceptible to cyclic densification.

Landslides. Slope failure can occur as either rapid movement of large masses of soil or imperceptibly slow movement of soils on slopes. The area of the proposed project has not been evaluated by CGS for seismically-induced landslide hazards;[7] however, the Alquist-Priolo fault map that covers the southern portion of the project area indicates that an area of massive landslides is present along the eastern portion of the project area.[8] Based on the steeply sloping terrain, there is the potential for

4 United States Geological Survey, 2018. The Modified Mercalli Intensity Scale. Website: earthquake.usgs.gov/ learn/topics/mercalli.php (accessed June 14, 2019).

5 Association of Bay Area Governments, 2018a. Contra Costa County Earthquake Hazard, Shaking Scenarios. Website: resilience.abag.ca.gov/earthquakes/contracosta (accessed June 14, 2019).

6 Association of Bay Area Governments, 2018b. *Liquefaction Susceptibility.* Website: resilience.abag.ca.gov/ earthquakes/#LIQUEFACTION (accessed June 14, 2019).

7 United States Geological Survey, 2018, op. cit.

8 California, State of, 1982, op. cit.

landslides to occur throughout much of the project area, and mapping of landslides performed by ABAG indicates that much of the project area has been affected by landslides.[9]

Paleontological Resources. EDS conducted a paleontological records search to determine if the project area contains previously recorded fossil localities or fossiliferous geologic units known to contain fossils. To develop a baseline paleontological resource inventory of the project area and to establish the paleontological sensitivity of each geologic unit present within and adjacent to the project area, EDS conducted the following tasks:

- Reviewed geologic maps and available published and unpublished geological and paleontological literature covering the bedrock and surficial geology and paleontology of the project area and surrounding area to determine what exposed and/or subsurface rock units are present, and to assess the potential paleontological productivity of each rock unit. This research identified the geologic units, previous paleontological studies, fossil localities (i.e., locations at which paleontological resources have been documented), and types of fossils in geologic units that may be within or adjacent to the project area.

- Conducted an online fossil locality record search utilizing the University of California Museum of Paleontology (UCMP) online fossil database.

- Supplemented the UCMP records search with one from the San Diego Natural History Museum (SDNHM) online fossil database, as well as personal communication with the staff paleontologist at SDNHM.

Based on the results of the paleontological record search, the Monterey, Briones and Orinda Formations, which cover a high percentage of the project area, possess a high potential paleontological resource sensitivity for fossil remains that are significant and unique because the fossils and sediments can provide important paleoclimatic, paleoecological, and paleontological data and information.

4.5.2 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would have a significant geology and soils impact if it would:

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,

   ii. Strong seismic ground shaking,

[9] Association of Bay Area Governments, 2018c. *Existing Landslide Distribution*. Website: resilience.abag.ca.gov/ earthquakes/#LANDSLIDES (accessed June 14, 2019).

iii. Seismic-related ground failure, including liquefaction,

iv. Landslides;

b. Result in substantial soil erosion or the loss of topsoil;

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or,

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

    i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,

    ii. Strong seismic ground shaking,

    iii. Seismic-related ground failure, including liquefaction; or,

    iv. Landslides.

Fault Rupture. The Alquist-Priolo Earthquake Fault Zone for the Calaveras Fault passes through the eastern portion of the project area. The proposed project does not include any structures in the eastern portion of the project area; therefore fault rupture would not result in damage to structures that could cause injury or death. It is possible that fault rupture could result in damage to existing and proposed trails in the eastern portion of the project area, however such damage would not be life threatening and could be readily repaired. Therefore, potential impacts of the project related to fault rupture would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

Ground Shaking. Ground shaking at the project area could Association of Bay Area Governments affect future recreational facilities, including the proposed restroom structure at the Chen property staging area. However, the risk of ground shaking impacts is reduced through adherence to design and materials standards set forth in the CBC. With the project's adherence

to these existing regulations, the risks to people and structures due to strong seismic ground shaking would represent a less-than-significant impact, and no mitigation measures would be required. This topic is not discussed further in this EIR.

Liquefaction. The proposed Chen property staging area would be located within an area of moderate liquefaction potential; all other areas within the project area have low liquefaction potential. Liquefaction could potentially result in settlement of the proposed restroom structure at the Chen property staging area. Based on the limited size of the structure, liquefaction-induced settlement would not be expected to result in significant damage to the structure, and if damage did occur, the simple structure could be readily repaired or replaced. Therefore, potential impacts related to liquefaction would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

Lateral Spreading. No significant free faces or slopes within the area of moderate liquefaction potential are identified in the vicinity of the proposed Chen property staging area. Therefore, the potential for impacts related to lateral spreading would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

Seismic Settlement. Soil beneath the project site could potentially be susceptible to cyclic densification which could cause settlement of the proposed restroom structure at the Chen property staging area. Similar to the discussion of potential liquefaction induced settlement above, based on the limited size of the structure, seismic settlement would not be expected to result in significant damage to the structure, and if damage did occur, the simple structure could be readily repaired or replaced. Therefore, potential impacts related to seismic settlement would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

Landslides. The proposed project would include construction of trails and the Chen property staging area in areas that exhibit landslide risks. Grading activities would not result in significant changes to slope stability, although erosion and localized sloughing of soil could occur in areas where cuts are made into steeper hillsides. Routine trail monitoring/maintenance and minor realignment of trails resulting from erosion and/or slope instability would ensure that the trail system would remain in a safe and operable condition. Implementation of routine trail monitoring/maintenance and policy NRM13 of the 2013 Master Plan would ensure that potential impacts related to landslides would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

b. Result in substantial soil erosion or the loss of topsoil. Project construction would involve grading and excavation that could result in temporary soil erosion when the disturbed soils are exposed to wind or rainfall. Because the proposed project would involve over 1 acre of land disturbance, it would be required to comply with the State Water Resources Control Board's Construction General Permit, which requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP).

The SWPPP would include erosion control best management practices to minimize erosion during construction. Routine trail monitoring and maintenance would include minimizing soil

erosion through various means including grading the trail surface and maintaining/ improving drainage systems. With implementation of a SWPPP, policy NRM13 of the 2013 Master Plan, Section 805 of District Ordinance 38, and the District's Standard Technical Specifications and Supplementary Conditions the project would result in less-than-significant impacts to soil erosion and the loss of topsoil, and no mitigation measures would be required. This topic is not discussed further in this EIR.

c. **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.** As previously discussed above, the proposed project would not result in significant impacts related to unstable soil conditions including liquefaction, settlement, lateral spread, or landslides.

   Subsidence or soil collapses can result from the removal of subsurface water resulting in either gradual depression or catastrophic collapse of the ground surface. The proposed project would not utilize groundwater. Dewatering may be required in isolated areas of the project site during construction (e.g., during excavation for installation of the vault toilet). Construction-related dewatering would be temporary and localized and would not result in subsidence or soil collapse. Therefore, potential impacts related to subsidence/soil collapse would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

d. **Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.** As previously discussed above, the proposed project would not result in significant impacts related to unstable soil conditions including liquefaction, settlement, lateral spread, or landslides.

   The only proposed structure and hardscape that would be constructed as part of the proposed project would be located in the proposed Chen property staging area. Soil at the proposed Chen property staging area is classified as Botella clay loam.[10] Due to the clayey nature of the soil, the soil could have expansive properties. Because of the limited size of the proposed restroom structure and the limited extent of hardscaping, it is unlikely that expansive soil would result in significant damage to the structure or hardscaping. Additionally modern construction practices account for the potential for shrinking and swelling of soil. Therefore, potential impacts related to expansive soils would be less than significant, and no mitigation measures would be required. This topic is not discussed further in this EIR.

e. **Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.** The proposed project would not include the use of septic tanks or alternative waste water disposal systems. The proposed restroom at the Chen staging area would have sealed vault type toilets that would contain waste until it is removed for transportation to an appropriate treatment/disposal facility on a routine basis by trained District staff, similar to other District

[10] United States Department of Agriculture, 2018. Natural Resources Conservation Service, Web Soil Survey. Website: websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed June 14, 2019).

facilities. Therefore, no impacts related to the use of septic tanks or alternative waste water disposal systems would occur. This topic is not discussed further in this EIR.

4.5.3 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to geology and soils that would result from implementation of the proposed project.

4.5.3.1 Project Impacts

f. **Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Geologic units within the project area exhibit high paleontological resource sensitivity. Due to this potential, Mitigation Measure GEO-1 would be required to reduce impacts to a less-than-significant level.

Mitigation Measure GEO-1 A qualified paleontological monitor, or archaeologist with paleontological cross-training, as overseen by a qualified paleontologist, shall be present during earth-moving activities below the soil zone.

If any potentially unique or scientifically important paleontological resources are identified during paleontological monitoring of earth-moving activities below the soil zone, the paleontologist shall evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (1996). The recovery plan may include, but shall not be limited to, sampling and data recovery, coordination of museum storage at a qualified curation facility, such as the SDNHM or UCMP for any specimens recovered, and a report of findings. All feasible recommendations contained in the recovery plan shall be implemented before construction activities resume at the site where the paleontological resources were discovered.

If paleontological resources are discovered during earth-moving activities and a paleontological monitor is not present, the construction crew shall immediately cease work within 50 feet of the find and notify the appropriate Park District staff who shall notify a qualified paleontologist. A paleontologist shall be retained to inspect the resource, conduct an evaluation and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (1996). The recovery plan may include, but shall not be limited to, an intensive field survey in the vicinity of the find, sampling and data recovery, coordination of museum storage at a qualified curation facility, such as the SDNHM or UCMP for any specimens recovered, and a report of findings. All feasible

recommendations contained in the recovery plan shall be implemented before construction activities can resume at the site where the paleontological resources were discovered.

Significance after Mitigation: Less than significant.

4.5.3.2 Cumulative Impacts

Potential geology and soils impacts are generally localized because of the dependence on site-specific conditions, and projects do not typically combine to become cumulatively considerable. The project, along with past, present, and future foreseeable projects, would all be constructed in accordance with the most recent version of the CBC seismic safety requirements and recommendations contained in a project area specific geotechnical report, as applicable, prepared by a California licensed geotechnical engineer or engineering geologist. Therefore, potential exposure to geological and soils hazards resulting from the project would not result in a cumulatively considerable impact.

Significance without Mitigation: No impact.

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4.6 HAZARDS AND HAZARDOUS MATERIALS

This section describes the regulatory framework, existing conditions, and potential project impacts related to hazards and hazardous materials. Wildfire hazards are discussed in Section 4.9 of this Draft EIR.

It should be noted that after completion of the Initial Study (included in Appendix A), it was determined that the analysis of potential impacts pertaining to hazards and hazardous materials, particularly the potential impacts that were determined to be less than significant with mitigation measures, be included in this Draft EIR.

4.6.1 Setting

4.6.1.1 Regulatory Setting

The following regulatory framework discussion sets the context for the range of issues related to hazards and hazardous materials that the Park District considered in the evaluation of the potential for the proposed project to have a significant effect on hazards and hazardous materials.

Federal Regulations. The following federal laws or regulations pertaining to hazards and hazardous materials are applicable to the proposed project.

U.S. Environmental Protection Agency. U.S. Environmental Protection Agency (EPA) is the lead agency responsible for enforcing federal laws and regulations pertaining to hazardous materials that affect public health and the environment. The major federal laws and regulations enforced by the EPA include the: Resource Conservation and Recovery Act (RCRA); Toxic Substances Control Act (TSCA); and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

- ***Resource Conservation and Recovery Act.*** In 1974, RCRA was enacted to provide a general framework for the EPA to regulate hazardous waste from waste generation to ultimate disposal. In accordance with RCRA, facilities that generate, treat, store, or dispose of hazardous waste are required to properly manage wastes from "cradle to grave."

- ***Toxic Substances Control Act.*** In 1976, TSCA was enacted to provide the EPA authority to regulate the production, importation, use, and disposal of chemicals that pose a risk of adversely affecting public health and the environment, such as polychlorinated biphenyls (PCB), asbestos-containing materials, and lead- based paint. TSCA also gives the EPA authority to regulate the cleanup of sites contaminated with specific chemicals.

- ***Comprehensive Environmental Response, Compensation and Liability Act.*** In 1980, CERCLA, commonly known as "Superfund," was enacted to ensure that a funding source would be available for the EPA to clean up uncontrolled or abandoned hazardous materials release sites that pose a risk of adversely affecting public health and the environment. Prohibitions and requirements regarding closed or abandoned hazardous waste sites and liability standards for responsible parties were also established by CERCLA.

U.S. Department of Transportation. U.S. Department of Transportation (DOT) is the federal administering agency responsible for hazardous materials transportation regulations. The DOT Office of Hazardous Materials Safety oversees a national safety program to minimize the risks related to commercial transportation of hazardous materials. The federal hazardous materials transportation law (49 USC 5101 et seq.) is the basic statute regulating hazardous materials transportation in the United States.

Vehicles transporting hazardous materials are required to prepare and implement a Response Plan that describes health and safety training, equipment testing, and response actions to prevent or mitigate a release of petroleum during transportation. Motor carriers transporting hazardous materials are subject to package marking, labeling, and placarding requirements that identify the hazards associated with the materials being transported. Health and safety training and emergency response information must also be maintained by motor carriers transporting hazardous materials to prevent or mitigate a release of hazardous materials. In California, the California Department of Transportation (Caltrans) is the implementing agency for DOT laws and regulations.

Occupational Health and Safety Administration. Occupational Health and Safety Administration (OSHA) is the federal administering agency for worker health and safety regulations. OSHA is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety. Under OSHA jurisdiction, the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations require training and medical supervision for workers at hazardous waste sites. Additional regulations have been developed for construction workers regarding exposure to lead and asbestos during construction activities.

State Regulations. In California, the EPA has granted most enforcement authority of federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). Under the authority of Cal/EPA, the Department of Toxic Substances Control (DTSC) or the San Francisco Bay Regional Water Quality Control Board (RWQCB) is responsible for overseeing the cleanup of contaminated ground or surface water. Cal/EPA has also granted responsibilities to local agencies, such as the Contra Costa County Health Services Hazardous Materials Programs, for implementation and enforcement of hazardous material regulations under the Certified Unified Program Agency (CUPA).

Cortese List. Known or suspected contaminated sites under DTSC or RWQCB oversight are identified by Cal/EPA pursuant to Government Code section 65962.5. The provisions of Government Code section 65962.5, which are commonly referred to as the Cortese List, requires agencies including the DTSC and the RWQCB, to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, and/or hazardous materials releases.

Regional Water Quality Control Board. The RWQCB is authorized by the Porter-Cologne Water Quality Control Act of 1969 to protect the waters of the State. The RWQCB may act as the lead agency and provide oversight for sites where the quality of groundwater or surface water is threatened. A water quality certification from the RWQCB would be required for site improvements that have the potential to impact water quality. The RWQCB would also have

jurisdiction of contaminated water (including contaminated groundwater from investigation/remediation activities or dewatering during construction) storm drains, surface water, or land.

Department of Toxic Substances Control. The DTSC is authorized by EPA to enforce and implement federal hazardous waste laws and regulations. Most State hazardous materials regulations are contained in Title 22 of California Code of Regulations. The Hazardous Waste Control Law of 1976 is the seminal hazardous waste control law in California. The Hazardous Materials Release Response Plans and Inventory Law of 1986 governs hazardous materials handling, reporting requirements, and local agency surveillance programs.

California Department of Industrial Relations, Division of Occupational Safety and Health. The California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH), enforces State regulations and supervision of workplaces in California that are not under direct federal jurisdiction. State worker health and safety regulations applicable to construction workers include training requirements for hazardous waste operations and emergency responses, and lead and asbestos regulations that equal or exceed their federal counterparts.

California Office of Emergency Services. The California Office of Emergency Services (OES) State Warning Point acts as the Governor's 911 Dispatch Center. The State Warning Point, under federal SARA Title III requirements, must be notified as soon as possible of possible spills and releases. OES complies Statewide statistics on spills and releases, and dispatches regional, State, and federal agencies to the scene, if necessary.

Emergency Preparedness Plans. California is divided into three Cal OES Administrative Regions – Inland, Coastal and Southern, which are further divided into six mutual aid regions. The Regional Level operates out of the Regional Emergency Operations Center. Contra Costa County is part of the Coastal Region, Mutual Aid Region II. Cal OES regions have the responsibility to carry out the coordination of information and resources within the region and between the Standardized Emergency Management System state and regional levels to ensure effective and efficient support to local response. The regions serve as the conduit for local and regional perspective and provide a physical presence for Cal OES functions at the local level in all phases of emergency management.

Local Regulations. The following local laws or regulations pertaining to hazards and hazardous materials are applicable to the proposed project.

Certified Unified Program Agency. In California, a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) is implemented at the local level by a Certified Unified Program Agency (CUPA). The CUPA has responsibility in its jurisdiction for the six elements of the Unified Program: hazardous waste generator and on-site hazardous waste treatment; storage tanks; hazardous materials release response plans and inventories; accidental release prevention; and Uniform Fire Code hazardous materials management plans and inventories. The CUPA for Contra Costa County is Contra Costa Health Services.

Contra Costa County Hazardous Materials Area Plan. The Contra Costa County Hazardous Materials Area Plan (HMAP) describes the overall hazardous materials emergency response organization within Contra Costa County designed to protect human health and the environment. The HMAP includes the identification of hazardous materials incident planning, operations, organization and responsibilities for handling a hazardous waste incident and provides support for hazardous materials management including data management, business plans and facility inspections.

District Regulations. The Park District has many policy documents that apply to hazards and hazardous material, as summarized below.

2013 Park District Master Plan. The 2013 Master Plan defines the long-term vision for lands managed by the Park District, and includes policies and goals related to hazards, in the Key Elements of the Planning Process and Natural Resource Management sections:

- KEP4: The District will participate in efforts to protect scenic or cultural resources, develop larger, multi-agency open space preserves, provide recreational opportunities, protect agricultural use, avoid hazards and plan for appropriate urban growth boundaries.

Ordinance 38. Portions of Park District Ordinance 38, Sections 403 to 900 pertain to hazards and hazardous materials.

- Section 900.3: Household or Industrial Materials. No person, firm, or business shall bring household or industrial garbage, trash or waste materials into any lands owned or operated by the Park District for the purpose of placing such materials into any trash can, dumpster, or receptacle provided by the Park District.

East Bay Regional Park District General Conditions. The Park District's General Conditions contain the following rules for contractors regarding hazards and hazardous materials:

- Article 24 Hazardous Materials.
    - The Contractor shall not use any hazardous material in connection with this project without the prior written approval of the Park District Representative. Ten (10) working days prior to using a hazardous material, the Contractor shall submit to the Park District Representative complete Material Safety Data Sheet (MSDS) information, product specifications, and a document stating the application rate and method and including the name of the manufacturer's local representative and emergency telephone numbers. All materials shall be properly labeled in accordance with applicable laws. The Park District Representative's response to the Contractor's request for approval of hazardous materials use shall not affect the Contractor's obligation to comply with the provisions of this section.
    - In using hazardous materials, the Contractor shall:

- Notify the Park District Inspector of the application schedule at least five (5) working days in advance.

- Comply with all applicable federal, state, and local laws, regulations, and ordinances relating to the use and disposal of hazardous materials and containers, environmental protection, industrial hygiene, worker and public safety.

- Supply protective clothing or equipment as required by applicable federal or state law for all persons handling hazardous materials, and for the Park District Inspector as required for inspection of the work.

- Be responsible for the notification of all concerned parties adjacent to or affected by said hazardous material and as directed by the Park District Inspector.

  - In the event the Contractor encounters material on the site reasonably believed to be asbestos, PCB or any other hazardous or toxic substance, the Contractor shall immediately stop work in the areas affected and report the condition to the Park District Representative. If in fact the material is asbestos, PCB or any other hazardous or toxic substance which has not been rendered harmless, the work in the affected area shall not be resumed except by written agreement between the Park District Representative and the Contractor. The work in the affected area otherwise shall only be resumed when asbestos, PCB and other hazardous or toxic substances have been removed or rendered harmless.

- Article 25. Safety and Public Convenience.

  - The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs. All work shall conform to the requirements of the California Administrative Code, Title 8, Industrial Relations, Division of Industrial Safety. The Contractor alone shall be responsible for responding to and for the final satisfaction of any and all claims of personal injury or property damage.

  - The Contractor shall take all reasonable measures as required by existing conditions and performance of the Contract to protect the public and their property. The Contractor shall provide adequate barricades, fences, signs, warning lights, watchpersons, flag persons, etc., to protect the public and their property. Safety devices and workers shall comply with the current State of California "Manual for Warning Signs, Lights and Devices for Use in Performing Work Upon Highways," as a minimum standard. All lighting shall be electric powered and left on from sunset to sunrise.

  - As required by the California Labor Code §6705, whenever any portion of the work involves excavating or trenching five feet or deeper, the Contractor shall submit for acceptance by the Park District, a detailed plan showing the design of shoring, bracing, sloping, etc., to protect the Contractor's workers, Park District personnel, and the public at large. If the plan varies from standard shoring systems established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be

prepared by a registered civil or structural engineer employed by the Contractor. All costs for trenching, excavation safety, including engineering, shall be included within the Contract Bid.

- When required by this Contract or the Park District Inspector, the Contractor shall take measures to prevent unauthorized vehicular traffic.
- Trucks hauling material or equipment shall not exceed vehicle or posted load and speed limits.
- The Contractor shall conduct the work so as to ensure the least possible obstruction to traffic or inconvenience to the general public.
- If in the opinion of the Park District Inspector, the Contractor fails to adequately provide for safety, the Park District Inspector may:
  - Suspend construction within the area.
  - Order and/or place any additional warning devices, barriers, or protective equipment deemed necessary.

Emergency Operations Plan. The Park District's Emergency Operations Plan applies to any extraordinary emergency associated with any hazard, natural or human-caused, which may affect the Park District and that generates situations requiring planned, coordinated responses by multiple agencies and jurisdictions. It is designed to guide users through the four phases of emergency management: preparedness, response, recovery, and mitigation and should be used in conjunction with applicable local contingency plans.

Pesticide Use and Storage. Park District pest management activities are performed in compliance with applicable state and federal law and in accordance with the Pest Management Policies and Practices. The Pest Management Policies and Practices manual describes how the Park District implements its Integrated Pest Management (IPM) program, which includes a comprehensive methodology for: evaluating animal and plant pest problem areas; choosing the appropriate treatment; and conducting treatments safely for applicators, the general public and the environment. The Park District follows all regulations for the use, storage and disposal of pesticides as regulated by the California Department of Pesticide Regulation (CaDPR) and administered through the Contra Costa County Department of Agriculture.

4.6.1.2 Existing Conditions

The project site abuts existing Las Trampas parkland to the north, private residences and San Ramon Valley Boulevard to the east, private residences to the south, and Bollinger Canyon Road and private residences to the southwest. The closest school is San Ramon Valley High School, located approximately 1 mile to the east of the project site. The nearest airport is the Hayward Executive Airport, located approximately 10 miles southwest of the project site.

The project site consists of vacant land and contains limited grazing infrastructure, such as ranch/fire roads, fences, water troughs, and a corral. No other structures or built features exist within the project site, although the Chen property includes a building site that was formerly utilized for a barn. Based on the review of environmental records available on the State Water Resources Control Board's GeoTracker database[1] and the DTSC Envirostor database,[2] the project site is not included on a list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5

4.6.2 Research Methodologies

This impact analysis focuses on potential effects of hazards and hazardous materials associated with the project. The evaluation considers current conditions in the project area, findings of regulatory agency database searches, applicable regulations, and project construction and operation.

4.6.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would have a significant hazards and hazardous materials impact if it would:

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area;

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

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1 State Water Resources Control Board, 2018. GeoTracker Database. Website: geotracker.waterboards.ca.gov (accessed June 14, 2019).

2 Department of Toxic Substances Control, 2018. Envirostor database. Website: www.envirostor.dtsc.ca.gov (accessed June 14, 2019).

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

a. **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.** During project construction, hazardous materials such as fuel, lubricants, paint, sealants, and adhesives would be transported and used at the project site. The proposed project would be required to comply with federal, state, and local regulations regarding the transportation, use, and disposal of hazardous materials, including preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) which requires implementation of control measures for hazardous material storage and soil stockpiles, inspections, maintenance, and training, and containment of releases to prevent runoff into existing storm collection systems or waterways. Compliance with existing regulations and implementation of the SWPPP would ensure that potential impacts associated with hazardous material use, transport, and disposal during project construction would be less than significant.

   During project operation, small quantities of hazardous materials such as paints, cleaning products, fuels, and pesticides (which includes herbicides) would be used for routine maintenance in accordance with federal, state, and local regulations regarding the transportation, use, and disposal of hazardous materials. CaDPR is the lead agency for regulating the registration, sale, and use of pesticides in California. CaDPR registers pesticides for use in California and licenses pesticide applicators, pilots, advisors, dealers, brokers, and businesses. In turn, the County Agricultural Commissioner acts as the local enforcement for CaDPR by registering licensed pest control businesses and agricultural pest control advisors in the County in which they operate; requiring permits and advanced notification for buying or using California restricted-use pesticides; and requiring the completion of pesticide use reports for pesticides applied in the County.

   The use of pesticides would be performed in accordance with the Park District's (IPM) Program, which strives to eliminate the use of chemicals as much as feasible whenever alternative methods are effective, as described in the 1987 Pest Management Policies and Practices.[3] Potential impacts from the use of chemicals in pest control include risk of exposure for the applicator and public, biological accumulation in the environment, and effects on non-target species. The 1987 Pest Management Policies and Practices includes guidelines for chemical selection, applicator training, authorization for chemical use, notification and posting, and record keeping, to ensure that the use of pesticides, when necessary, is performed in a manner that would be protective of workers, the public, and the environment.

   During routine maintenance and vegetation management activities, fuels and lubricants may be used for equipment and fuel may also be used for prescribed burns. The 2001 Wildland Management Policies and Guidelines[4] provide general guidance pertaining to the administration and stewardship of Park District parklands to ensure the proper use and enhancement of wildland resources. The policies and guidelines apply modern management practices to

[3] East Bay Regional Park District, 1987. Pest Management Policies and Practices, Resolution Number 1987-11-325. October.

[4] East Bay Regional Park District, 2001. Wildland Management Policies and Guidelines. June.

biological resources based on scientific principles supported by available research. These practices include BMPs for the handling of hazardous materials during various types of vegetation management activities to ensure that hazardous materials are not released into the environment.

Compliance with existing regulations and policies described above would ensure that potential impacts related to the routine transport, use, or disposal of hazardous materials during operation of the proposed project would be less than significant. This criterion is not further discussed in this EIR.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The closest school is San Ramon Valley High School, located approximately 1 mile to the east of the project site. Operation and maintenance within the project site could result in the use of pesticides within the project site. CaDPR has enacted rules for the use of pesticides in agricultural production near school sites, generally requiring notification within 0.25 miles, and includes restrictions in these areas. As stated above, the project site is located approximately 1 mile from the nearest school. Any use of herbicide in the project area will be non-agricultural and the Park District would utilize spot treatments and follow Best Management Practices to avoid any product from entering any waterway.

Considering the Park District's compliance with CaDPR, the relatively small quantities of products to be used during project operation, the Best Management Practices employed for materials storage and handling, the threat of exposure to the public would be less than significant. Therefore, the proposed project would result in a less-than-significant impact to existing or proposed school facilities from the emission of hazardous materials. This criterion is not further discussed in this EIR.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. Based on the review of environmental records available on the State Water Resources Control Board's GeoTracker database[5] and the DTSC Envirostor database,[6] the project site is not included on a list of hazardous materials release sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would result from the proposed project, and no mitigation measures would be required. This criterion is not further discussed in this EIR.

e. Be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area. The nearest airport is the Hayward Executive Airport, located approximately 10 miles southwest of the project site. In

[5] State Water Resources Control Board, 2018. GeoTracker Database. Website: geotracker.waterboards.ca.gov (accessed June 14, 2019).

[6] Department of Toxic Substances Control, 2018. Envirostor database. Website: www.envirostor.dtsc.ca.gov (accessed June 14, 2019).

addition, the Oakland International Airport is located approximately 12 miles west of the project site, and the Livermore Municipal Airport is located approximately 12 miles to the southeast of the project site, and the San Francisco International Airport is located approximately 22 miles southwest of the project site. Operations at these airports are not expected to pose a safety hazard for people working at or visiting the project site. Therefore, implementation of the proposed project would not expose persons to airport-related hazards, and no impact would occur. This criterion is not further discussed in this EIR.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The proposed project would not alter existing public roadways that intersect or surround the project area, and would not interfere with emergency response or evacuation plans. The project would improve accessibility at Las Trampas for emergency response and evacuation by improving existing trails/access roads and constructing new trails that would also serve as emergency vehicle access roads. Potential project impacts to emergency evacuation routes or emergency response plans are therefore considered less than significant, and no mitigation measures would be required. This criterion is not further discussed in this EIR.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. As discussed in Section 4.9, Wildfire, the proposed project would provide new passive recreational facilities and access points that would increase the use and human activity within formerly inaccessible areas of Southern Las Trampas. Because human activities are the leading cause of wildfires in California and the United States, this increased use and activity has the potential to increase the sources of potential fire ignition and wildfire spread within Las Trampas and nearby areas. However, the proposed project would not exacerbate wildfire hazards such that people or structures would be exposed to an increased risk of loss, injury, or death when compared to current conditions. Impacts would be less than significant, and no mitigation measures are required. Refer to Section 4.9, Wildfire, for a comprehensive discussion of this topic.

4.6.4 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to hazards and hazardous materials that would result from implementation of the proposed project.

4.6.4.1 Project Impacts

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Compliance with existing regulations and policies, as described above, would minimize the likelihood that an accidental release of hazardous materials would occur during construction and operation of the proposed project.

The historic use of portions of the project area as cattle ranches may have included the storage and use of hazardous materials such as pesticides (e.g., toxaphene) for parasite control on cattle. The

proposed Old Corral Staging Area is located in an area previously used as a cattle corral, which is an area where the application of pesticides to cattle may have occurred and may occur in the future. In addition, an old barn on the Chen property was in an area where removal of soil for creek restoration is proposed. Pesticides may have been stored or used in the area of the former barn, and the former barn may have contained lead paint. Therefore, elevated concentrations of hazardous materials may have the potential to be present in shallow soil in the proposed Old Corral Staging Area and former barn, and elevated lead levels may be present in shallow soil in the area of the former barn.

The proposed project may also involve the restoration of ponds including removal of accumulated sediments in the ponds. Sediments in the ponds may have the potential to be impacted with hazardous materials (e.g., pesticides) from the use of ponds by cattle and collection of runoff in ponds that can create a sink for the accumulation of contaminants.

Mitigation Measure HAZ-1 Sampling and analysis of soil in the area of the proposed Old Corral Staging Area and former barn on the Chen property shall be performed prior to the disturbance of soil in those areas.

Sampling and analysis of sediment in ponds shall be performed prior to removal of sediments from ponds. The sampling and analysis shall be performed by a qualified environmental professional who shall provide recommendations for soil/sediment handling based on the analytical results. Park District shall implement any soil cleanup recommendations of qualified environmental professionals prior to initiating construction.

With implementation of Mitigation Measure HAZ-1, project construction would have a less-than-significant impact related to soil contamination, and this topic will not be discussed in the EIR.

Significance after Mitigation: Less than significant.

4.6.4.2 Cumulative Impacts

Depending on the pathway of exposure, the geographic scope for cumulative effects relating to hazards and hazardous materials would be the watershed boundary, groundwater basin, or extent of any potentially affected soils. Hazardous materials delivery routes for the region would also be included in the event of a traffic accident-related spill. Cumulative hazards and hazardous materials-related effects could arise at any point from the project construction or operation and related activities.

Hazards and hazardous materials are generally very heavily regulated under existing federal, state, and local requirements for the safe transport, storage, use, and disposal. Cumulative hazardous materials effects could occur if activities at the project site and other past, existing and proposed development, together, could significantly increase risks in the regional vicinity of the project site. However, most routine hazardous materials activities at the project site and immediate vicinity

would likely involve relatively small quantities of hazardous materials. Any health or safety effects of routine hazardous materials use would be limited to the specific individuals using the materials and anyone in the immediate vicinity of the use. No interaction would occur between these routine activities and similar activities at different sites. Therefore, this cumulative impact would be less than significant.

Significance without Mitigation: Less than significant.

4.7 NOISE

This section assesses the effects of the project on the noise environment within and around the project area. The following discussion describes the general characteristics of sound and the categories of audible noise. The regulatory framework related to noise issues is then described. Lastly, potential noise impacts associated with implementation of the project are evaluated, and mitigation measures are recommended as necessary.

It should be noted that after completion of the Initial Study (included in Appendix A), it was determined that the analysis of potential impacts related to noise, particularly the potential impacts that were determined to be less than significant with mitigation measures, be included in this Draft EIR. A Noise Impact Analysis was prepared for the proposed project by LSA, and is included as Appendix E.

4.7.1 Setting

This section provides background information on the evaluation of noise impacts, including the characteristics of sound, measurement of sound, physiological effects of noise, and the regulatory framework for this analysis.

4.7.1.1 Characteristics of Sound

Noise is usually defined as unwanted sound and consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves, combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be measured precisely with instruments. The project analysis defines the noise environment of the project area in terms of sound intensity and the project's effect on adjacent sensitive land uses.

Measurement of Sound. Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units (e.g., inches or pounds), decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) are 10 times more intense than 1 dB; 20 dB are 100 times more intense than 1 dB; and 30 dB are 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represent 1,000 times as much acoustic energy as 1 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB

increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dBA for each doubling of distance in a hard-site environment, and the sound decreases 4.5 dBA for each doubling of distance in a relatively flat environment with absorptive vegetation.

There are many ways to rate noise for various time periods, an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average level (L_{dn}) based on dBA. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as evening hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable.

Other noise rating scales that are important when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half of the time the noise level exceeds this level, and half of the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater since this level has been found to be the lowest audible change perceptible to humans in outdoor environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB, which is only noticeable in laboratory environments. The last category includes changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

4.7.1.2 Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure (typically more than 8 hours, as defined by the Occupational Safety and Health Administration [OSHA]) to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions (thereby, affecting blood pressure and functions of the heart and the nervous system). In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dB, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dB, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dB will result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying less developed areas.

Table 4.7.A lists "Definitions of Acoustical Terms," and Table 4.7.B displays "Common Sound Levels and Their Noise Sources."

Table 4.7.A: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of level that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10 percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: Harris, Cyril M., *Handbook of Acoustical Measurements and Noise Control,* 1991.

Table 4.7.B: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environment	Subjective Evaluation
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle a few feet away	110	Very Loud	16 times as loud
Pile Drive; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	
Near Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ as loud
Suburban Street	55	Quiet	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ as loud
Large Transformer	45	Quiet	
Average Residence Without Stereo Playing	40	Faint	⅛ as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing

Source: Compiled by LSA, 2015.

4.7.1.3 Characteristics of Groundborne Vibration

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may be perceptible from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. When assessing annoyance from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second.

To distinguish vibration levels from noise levels, the unit is written as “VdB.” Human perception to vibration starts at levels as low as 67 VdB and sometimes lower. Annoyance due to vibration in residential settings starts at approximately 70 VdB. Groundborne vibrations are almost never annoying to people who are outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

Common sources of groundborne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment. Typical vibration source levels from construction equipment are shown in Table 4.7.C. Although the table gives one level for each piece of equipment, it should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide

range of soil conditions. In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. For buildings considered of particular historical significance or that are particularly fragile structures, the damage threshold is approximately 96 VdB; the damage threshold for other structures is 100 VdB.[1]

Table 4.7.C: Typical Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate VdB at 25 ft
Pile Driver (impact)	Upper range	1.518	112
Pile Driver (impact)	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
Pile Driver (sonic)	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment.* May.
ft = foot/feet
PPV = peak particle velocity
in/sec = inches per second
VdB = vibration velocity decibel

4.7.1.4 Regulatory Setting

To limit people's exposure to physically and/or psychologically damaging as well as intrusive noise levels, agencies have established standards and ordinances to control noise. Potential noise and vibration impacts were evaluated based on the noise standards of applicable regulatory agencies including the Park District, Contra Costa County, Town of Danville, and City of San Ramon, to determine whether significant adverse noise and vibration impacts would result from construction and operation of the proposed project.

Federal Regulations. In 1972 Congress enacted the Noise Control Act. This act authorized the (U.S. EPA) to publish descriptive data on the effects of noise and establish levels of sound *requisite to protect the public welfare with an adequate margin of safety.* These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in *Table 4.7.D: Summary of U.S. EPA Noise Levels*. The U.S. EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

[1] Harris, C.M., 1998. *Handbook of Acoustical Measurements and Noise Control.*

Table 4.7.D: Common Sound Levels and Their Noise Sources

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq$ dB	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March.
L_{dn} = day-night average sound level
L_{eq} = equivalent continuous noise level over a specified period of time (acoustical energy of a given measurement)

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The U.S. EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

The noise effects associated with an outdoor L_{dn} of 55 dBA are summarized in *Table 4.7.E: Summary of Human Effects in Areas Exposed to 55 dBA CNEL*. At 55 dBA L_{dn}, 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no community reaction. However, one percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

Table 4.7.E: Summary of Human Effects in Areas Exposed to 55 dBA CNEL

Types of Effects	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety.
Speech – Outdoors	100 percent sentence intelligibility (average) at 1.4 feet. 99 percent sentence intelligibility (average) at 3.2 feet. 95 percent sentence intelligibility (average) at 11.5 feet.
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below "vigorous action."
Complaints	1 percent dependent on attitude and other non-level related factors.
Annoyance	17 percent dependent on attitude and other non-level related factors.
Attitude Towards Area	Noise essentially the least important of various factors.

Source: U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March.
dB = decibel

State Regulations. The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the *State Noise Insulation Standard*, it requires buildings to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the receptor. State

regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA CNEL in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in an area with exterior noise levels greater than 60 dBA CNEL. The project would not include any new buildings; therefore, these regulations are not applicable to the project and are provided for informational purposes only.

The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses.

Contra Costa County. Contra Costa County does not have an ordinance specifically addressing noise. Noise complaints within unincorporated areas are addressed through application of peace disturbance sections of the County Code and application of generic nuisance ordinances of the County Code.

Contra Costa County addresses noise in the Noise Element.[2] The Noise Element sets noise and land use compatibility guidelines. The Noise Element also contains goals and policies that seek to maintain appropriate noise conditions throughout the County. Policy 11-2 states that the standard for outdoor noise levels in residential areas is a L_{dn} of 60 dB. Policy 11-7 states that public projects shall be designed and constructed to minimize long-term noise impacts on existing residents. Policy 11-8 states that construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods. Policy 11-11 states that noise impacts upon the natural environment, including impacts on wildlife, shall be evaluated and considered in review of development projects.

City of San Ramon. The City of San Ramon addresses noise in the Noise Element.[3] The Noise Element sets noise and land use compatibility guidelines. The Noise Element also contains implementing policies that are designed to help the City achieve an acceptable noise environment for the present and future residents of San Ramon. Implementing Policy 10.1-I-1 requires the minimization of vehicular and stationary noise sources and noise emanating from intermittent activities. Implementing Policy 10.1-I-14 states that construction activities are exempt from the noise and land use compatibility standards, but must implement all practical noise attenuation measures and practices to limit adverse impacts on nearby land uses. In addition, implementing Policy 10.1-I-7 identifies that a significant increase in ambient noise levels is assumed if the project causes ambient noise levels to exceed the following: the ambient noise level is less than 60 dB L_{dn} and the project

2 Contra Costa, County of, 2010. *Contra Costa County General Plan 2005 – 2020.* July.

3 San Ramon, City of, 2015. *City of San Ramon General Plan 2035.* April 28.

increases noise levels by 5 dB or more; the ambient noise level is 60-65 dB L_{dn} and the project increases noise levels by 3 dB or more; or the ambient noise level is greater than 65 dB L_{dn} and the project increases noise levels by 1.5 dB or more.

The City of San Ramon also addresses noise in the City's Municipal Code.[4] Chapter V – Noise Control permits construction noise when activities occur between the hours of 7:30 a.m. and 7:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays and Sundays. No construction is allowed on federal holidays.

Town of Danville. The Town of Danville addresses noise in the Resources and Hazards Element.[5] The Resources and Hazards Element sets noise and land use compatibility guidelines. The Resource and Hazards Element also contains policies that are designed to protect existing and future residents of Danville from hazards and nuisance associated with excessive levels of noise by maintaining or reducing noise intrusion levels in all areas of the Town to acceptable levels. Policy 27.03 requires the protection of the noise environment in existing residential areas. Where acceptable noise levels in residential areas would be exceeded or further impacted as a result of new development or transportation improvements, require the use of noise mitigation measures, such as wall barriers, berms, mufflers, sound traps, and baffles to reduce noise intrusion. Policy 27.05 recommends that open space should be used, wherever practical, to provide an adequate spatial separator between noise sources and sensitive land uses. In addition, Policy 27.13 requires utilizing noise reduction measures during all phases of construction activity to minimize the exposure of neighboring properties to excessive noise levels.

The Town of Danville also addresses noise in the Town's Municipal Code.[6] Chapter IV – Police Regulations permits construction noise when activities occur between the hours of 7:30 a.m. and 7:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 7:00 p.m. on Saturdays, Sundays, and holidays.

EBRPD Master Plan. The Park District's 2013 Master Plan contains policies for achieving the highest standards of service in resource conservation, management, interpretation, public access, and recreation. The goal of the Master Plan is to maintain a careful balance between the need to protect and conserve resources and the need to provide opportunities for recreational use of the parklands. There are no specific Master Plan policies addressing noise.

Park Rules and Regulations: Ordinance 38. Portions of the Park District's Ordinance 38 address noise and are summarized in Table 4.7.F.

4 San Ramon, City of, 2017. *San Ramon, CA Code of Ordinances.* May 26.
5 Danville, Town of, 2013. *The Town of Danville 2030 General Plan.* March 19.
6 Danville, Town of, 2017. *Danville, California Municipal Code.* April 4.

Table 4.7.F: Relevant Ordinance 38 Sections – Noise

Section 908.2 This section states that, "it is the policy of the District to prohibit unnecessary, excessive, annoying noises from all sources subject to its police power, including within the sleeping quarters of campgrounds of the District between the hours of 10:00 p.m. and 7:00 a.m. daily."
Section 908.3 This section states that, "it unlawful to install use or operate within the District a loudspeaker or sound-amplifying equipment… for the purpose of transmitting music to any persons or assemblages of persons without filing a registration statement with and obtaining approval from the General Manager. Furthermore, such approval may be granted to operate such devices or equipment only within designated amphitheater areas maintained by the District for such purposes, or other such similar areas as the Board may from time to time so designate."
Section 908.7 This section states that, "The use of sound-amplifying equipment shall be subject to the following regulations: a) The operation of sound-amplifying equipment shall only occur between the hours of 10:00 a.m. and 8:00 p.m. each day, and b) the volume of sound shall be so controlled that it will not be unreasonably loud, raucous, jarring, disturbing or a nuisance to reasonable persons of normal sensitiveness within the area of audibility."
Section 908.8 This section states that, "it is unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary or unusual noise which disturbs the peace or quiet within any area within the District or which causes discomfort or annoyance to any reasonable person of normal sensitiveness utilizing any facility of the District."

Source: East Bay Regional Park District. 2016. Ordinance 38 Rules and Regulations. Revised April 2016.

4.7.1.5 Existing Noise Environment

This section describes the existing noise environment in the project site vicinity. Noise monitoring, traffic modeling, and noise modeling were used to quantify existing and future noise levels at the project site.

Ambient Noise Levels. The primary noise source impacting the project area results from traffic on Bollinger Canyon Road. Other noise sources not related to vehicles include birds and airplanes. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust systems. Airport related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. The Hayward Executive Airport is the closest airport and is located approximately 10 miles southwest of the project site. In addition, the Oakland International Airport is located approximately 12 miles west of the project site and the Livermore Municipal Airport is located approximately 12 miles to the southeast of the project site. The San Francisco International Airport is located approximately 22 miles southwest of the project site. Aircraft noise is occasionally audible at the project site; however, no portion of the project site lies within the 65 dBA CNEL noise contours of these airports.

To assess existing noise levels, LSA conducted two short-term noise measurements on the project site on October 6, 2017. The short-term 15-minute noise measurements were recorded at different locations on the project site between 10:02 a.m. and 10:45 a.m. LSA also conducted one long-term noise measurements at the proposed staging area between October 6, 2017, and October 9, 2017. The long-term noise measurement captured hourly L_{eq} data as well as CNEL data, which incorporates the nighttime hours. Short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 56.6 dBA to 58.5 dBA L_{eq}. The long-term noise measurement was 62.8 dBA L_{eq} and 65.9 dBA CNEL. Traffic on Bollinger Canyon Road was reported as the primary noise source.

LSA prepared a Noise Impact Analysis for the proposed project, which is included as Appendix E.

Vehicular Traffic Noise. Motor vehicles with their distinctive noise characteristics are a major source of noise in the project area. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Major contributing roadway noise sources in the project vicinity include Bollinger Canyon Road and Crow Canyon Road, as well as other arterial and collector roadways throughout the County. Existing roadway traffic noise levels in the project vicinity were assessed using the Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77- 108). This model uses a typical vehicle mix for urban/suburban areas in California and requires parameters, including traffic volumes, vehicle speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Existing traffic noise contours along modeled roadway segments are shown in *Table 4.7.G: Existing Traffic Noise Levels Without Project*. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the location where the noise contours are drawn.

Table 4.7.G: Existing Traffic Noise Levels Without Project

Roadway Segment	ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
Bollinger Canyon Road - North of Chen Staging Area	1,650	< 50	< 50	< 50	59.1
Bollinger Canyon Road - Chen Staging Area to Faria Trailhead	1,650	< 50	< 50	< 50	59.1
Bollinger Canyon Road - Faria Trailhead to Deerwood Drive	1,650	< 50	< 50	< 50	59.1
Bollinger Canyon Road - Deerwood Drive to Crow Canyon Drive	1,590	< 50	< 50	< 50	57.6
Bollinger Canyon Road - South of Crow Canyon Drive	2,190	< 50	< 50	< 50	54.5
Deerwood Drive - East of Bollinger Canyon Road	390	< 50	< 50	< 50	50.1
Crow Canyon Drive - West of Bollinger Canyon Road	8,210	< 50	65	141	66.0
Crow Canyon Drive - East of Bollinger Canyon Road	9,700	< 50	81	161	64.5

Source: LSA (December 2017).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information. ADT = average daily traffic
CNEL = Community Noise Equivalent Level dBA = A-weighted decibels

Sensitive Receptors. Certain land uses are particularly sensitive to noise and vibration, including residential land uses and schools, where quiet environments are necessary for enjoyment, public health, and safety. These uses are regarded as sensitive because they are where citizens most frequently engage in activities which are likely to be disturbed by noise, such as reading, studying, sleeping, resting, or otherwise engaging in quiet or passive recreation. Commercial and industrial uses are not considered noise- and vibration-sensitive uses for the purposes of this analysis since noise- and vibration-sensitive activities are less likely to be undertaken in these areas, and because

these uses themselves often generate noise in excess of what they receive from other uses. The project site is located within an area that is predominantly open parkland and is surrounded by residential uses. The closest sensitive receptor includes the single-family residence located approximately 40 feet west of the proposed staging area. In addition, other single-family residences would be located approximately 75 feet from proposed trails.

4.7.2 Research Methodologies

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located.

This analysis examines potential noise impacts associated with implementation of the project. The project could result in short-term noise impacts due to construction and long-term impacts related to Project operations, as described below. Evaluation of noise impacts associated with the proposed project includes the following:

- Determine the short-term construction noise levels at off-site noise sensitive uses and compare to the County of Contra Costa, City of San Ramon, and Town of Danville General Plan and Municipal Code Ordinance requirements;

- Determine the long-term noise levels at off-site noise sensitive uses and compare the levels to the County of Contra Costa, City of San Ramon, and Town of Danville pertinent noise standards; and

- Determine the required mitigation measures to reduce long-term on-site noise impacts from all sources.

4.7.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, the proposed project would result in a significant noise impact if it would:

a. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b. Generate of excessive groundborne vibration or groundborne noise levels; or

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

Based on the analysis included in the Initial Study (included as Appendix A of this Draft EIR), the proposed project would result in less-than-significant impacts related to the following criteria.

b. Generate excessive groundborne vibration or groundborne noise levels. Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on- road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate groundborne vibration.

Construction Vibration

The nearest sensitive receptor is the single-family residence located approximately 40 feet west of the staging area. This construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and will assess the potential for building damages using vibration levels in PPV (in/sec) because vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration level in PPV is best used to characterize potential for damage. The Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment*[7] guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

[7] Federal Transit Administration, 2006. Office of Planning and Environment. Transit Noise and Vibration Impact Assessment. FTA-VA-90-1003-06. May.

Table 4.7.H shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table 4.7.H, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of groundborne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment. At this level, groundborne vibration would result in potential annoyance to residences and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/ office buildings in the project vicinity). Outdoor site preparation for the project is expected to use a bulldozer and loaded truck. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$L_vdB\ (D) = L_vdB\ (25\ ft) - 30$$

$$\text{Log}\ (D/25)\ PPV_{equip} = PPV_{ref}\ x$$

$$(25/D)^{1.5}$$

Table 4.7.H: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV/L_V at 25 feet	
	PPV (in/sec)	L_v (VdB)[a]
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large Bulldozer [b]	**0.089**	**87**
Caisson Drilling	0.089	87
Loaded Trucks	**0.076**	**86**
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: *Transit Noise and Vibration Impact Assessment* (Federal Transit Administration, 2006).
[a] RMS vibration velocity in decibels (VdB) is 1 µin/sec.
[b] Equipment shown in bold is expected to be used on site.
µin/sec = micro-inches per second
in/sec = inches per second
L_V = velocity in decibels
PPV = peak particle velocity
RMS = root-mean-square
VdB = vibration velocity decibels

For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. The closest residential structure is located 40 feet from the project construction boundary. Based on distance attenuation, the closest residences would experience vibration levels of up to 81 VdB (0.044 PPV [in/sec]). This

vibration level at the closest residential structure from construction equipment or would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage when bulldozers and loaded trucks operate within 50 feet of the project construction boundary. This level is also below the FTA's "barely perceptible" human response criteria of 0.04 PPV for transient sources of vibration events. In addition, trails would be constructed mostly with hand tools which would not be a significant source of vibration. Therefore, groundborne vibration impacts from project-related construction activities would be considered less-than-significant, and no mitigation measures are required. This topic is not discussed further in this EIR.

c. **Would the project be located within the vicinity of a private airstrip or airport land use plan, or, where such as plan has not been adopted, within two miles of a public airport or public use airport, so that the project would expose people residing or working in the project area to excessive noise levels?** The proposed project is not located within the vicinity of a private airstrip or airport land use plan, nor is it located within 2 miles of a public airport or public use airport. The Hayward Executive Airport is the closest airport and is located approximately 10 miles southwest of the project site. The Oakland International Airport is located approximately 12 miles west of the project site. San Francisco International Airport is located approximately 22 miles southwest of the project. Aircraft flyover noise is occasionally audible at the project sites, due to the flightpath of the regional airports in the vicinity; however, no portion of the project site lies within the 65 dBA CNEL noise contours of any public airport nor does any portion of the project sites fall within 2 miles of any private airfield or heliport. Therefore, the proposed project would not result in the exposure of sensitive receptors to the excessive noise levels from aircraft noise sources, and no mitigation measures are required. This topic is not discussed further in this EIR.

4.7.4 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to noise that would result from implementation of the proposed project.

4.7.4.1 Project Impacts

a. **Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located. The project would result in short-term noise impacts due to construction and long-term impacts related to project operations, as described below.

Land Use Compatibility. The dominant source of noise in the project vicinity is traffic on Bollinger Canyon Road. The long-term noise monitoring at the staging area measured 65.9 dBA CNEL. Contra Costa County, City of San Ramon, and Town of Danville set forth normally acceptable noise level standards for land use compatibility and outdoor exposure of new projects. The normally acceptable exterior noise level for recreational uses is up to 70 dBA CNEL under Contra Costa County, City of

San Ramon, and Town of Danville noise standards. As identified above, the long-term noise monitoring identified noise levels of 65.9 dBA CNEL which indicates noise levels on the site would be below 70 dBA CNEL. In addition, noise levels would attenuate based on distance from Bollinger Canyon Road. Therefore, noise levels of 65.9 CNEL would only occur at the staging area and noise levels along the proposed trails would be expected to be much lower. Therefore, the project's noise environment is consistent with Contra Costa County, City of San Ramon, and Town of Danville noise and land use compatibility standards. This topic will not be discussed in the EIR.

Permanent Increase in Ambient Noise. The proposed project is located 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. Implementation of the proposed project could expose existing nearby residences to noise generated from mobile source noise and stationary source noise. Mobile source noise would be attributable to the additional trips that would be a result of the proposed project. Stationary source noise would noise be generated by parking lot activities and recreationalists using the trails.

Mobile Source Noise.To assess traffic noise impacts, the traffic noise levels along major roadway segments within the project vicinity were projected using the federal highway administration (FHWA) modeling to predict traffic noise level conditions with and without the proposed project. FWHA modeling was based on existing traffic conditions, FWHA modeling results are summarized in Table 4.7.I. The table includes projected traffic noise levels as measured at 50 feet from the centerline of the outermost traveled lane along the modeled roadway segments. The model does not account for existing sound walls or terrain features that could reduce traffic noise levels at adjacent land uses, but rather assumes a reasonable worst-case direct line-of-sight over hard surface to the modeled traffic noise sources.

Table 4.7.I shows a minor change in the traffic noise levels associated with the implementation of the proposed project. The largest increases in traffic-related noise as a result of the project would be along Bollinger Canyon Road, with a 1.5 dBA increase between Deerwood Drive and Crow Canyon Drive. This noise level increase would be less than the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment and the resulting noise level would be 59.1, which would be in the normally acceptable and conditionally acceptable range at the nearby residential land uses. Therefore, no significant traffic noise impacts would occur for off-site land uses. As a result, no mitigation is required to address traffic-related noise.

Stationary Source Noise.Implementation of the proposed project could expose existing nearby sensitive receptors to noise generated from parking lot activities at the staging area and small parking areas. Parking lot noise, including engine sounds, car doors slamming, car alarms, and people conversing, could occur as a result of the proposed project at the project site. Typical parking lot activities, such as people conversing or doors slamming, generates noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet.

The staging area would include parking for up to 25 vehicles and would include benches, a restroom, trail connections, information signs, and landscaping.

As discussed above, the closest sensitive receptor includes the single-family residence located approximately 40 feet west of the proposed staging area. At 40 feet, there would be an increase of approximately 2 dBA from the reduced distance compared to the noise reference level measured at 50 feet. Therefore, based on distance attenuation, the closest receptor may be subject to parking lot noise levels of approximately 62 dBA to 72 dBA L_{max}.

The staging area is located within the jurisdiction of Contra Costa County; therefore, County of Contra Costa noise standards were used to evaluate potential noise impacts associated with the proposed staging area. The County of Contra Costa addresses noise in terms of community noise equivalent levels; therefore, to analyze the 24-hour noise impact of the proposed project, park open-hours were used. Between January 1 and May 20 and September 4 through December 31, noise levels with the project would be approximately 66.0 dBA CNEL at the nearest residential property line. Between May 21 and September 3, noise levels with the project would be approximately 66.1 dBA CNEL at the nearest residential property line. Table 4.7.J identifies noise levels with and without implementation of the proposed project.

As shown in Table 4.7.J below, due to the intermittent nature of parking lot activity, when averaged over a 24-hour period, noise levels associated with parking lot activity would result in a minimal increase of 0.1 to 0.2 dBA. This noise level is well below the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment and less than the established significance criteria of a 3 dBA permanent increase in ambient noise levels. Noise levels would remain within the conditionally acceptable exterior noise level for residential land uses under Contra Costa County, City of San Ramon, and Town of Danville's land use compatibility standards. Maximum noise levels from cars passing were recorded at approximately 72 dBA to 75 dBA L_{max}, therefore, door slamming noise levels ranging from 65 dBA to 72 dBA would be consistent with existing noise levels and would not result in a substantial increase in noise. Therefore, this impact would be considered less than significant.

In addition, Las Trampas is an existing open space and park visitors would generate noise intermittently while visiting the proposed project, but would not generate noise levels that would exceed the applicable standards. In addition, the proposed trails are located approximately 75 feet from the nearest sensitive receptors. Voices from trail users may be audible at the nearest residences on occasion, but due to the distance and the minimal noise generated by park users, the noise impact would be expected to be minimal. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Table 4.7.I: Existing Traffic Noise Levels Without and With Project

Roadway Segment	Existing Volumes					Existing Plus Future Projects Volumes				
	Without Project		With Project			Without Project		With Project		
	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	ADT	L_{dn} (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Bollinger Canyon Road - North of Chen Staging Area	1,650	59.1	1,650	59.1	0.0	1,650	59.1	1,650	59.1	0.0
Bollinger Canyon Road - Chen Staging Area to Faria Trailhead	1,650	59.1	2,080	60.1	1.0	1,650	59.1	1,865	59.6	0.5
Bollinger Canyon Road - Faria Trailhead to Deerwood Drive	1,650	59.1	2,300	60.5	1.4	2,065	60.0	2,715	61.2	1.2
Bollinger Canyon Road - Deerwood Drive to Crow Canyon Drive	1,590	57.6	2,235	59.1	1.5	2,875	60.2	3,520	61.1	0.9
Bollinger Canyon Road - South of Crow Canyon Drive	2,190	54.5	2,340	54.8	0.3	3,310	56.3	3,460	56.5	0.2
Deerwood Drive - East of Bollinger Canyon Road	390	50.1	390	50.1	0.0	390	50.1	390	50.1	0.0
Crow Canyon Drive - West of Bollinger Canyon Road	8,210	66.0	8,330	66.1	0.1	8,520	66.2	8,640	66.2	0.0
Crow Canyon Drive - East of Bollinger Canyon Road	9,700	64.5	10,070	64.7	0.2	10,130	64.7	10,500	64.9	0.2

Source: LSA (December 2017).
Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibels

Table 4.7.J: Operational Noise Levels With and Without Project at Nearest Receptor

	Existing Noise Levels	Parking Lot Noise Levels	Existing Plus Project Noise Levels	Noise Level Increase
January 1 – February 13 (8:00 a.m. – 5:30 p.m.)	65.9 dBA CNEL	72 dBA L_{max}	66.0 dBA CNEL	0.1 dBA
February 14 – March 8 (8:00 a.m. – 6:00 p.m.)	65.9 dBA CNEL	72 dBA L_{max}	66.0 dBA CNEL	0.1 dBA
March 8 – May 20 (8:00 a.m. – 7:00 p.m.)	65.9 dBA CNEL	72 dBA L_{max}	66.0 dBA CNEL	0.1 dBA
May 21 – September 3 (8:00 a.m. – 8:00 p.m.)	65.9 dBA CNEL	72 dBA L_{max}	66.1 dBA CNEL	0.2 dBA
September 4 – November 1 (8:00 a.m. – 7:00 p.m.)	65.9 dBA CNEL	72 dBA L_{max}	66.0 dBA CNEL	0.1 dBA
November 2 – December 31 (8:00 a.m. – 5:30 p.m.)	65.9 dBA CNEL	72 dBA L_{max}	66.0 dBA CNEL	0.1 dBA

Source: LSA (December 2017).
Note: CNEL is the Community Noise Equivalent Level (CNEL) which is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as evening hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours).

Temporary Increase in Ambient Noise. The proposed project is located approximately 40 feet from single-family residences. Construction activities associated with the project could result in substantial temporary or periodic increases in ambient noise levels at staging, parking, access, and trail sites throughout Las Trampas. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table 4.7.K lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site for the proposed project, which would incrementally increase noise levels on Bollinger Canyon Road leading to the sites. As shown in Table 4.7.K, a pickup truck at a distance of 50 feet from a noise receptor would result in a relatively high single-event exposure potential at a maximum level of 75 dBA L_{max}.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various

sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 4.7.K lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels can range up to 96 dBA L_{max} at 50 feet during the noisiest construction phases, when pile driving and rock drills are not used. It is not anticipated that construction of the project would require the use of rock drills or pile drivers. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

The nearest sensitive receptor is the single-family residence located approximately 40 feet west of the staging area. Project construction would result in short-term noise impacts on this adjacent receptor. At a distance of 40 feet, there would be an increase of approximately 2 dBA compared to the noise reference level calculated as 50 feet from the active construction area. Therefore, the closest sensitive receptor may be subject to short-term construction noise reaching 98 dBA L_{max} when construction is occurring at the staging area boundary. Based on this maximum noise level and assuming a crane, forklift, tractor, welder, and air compressor would be operating simultaneously, construction of the proposed project would result in noise levels of approximately 84 dBA L_{eq} at the nearest sensitive receptor. This noise level would be higher than the existing measured ambient noise levels of approximately 56.6 dBA to 58.5 dBA L_{eq}. However, the total construction period would be approximately 6 months and construction equipment would operate at various locations within the approximately 0.62-acre staging area project site and would only generate this maximum noise level when operations occur at the boundary of the staging area closest to the receptor.

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, Puilaskis, and shovels. The proposed trails are located approximately 75 feet from the nearest sensitive receptors. Therefore, based on the distance between receptors from the trails and the type of construction activities, construction of the trails would not be expected to result in the exposure of sensitive receptors to noise levels in excess of standards.

Table 4.7.K: Noise Emission Reference Levels and Usage Factors

Equipment Description	Acoustical Usage Factor [a]	Predicted L_{max} at 50 feet (dBA, slow) [b]	Actual Measured L_{max} at 50 feet (dBA, slow) [c]
All Other Equipment > 5 HP	50	85	N/A [d]
Backhoe	40	80	78
Compactor (ground)	20	80	83
Compressor (air)	40	80	78
Concrete Mixer Truck	40	85	79
Concrete Pump Truck	20	82	81
Crane	16	85	81
Dozer	40	85	82
Dump Truck	40	84	76
Excavator	40	85	81
Flat Bed Truck	40	84	74
Front-End Loader	40	80	79
Generator	50	82	81
Gradall	40	85	83
Grader	40	85	N/A
Grapple (on backhoe)	40	85	87
Man Lift	20	85	75
Paver	50	85	77
Pickup Truck	40	55	75
Pneumatic Tools	50	85	85
Pumps	50	77	81
Roller	20	85	80
Scraper	40	85	84
Sheers (on backhoe)	40	85	96
Tractor	40	84	N/A
Vacuum Excavator (Vac-Truck)	40	85	85
Vacuum Street Sweeper	10	80	82
Ventilation Fan	100	85	79
Welder/Torch	40	73	74

Source: Highway Construction Noise Handbook, Table 9.1 (Federal Highway Administration 2006). Note: Noise levels reported in this table are rounded to the nearest whole number.

[a] Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.

[b] Maximum noise levels were developed based on Specification (Spec.) 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.

[c] The maximum noise level was developed based on the average noise level measured for each piece of equipment during the CA/T program in Boston, Massachusetts.

[d] Since the maximum noise level based on the average noise level measured for this piece of equipment was not available, the maximum noise level developed based on Spec 721.560 would be used.

dBA = A-weighted decibels
HP = horsepower
L_{max} = maximum instantaneous noise level kVA = kilovolt-amperes
N/A = not applicable
RCNM = Roadway Construction Noise Model VMS = variable message sign

Construction noise is permitted by Contra Costa County when activities occur during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods. Construction noise is also permitted by the City of San Ramon when

activities occur between the hours of 7:30 a.m. and 7:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays and Sundays. No construction is allowed on federal holidays. In addition, construction noise is permitted by the Town of Danville when activities occur between the hours of 7:30 a.m. and 7:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 7:00 p.m. on Saturdays, Sundays, and holidays.

As discussed above, construction noise would result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Implementation of best management practices for project construction, as identified as Mitigation Measure NOI-1 below, would reduce potential construction period noise impacts for the indicated sensitive receptors.

Mitigation Measure NOI-1 The project contractor shall implement the following best management practice measures during construction of the project:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.
- Prohibit extended idling time of internal combustion engines.
- The hours of work shall be any 8.5-hour block as mutually agreed upon between the Contractor and the Park District between 7:30 a.m. and 7:00 p.m., Monday through Friday. No night work shall be permitted.
- Designate a "disturbance coordinator" at EBRPD who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

With implementation of Mitigation Measure NOI-1, project construction would have a less-than-significant impact related to noise.

Significance after Mitigation: Less than significant.

4.7.4.2 Cumulative Impacts

CEQA defines cumulative impacts as "two or more individual effects, which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited but cumulatively significant. These impacts can result from the project alone, or together with other projects. The CEQA Guidelines state: "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." Cumulative impacts can result from individually minor but collectively significant projects taking place over time.

The project would not create a cumulatively considerable contribution to regional noise conditions. The largest increase in traffic-related noise as a result of the project would be along Bollinger Canyon Road between Deerwood Drive and Crow Canyon Road, with a 1.5 dBA increase. The next largest increase in noise would be along Bollinger Canyon Road, between the Faria property and Deerwood Drive, with a 1.4 dBA increase. These noise level increases would be less than the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment and the resulting noise levels would be 59.1 and 60.5 dBA respectively, which would be in the normally acceptable and conditionally acceptable ranges at the nearby residential land uses. Therefore, no significant traffic noise impacts would occur.

Implementation of the project would also generate on-site stationary noise sources associated with parking lot activities. A significant cumulative impact would also occur if the implementation of the project would result in any permanent increase of 3 dBA or more in ambient noise levels at the existing sensitive receptors in the project site vicinity that are currently exposed to noise levels above the normally acceptable threshold for that type of land use. As discussed above, the project would not result in any permanent increase of 3 dBA or more in ambient noise levels at the existing sensitive receptors in the project vicinity that are currently exposed to noise levels above the County of Contra Costa, City of San Ramon, or Town of Danville normally acceptable threshold for that type of land use.

In addition, implementation of Mitigation Measure NOI-1 would ensure that construction of projects associated with the project would not result in adverse noise impacts from construction activities. In addition, construction-related noise impacts would be temporary and would no longer occur once construction activities associated with the proposed project are completed. Therefore, construction activities would not be considered a cumulatively considerable contribution to the total noise environment in the project area and this impact would be *less than significant* and no mitigation is required.

Significance without Mitigation: Less than significant.

4.8 TRANSPORTATION

This section describes existing transportation and circulation conditions that could be affected by implementation of the proposed project. Laws, regulations, plans, and policies related to transportation that may be relevant to the proposed project are also described. Impacts associated site access and vehicle trips are discussed below.

4.8.1 Setting

4.8.1.1 Regulatory Setting

The following regulatory framework discussion provides an overview of federal, State and local regulatory settings that are applicable to transportation and the proposed project.

Federal Regulations. The following provides an overview of applicable federal transportation regulations that apply to the proposed project.

Federal Highway Administration. The Federal Highway Administration (FHWA) is a major agency of the United States Department of Transportation. In partnership with State and local agencies, the FHWA carries out federal highway programs to meet the nation's transportation needs. The FHWA administers and oversees federal highway programs to ensure that federal funds are used efficiently.

Americans with Disabilities Act of 1990. Titles I, II, III, IV, and V of the Americans with Disabilities Act (ADA) have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and nonprofit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Standards for Accessible Design, which establish minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility.

Federal Transit Administration. The Federal Transit Administration (FTA) is an authority that provides financial and technical assistance to local public transit systems, including buses, subways, light rail, commuter rail, trolleys, and ferries. The FTA is funded by Title 49 of the United States Code, which states the FTA's interest in fostering the development and revitalization of public transportation systems. The FTA invests approximately $12 billion annually to support and expand public transit.

State Regulations. The following provides an overview of applicable State transportation regulations that apply to the proposed project.

Assembly Bill 32 (Global Warming Act of 2006) and Senate Bill 375. Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (Act), requires California to reduce its green-house gas (GHG) emissions to levels present in the year 1990 by 2020. In response, the California Air Resources Board (CARB) is responsible for creating guidelines for this Act. In 2008, CARB adopted its proposed Scoping Plan, which included the approval of Senate Bill (SB) 375 as

a means of achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks helps the State comply with AB 32.

Established through CARB, SB 375 lists four major components and requirements: 1) it requires regional GHG emissions targets; 2) it requires creating a Sustainable Communities Strategy (SCS) that provides a plan for meeting the regional targets; 3) it requires that regional housing elements and transportation plans be synchronized on 8-year schedules; and 4) it requires transportation and air pollutant emissions modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC).

California Air Resources Board. As previously described, as part of SB 375 compliance, CARB was required to set targets for GHG reductions for each Metropolitan Planning Organization (MPO) within California. CARB provides targets and thresholds for MPOs and assists with regional efforts to achieve the GHG emission reductions contained in each MPO's SCS. It should be noted that CARB does not provide a threshold for reducing Vehicle Miles Traveled (VMT); however, reducing VMT is a strategy for achieving CARB GHG reduction targets.

Senate Bill (SB) 743. On September 27, 2013, Governor Jerry Brown signed SB 743 into law and codified a process that changed transportation impact analysis as part of CEQA compliance. SB 743 directs the California Office of Planning and Research (OPR) to administer new CEQA guidance for jurisdictions that removes automobile vehicle delay and Level of Service (LOS) or other similar measures of vehicular capacity or traffic congestions from CEQA transportation analysis. Rather, it requires the analysis of VMT or other measures that "promote the reduction of greenhouse gas emissions, the development of multi-modal transportation networks, and a diversity of land uses," to be used as a basis for determining significant impacts to circulation in California. The goal of SB 743 is to appropriately balance the needs of congestion management with Statewide goals related to reducing GHG emissions, encourage infill development, and promote public health through active transportation.

Local Resource Protection Policies. The following provides an overview of applicable local County and City transportation regulations and policies that apply to the proposed project.

Countywide Transportation Plan. The Countywide Transportation Plan (CTP) provides the overall direction for achieving and maintaining a balanced and functional transportation system within Contra Costa County while strengthening links between land use decisions and transportation. The CTP outlines the vision of the Contra Costa Transportation Authority (CCTA) for Contra Costa County and establishes goals, strategies, projects, and actions for achieving that vision.

City and County General Plan Policies. City and county general plan policies provide guidance on District parklands from the planning phases through project implementation. Relevant city and county general plan policies pertaining to transportation in the project area are described in Table 4.8.A, City and County Transportation Goals and Policies.

Table 4.8.A: City and County Transportation Goals and Policies

Goal/Policy Item Number	Goal/Policy
Contra Costa County General Plan – Transportation and Circulation Element	
5-A	To provide a safe, efficient and integrated multimodal transportation system.
5-B	To coordinate the provision of streets, roads, transit and trails with other jurisdictions.
5-C	To balance transportation and circulation needs with the desired character of the community.
5-K	To provide basic accessibility to all residents, which includes access to emergency services, public services and utilities, health care, food and clothing, education and employment, mail and package distribution, freight delivery, and a certain amount of social and recreational activities.
5-1	Cooperation between the cities and the County shall be strongly encouraged when defining level of service standards.
5-13	The use of pedestrian and bicycle facilities shall be encouraged. Proper facilities shall be designed to accommodate bikes, pedestrians, and transit.
Town of Danville 2030 General Plan – Mobility Element	
12.02	Require design measures to accommodate access by pedestrians, bicycles, and transit within new development, and to provide connections to adjacent development.
12.03	Provide a pleasant and safe environment for pedestrian movement.
12.04	Provide additional directional and destination signage for motorists, bicyclists, pedestrians, and transit users.
12.11	Recognize the benefits of walking and bicycling to public health and the overall livability of Danville
12.12	To the extent permitted by law, ensure that the Town's transportation improvement fees may be used to support pedestrian, bicycle, and transit improvements as well as road improvements.
13.05	Create and maintain a safe, effective system of bikeways, including an integrated network of off-road bicycle trails, dedicated on-road bicycle lanes and signed bicycle routes along Danville streets.
14.03	Maintain level of service (LOS) standards for Danville streets which balance vehicle speed and travel time objectives with other considerations, such as the safety and comfort of pedestrians, bicyclists, and transit users. Standards may vary according to roadway function and the character of surrounding uses
16.01	Work with other agencies, including neighboring cities, Contra Costa County, TVTC, CCTA, SWAT, County Connection, Caltrans, and MTC on multi-jurisdictional transportation issues affecting Danville.
16.07	Link the local bicycle and pedestrian trail system to the regional system to provide improved access to regional destinations, public transit, and open space.
City of San Ramon General Plan 2035 – Traffic and Circulation Element	
5.1-G-1	Strive to maintain traffic LOS C or better as the standard at all intersections with a maximum LOS D during a.m. and p.m. peak periods
5.1-I-6	Monitor key intersection LOS on an annual basis and document the results
5.2-I-4	Support goals and policies of the Contra Costa Congestion Management Plan (CMP).

Source: Contra Costa County General Plan (2005), Town of Danville 2030 General Plan (2013), San Ramon General Plan 2035 (2015).

4.8.1.2 Existing Conditions

Descriptions of vehicle access, parking, public transit, bicycle and pedestrian facilities.

Vehicle Access. Las Trampas and the adjacent parcels can be accessed from major freeways such as Interstate 680 (I-680) to the east and Interstate 580 to the south. Bollinger Canyon Road is the only local access route to Las Trampas. Bollinger Canyon Road can be reached via Crow Canyon Road via a signalized intersection.

Bollinger Canyon Road is a major arterial that runs through San Ramon and varies from two to six lanes. In the vicinity of the preserve, the segment of Bollinger Canyon Road north of Crow Canyon Road is a two-lane rural collector and serves as a route for bicyclists to travel to and from the Bollinger Canyon Staging Area. The Bollinger Canyon Staging area is 4.5 miles north of Crow Canyon Road.

Vehicle Parking. The existing Bollinger Canyon Staging Area at the northern terminus of Bollinger Canyon Road provides 45 parking spaces. Other all-weather gravel staging areas along Bollinger Canyon Road that provide parking for trail users include the Elderberry Trailhead, Bollinger Canyon Road Equestrian Parking, and the Chamise Trailhead. The equestrian parking area is a gated, all-weather gravel lot that can accommodate equestrian trailers and can be used as overflow passenger vehicle parking during special events. The Chamise Trailhead provides an all-weather gravel area that can accommodate up to seven passenger vehicles. A gated all-weather gravel lot next to the Chamise Trailhead that previously served as a construction staging area for the Bollinger Canyon Staging Area currently serves as an overflow lot that Park District staff can make available during busy days and can accommodate approximately 70 passenger vehicles. The Elderberry Trailhead provides space for approximately 30 passenger vehicles. LSA interviewed Park District staff on usage patterns and found that passenger vehicles also park along both sides of Bollinger Canyon Road from the Bollinger Canyon Road Staging Area entrance south for approximately 500 feet. Although this segment, along with various other segments all along Bollinger Canyon Road, is available for on-street parking, the remote nature, limited trail access, and availability of overflow parking areas for special events make it unreasonable to consider parking along the road farther south than this segment. According to Park District staff observations, on-street parked visitors rarely reach south past the preserve gate near the Elderberry Trailhead.

With the exception of the Elderberry Trailhead staging area, all preserve trailheads along Bollinger Canyon Road are currently behind a gate that restricts use of these areas to hours coinciding with roughly dawn until dusk, depending on the time of year.

Public Transit. San Ramon is served with bus transportation via the CCTA's County Connection service. County Connection Route 35 bus stops are located 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 West Dublin/Pleasanton Bay Area Rapid Transit (BART) station, which is the closest station to the project area. The station is near the intersection of Dublin Boulevard and Golden Gate Drive, approximately 7 miles south of Las Trampas via I-680.

Bicycle and Pedestrian Facilities. Bicycle and pedestrian facilities, such as class II bike lanes, class III bike route designations, and sidewalks do not exist along Bollinger Canyon Road in the vicinity of the preserve. Class II bicycle facilities are provided on both sides of Bollinger Canyon Road between Crow Canyon Road and north of Deerwood Drive. According to publicly available global positioning system (GPS) based qualitative data from Strava.com[1] and the 24-hour traffic counts collected in 2017-2018 (discussed below), recreational cyclists use Bollinger Canyon Road to reach the Bollinger

[1] Strava is an internet service for tracking exercise data primarily collected from GPS data associated with cycling and running. www.strava.com

Canyon Staging Area. The shoulders of Bollinger Canyon Road are unpaved and do not provide continuous pedestrian connectivity. Pedestrian users of the preserve, such as hikers and dog walkers, arrive at the preserve primarily via passenger car. According to the CCTA Bicycle and Pedestrian Plan, class II bicycle facilities are proposed along Bollinger Canyon Road north of Deerwood Drive to connect cyclists to the Old Time Corral Staging Area and the Bollinger Canyon Staging Area. The proposed project would not affect the right-of-way for a future class II bicycle facility along Bollinger Canyon Road.

Existing Intersection Level of Service Analysis. The Saturday peak-hour counts (11:30 a.m. to 12:30 p.m.) were assessed against the existing vehicular roadway facilities to determine current vehicular operational levels. Traffic counts collected in 2017–2018 were escalated to account for the passage of 3 years. As existing traffic conditions are atypical due to the ongoing COVID-19 pandemic, new traffic counts could not be collected and used to reflect typical existing conditions. Therefore, a 1.5 percent growth factor per year was applied to the 2017 traffic counts to account for possible growth and to represent a 2020 condition. Peak-hour intersection operations at study area intersections are based on intersection capacity utilization (ICU) methodology at signalized intersections and 2010 Highway Capacity Manual (HCM) methodology at unsignalized intersections. As shown in Table 4.8.B, the two existing study intersections currently operate at acceptable LOS A. Appendix F of this Draft EIR includes all intersection LOS worksheets.

Table 4.8.B: Existing Intersection Level of Service Summary

Intersection	Existing Weekend Peak Hour	
	ICU/Delay	LOS
1. Bollinger Canyon Road/Old Time Corral Staging Area[1]	–	–
2. Bollinger Canyon Road/Deerwood Drive[1]	9.5 sec	A
3. Bollinger Canyon Road/Crow Canyon Road	0.244	A

Source: Compiled by LSA (2020).
[1] Unsignalized intersection
ICU = intersection capacity utilization
LOS = level of service
sec = seconds
– = location does not exist under this scenario

Existing Plus Future Projects Baseline Conditions. To forecast future traffic conditions along Bollinger Canyon Road upon project completion, nearby traffic generating developments have been identified and included in an existing plus future projects baseline. Park District staff provided information on the following nearby projects: 1) The Faria Preserve and 2) Chang Property Development (Chang project).

The Faria Preserve project is within the San Ramon city limit, west of I-680 and south of the Danville town limit. The Faria Preserve project would access the regional roadway network through Bollinger Canyon Road and Deerwood Road. The Faria Preserve project includes 740 residential units, a 1.5-acre house of worship site, a 2.6-acre educational facility site, a 12.9-acre community park, and a 0.7-acre rose garden. This project is currently under construction and is anticipated to contribute traffic to the study area. To include traffic from The Faria Preserve project in this analysis, assumptions about the Faria project's trip generation potential were obtained from the Traffic

Impact Analysis (TIA) prepared for that project and adjusted for Saturday peak-hour conditions.[2,3] This was achieved by applying current industry standard Saturday peak-hour trip generation rates against the Faria project's land uses.[4] Table 4.8.C provides a Saturday trip generation summary table.

Table 4.8.C: The Faria Preserve Project Saturday Trip Generation

Land Use (Land Use Code)	Size	Units	ADT	Saturday Peak Hour		
				In	Out	Total
Trip Rates[1]						
Single Family Detached Residential (210)		DU	9.54	0.50	0.43	0.93
Multifamily Housing (Low-Rise) (220)		DU	8.14	0.35	0.35	0.70
Senior Adult Housing (Attached) (252)		DU	3.23	0.20	0.13	0.33
Church (560)		TSF	5.99	1.64	1.14	2.78
Daycare Center (565)		Student	0.39	0.07	0.04	0.11
Public Park (411)		AC	1.96	0.15	0.13	0.28
Museum (580)		TSF	-	0.47	0.19	0.66
The Faria Preserve Project Trip Generation						
Single-Family Detached Homes	256	DU	2,442	129	110	238
Townhomes/Apartments	398	DU	3,240	139	139	279
Senior Attached Residential	86	DU	278	18	11	28
Church	15,000	TSF	90	25	17	42
Daycare	120	Student	47	8	5	13
Community Park	13.2	AC	26	2	2	4
Educational Facility	25.000	TSF	0	12	5	17
		Total	**6,122**	**332**	**288**	**620**

Sources: AECOM. 2013. Faria Preserve Final Transportation Impact Analysis; Institute of Transportation Engineers. 2017. Trip Generation Manual.

[1] Trip rates obtained from Trip Generation Manual 10th Edition, 2017

AC = acres
ADT = average daily trips
DU = dwelling units
TSF = thousand square feet

The Chang project site is at the northwest corner of Bollinger Canyon Road/Crow Canyon Road, within the San Ramon city limit. The Chang project would access the regional roadway network through Bollinger Canyon Road. The Chang project includes 43 single-family, large-lot homes and 18 accessory dwelling units. LSA estimated[5] the trip generation of the project for Saturday peak-hour conditions. This was achieved by applying current industry standard Saturday peak-hour trip generation rates against the Chang project's land uses. Table 4.8.D provides a Saturday trip generation summary table for the Chang project.

[2] Saturday conditions are appropriate for purposes of this transportation analysis as the peak activities (and vehicular trips) of the preserve occur outside the traditional weekday 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. periods.

[3] AECOM. 2013. Faria Preserve Final Transportation Impact Analysis.

[4] Institute of Transportation Engineers. 2017. Trip Generation, 10th Edition.

[5] Ibid.

Table 4.8.D: Chang Project Saturday Trip Generation

Land Use	Size	Unit	Saturday			
			ADT	Peak Hour		
				In	Out	Total
Trip Rates[1]						
Single-Family Detached Housing (210)		DU	9.54	0.50	0.43	0.93
Project Trip Generation						
Single-Family Detached Homes	43	DU	410	22	18	40
Accessory Dwelling Units	18	DU	172	9	8	17
Total Trip Generation			**582**	**31**	**26**	**57**

[1] Trip rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition (2017).
ADT = average daily trips
DU = dwelling units

The resulting Saturday peak-hour trips for The Faria Preserve and the Chang project were distributed throughout the study area according to the same trip distribution pattern used for weekday trips in the Faria TIA, and added to existing Saturday traffic counts to arrive at an existing plus future projects baseline. Figure 4.8-1 shows the resulting volumes. These volumes were then used to assess existing plus future projects peak-hour vehicular operations at the three study intersections.

As shown on Table 4.8.E, the two existing study intersections are anticipated to operate at LOS B or better during the weekend peak hour after the inclusion of traffic from the Faria project and Chang project. Appendix B of the Circulation Assessment (Included as Appendix F of this Draft EIR) includes all intersection LOS worksheets.

Table 4.8.E: Existing Plus Future Projects Intersection Level of Service Summary

Intersection	Existing + Future Projects	
	ICU/Delay	LOS
1. Bollinger Canyon Road/Old Time Corral Staging Area[1]	–	–
2. Bollinger Canyon Road/Deerwood Drive[1]	10.5	B
3. Bollinger Canyon Road/Crow Canyon Road	0.265	A

Source: Compiled by LSA (2020).
[1] Unsignalized intersection
ICU = intersection capacity utilization
LOS = level of service
sec = seconds
– = location does not exist under this scenario

4.8.2 Research Methodologies

While CEQA no longer requires an LOS analysis for the purpose of determining a project's transportation impacts, LOS analyses are useful in evaluating a project's operational and safety impacts. Evaluation of intersections along Bollinger Canyon Road used methodologies consistent with City of San Ramon, Town of Danville, and CCTA traffic analysis guidelines.

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	75	
	97	

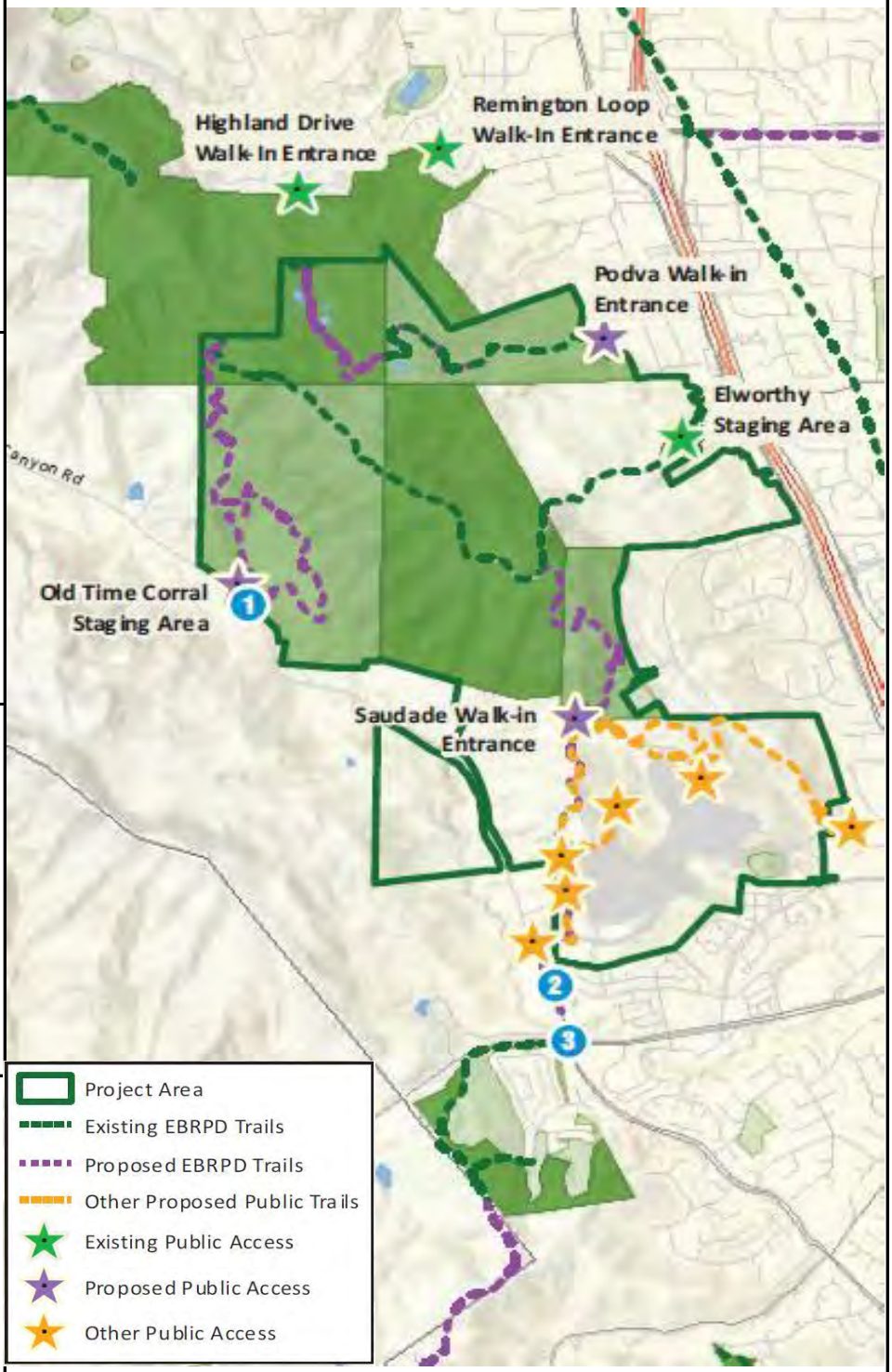
1 Bollinger Cyn Rd/Old Time Corral Staging Area

93 8		8 13
	203	12

2 Bollinger Cyn Rd / Deerwood Dr

33 82 86		72 378 55
24 409 27	20 86 91	

3 Bollinger Cyn Rd / Crow Cyn Rd



LSA

FIGURE 4.8-1

xx Saturday Peak–Hour Volume

Southern Las Trampas LUPA EIR
Existing Plus Future Projects Volumes

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Evaluation of the signalized intersection of Bollinger Canyon Road and Crow Canyon Road within San Ramon uses the City of San Ramon's prescribed ICU peak-hour intersection capacity methodology. This methodology is a capacity-based methodology that derives a capacity utilization ratio from demand inputs in the form of vehicular peak-hour volumes and capacity inputs from intersection controls and geometrics. The Traffix software package has been used to analyze ICU based vehicular peak-hour LOS at the intersection of Bollinger Canyon Road and Crow Canyon Road.

LOS is a qualitative assessment of the quantitative effects of such factors as traffic volume, roadway geometrics, speed, delay, and maneuverability on roadway and intersection operations where LOS A represents free-flow activity and LOS F represents overcapacity operation.

Evaluation of vehicular operations at unsignalized intersections along Bollinger Canyon Road use the CCTA-prescribed 2010 Highway Capacity Manual (HCM) peak-hour intersection operations methodology. This methodology is a delay-based analysis methodology that relies on inputs such as intersection controls and geometrics and vehicular peak-hour volumes and ultimately produces an LOS grade. Peak-hour intersection operations were assessed at the following locations:

1. Bollinger Canyon Road/Old Time Corral Staging Area
2. Bollinger Canyon Road/Deerwood Drive
3. Bollinger Canyon Road/Crow Canyon Road

The Synchro 10 software package has been used to analyze vehicular peak-hour LOS at unsignalized locations. Synchro 10 is a widely recognized and accepted macroscopic traffic analysis software that supports 2010 HCM methodology. The following table shows the relationship between LOS, ICU value (i.e., volume-to-capacity ratio), and delay. Table 4.8.F presents the relationship between delay and LOS.

Table 4.8.F: Level of Service for Signalized and Unsignalized Intersections

Level of Service	Signalized Intersection Delay per Vehicle (seconds)	Unsignalized Intersection Delay per Vehicle (seconds)
A	≤ 10.0	≤ 10.0
B	10.0–20.0	10.0–15.0
C	20.0–35.0	15.0–25.0
D	35.0–55.0	25.0–35.0
E	55.0–80.0	35.0–50.0
F	> 80.0	> 50.0

Source: *Southern Las Trampas Land Use Plan Amendment Circulation Assessment* (LSA, 2021).
LOS = Level of Service

4.8.3 Significance Thresholds

Based on CEQA Guidelines Appendix G, a project would have a significant impact on transportation if it would:

a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

d. Result in inadequate emergency access.

Vehicular peak-hour analysis criteria for each study area facility depend on the jurisdiction where they are located. All study locations are within areas under the jurisdiction of the City of San Ramon and Town of Danville's General Plans; both consider LOS D to be the limit of acceptability. The CCTA Congestion Management Program (CMP) considers LOS E to be the limit of acceptability for CMP facilities.

The intersection of Bollinger Canyon Road/Old Time Corral Staging Area is in an unincorporated portion of Contra Costa County. This study uses LOS C as the limit of acceptability at this location, consistent with the County's General Plan – Growth Management Element. LOS D is used as the limit of acceptability at the remaining study intersections in keeping with the standards of the City of San Ramon and the Town of Danville.

4.8.4 Impact Analysis

The following discussion describes the potential project impacts and cumulative impacts related to transportation that would result from implementation of the proposed project, including construction of new trails and a staging area.

4.8.4.1 Project Impacts

Potential project impacts resulting from implementation of the proposed project, include of new trails and a staging area are discussed below.

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Trip Generation. The daily and peak-hour trips for the proposed project were generated using data collected along Bollinger Canyon Road, north of Deerwood Drive. While nationally used trip generation rates such as those published by the Institute of Transportation Engineers (ITE) may be applicable for nationally comparable uses such as a typical single-family household, church, or small community park, nationally surveyed rates were not used to forecast trip generation for the proposed project. These rates were not used because large recreational parks often substantially differ from each other in popularity, level of usage, and general interest due to characteristics that are specific to each individual large park environment and level of amenity.

To forecast new project trips from existing data, quantifiable changes such as trail mileage, acreage, and parking spaces resulting from the proposed project were considered against existing trips

generated by Las Trampas. Existing weekend peak hour preserve traffic was counted as 165 trips (93 inbound and 72 outbound) during the peak hour from 11:30 a.m. to 12:30 p.m. on Saturday, October 7, 2017. This existing trip number includes congregate care, residential, and commercial uses along Bollinger Canyon Road north of Deerwood Drive that may have been active during this peak hour and therefore provides a conservative estimate of the preserve's existing Saturday peak-hour traffic generation. The use of this traffic count as an estimate of preserve traffic is considered applicable because information provided by Park District staff regarding Saturday activity at the non-preserve uses along Bollinger Canyon Road such as The Ranch at Little Hills event center, the Corrie Companies, the Las Trampas Stables, the Child Day School preschool, and Brookdale senior living facility would have generated nominal vehicular traffic during the data collection period.

Based on existing preserve trail mileage, acreage, and parking spaces, trip generation rates were developed for each park unit type, as shown in Table 4.8.G. The project's trip generation potential, based on its associated increases to mileage, acreage, and parking spaces, were developed and are shown below in Table 4.8.H.

Table 4.8.G: Southern Las Trampas Preserve Saturday Trip Generation Rates

Unit Type	Units	ADT	Saturday Peak Hour		
			In	Out	Total
Existing Trail Mileage	29.92	39.44	3.11	2.41	5.52
Existing Total Acreage	4,116	0.29	0.02	0.02	0.04
Existing Parking Spaces[1]	95	0.98	0.98	0.76	1.74
Existing Las Trampas Preserve Trips		1,180	93	72	165

Source: *Southern Las Trampas Land Use Plan Amendment Circulation Assessment* (LSA, February 2021).
Note: Existing trail mileage, total acreage, and number of parking spaces were based on the existing Las Trampas Regional Wilderness Trail Map, the Las Trampas LUPA project description, and an LSA staff field visit, respectively.
[1] Parking supply total includes the stalls of the Bollinger Canyon Staging Area, the Elderberry Trailhead, Chamise Trailhead, and the 500-foot-long roadside parking area on Bollinger Canyon Road adjacent to the Bollinger Canyon Staging Area.
ADT = average daily traffic
LUPA = Land Use Plan Amendment

Table 4.8.H: Las Trampas LUPA Trip Generation Potential

Unit Type	Units	ADT	Saturday Peak Hour		
			In	Out	Total
Additional Las Trampas LUPA and Other Public Trail Mileage	6.1	241	19	15	34
Additional Las Trampas LUPA Acreage	756	217	17	13	30
Additional Parking Spaces (Old Time Corral Staging Area)	25	311	24	19	43

Source: *Southern Las Trampas Land Use Plan Amendment Circulation Assessment* (LSA, February 2021).
ADT = average daily traffic
LUPA = Land Use Plan Amendment

As shown in Table 4.8.H, the proposed project is forecast to generate 241 ADT on a Saturday, including 34 peak-hour trips (19 inbound and 15 outbound), based on 6.1 additional trail miles. The project would generate 217 ADT on a Saturday, including 30 peak-hour trips (17 inbound and 13 outbound), based on 756 additional acres. The project is forecast to generate 311 ADT on a

Saturday, including 43 peak-hour trips (24 inbound and 19 outbound), based on 25 additional parking spaces. In an effort to provide a worst-case, most-conservative analysis, the vehicular operations analysis used the highest trip generation potential of the project, which, in this case, is based on additional parking spaces.

It should be emphasized that the Circulation Assessment focuses on the Saturday peak hour, as parks and recreational uses are forecast to generate higher trips on weekends. LSA reviewed the weekday and weekend trip rates for Land Use Code 411 (Public Park) contained in the ITE Trip Generation Manual, 10th Edition (2017). It was determined that the weekday daily and peak-hour trip rates are less than half of the Saturday daily and peak-hour trip rates, respectively. More specifically, the weekday daily trips are approximately 42 percent of the weekend daily trips, and the weekday peak-hour trips are approximately 45 percent of the weekend peak-hour trips. Applying these weekday percentages to the anticipated project weekend trips would result in a project weekday trip generation of 131 daily trips and 19 peak-hour trips. Because of the low estimated weekday trip generation, the proposed project is not anticipated to exacerbate or create any operational or safety deficiencies or impacts on a weekday. Therefore, evaluation of Saturday conditions is appropriate to determine the potential impacts related to trips generated by the proposed project.

Intersection Impacts. Project trips were distributed based on existing travel patterns and the location of the proposed parking facilities. New project trips were then added to existing and existing plus future projects baseline conditions, which, as stated in section 4.8.1.2, includes the Faria Preserve project and the Chang project, to determine the proposed project's potential impact on vehicular operations. As shown in Table 4.8.I, the addition of project traffic to both existing and existing plus future projects conditions would not result in any unacceptable vehicular operational levels for any of the study intersections. Therefore, the project would result in a less-than-significant impact on the study intersections, and no mitigation measures would be required.

Table 4.8.I: Plus Project Saturday Peak Hour Intersection Level of Service Summary

Intersection	Existing		Existing + Project		Existing + Future Projects		Existing + Future Projects + Project	
	ICU/ Delay	LOS	ICU/ Delay	LOS	ICU/ Delay	LOS	ICU/ Delay	LOS
1. Bollinger Canyon Road/Old Time Corral Staging Area[1]	–	–	9.7	A	–	–	9.7	A
2. Bollinger Canyon Road/ Deerwood Drive[1]	9.5	A	9.8	A	10.5	B	10.8	B
3. Bollinger Canyon Road/Crow Canyon Road	0.244	A	0.250	A	0.265	A	0.272	A

Source: *Southern Las Trampas Land Use Plan Amendment Circulation Assessment* (LSA, February 2021).
[1] Unsignalized intersection. Delay values are presented in seconds per vehicle.
ICU = intersection capacity utilization
LOS = level of service
sec = seconds
– = location does not exist under this scenario

Transit, Bicycle and Pedestrian Facilities. According to the Park District Master Plan, expanding the unpaved multi-use trail system is a key Regional Facilities and Trails objective. The proposed project would not include any activities or construction of structures that would decrease the performance or safety of public transit, bicycle, or pedestrian facilities. Bicycle and pedestrian facilities, such as class II bike lanes, class III bike route designations, and sidewalks do not exist along Bollinger Canyon

Road in the vicinity of the preserve. As previously stated, recreational cyclists currently use Bollinger Canyon Road to reach the Bollinger Canyon Staging Area. The shoulders of Bollinger Canyon Road are unpaved and do not provide continuous pedestrian connectivity. Pedestrian users of the preserve, such as hikers and dog walkers, arrive at the preserve primarily via passenger car.

As previously discussed, County Connection Route 36 bus stops are located at the corner of Bollinger Canyon Road and Crow Canyon Road. Route 36 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 West Dublin/Pleasanton BART station. The Route 36 bus and BART have sufficient capacity to accommodate additional transit trips anticipated as a result of this project.

Public transit, bicycle, and pedestrian facilities in the project area are not expected to be affected by the operation or construction of the proposed project.

Class II bicycle facilities are proposed along Bollinger Canyon Road north of Deerwood Drive to connect cyclists to the Old Time Corral Staging Area and the Bollinger Canyon Staging Area. The proposed project would accommodate the right-of-way for this future Class II bicycle facility along Bollinger Canyon Road and would increase separation between motorists and bicycles.

Once proposed improvements are operational, pedestrians, bicyclists, equestrians, and dog-owners would have increased access to regional recreation destinations. Therefore, implementation of the proposed project would not conflict with any adopted policies, plans, or programs regarding bicycle or pedestrian facilities. This impact would be less than significant and no mitigation measures would be required.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

As previously discussed, SB 743 was signed in 2013 and required a move away from vehicle delay and LOS within CEQA transportation analysis.

SB 743 required OPR to identify new metrics for identifying and mitigating transportation impacts. OPR identified VMT per capita and VMT per employee as the new metrics for transportation analysis. The goal of SB 743 is to bring State transportation analysis in line with promoting State goals of reducing greenhouse gas emissions through the reduction of VMT.

According to the revised State CEQA Guidelines codified in Section 15064.3(a), project-related transportation impacts are generally best measured by evaluating the project's VMT. VMT refers to the amount and distance of automobile travel attributable to a project.

To determine whether a project has a significant transportation impact under CEQA, the traffic analysis must determine whether the project would conflict or be inconsistent with State CEQA Guidelines Section 15064.3 subdivision (b). Specifically related to land use projects, Section 15064.3(b) of the California Code of Regulations states that vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The Contra Costa County

Transportation Analysis Guidelines (CCTA Guidelines)[6] provides guidance on analyzing transportation impacts according to the revised CEQA Guidelines. The guidelines establish screening criteria based on substantial evidence that can be applied to projects anticipated to have a less than significant impact. According to the CCTA Guidelines, the following projects are expected to have a less than significant impact with regards to VMT:

- Projects that generate or attract fewer than 110 daily vehicle trips; or,
- Projects of 10,000 square feet or less of non-residential space or 20 residential units or less, or otherwise generating less than 836 VMT per day.
- Residential, retail, office projects, or mixed-use projects proposed within 0.5 miles of an existing major transit stop or an existing stop along a high quality transit corridor.
- Residential projects (home-based VMT) at 15 percent or below the baseline Countywide home-based average VMT per capita, or employment projects (employee VMT) at 15 percent or below the baseline Bay Area average commute VMT per employee in areas with low VMT that incorporate similar VMT reducing features (i.e., density, mix of uses, transit accessibility).
- Public facilities (e.g. emergency services, passive parks (low-intensity recreation, open space), libraries, community centers, public utilities) and government buildings.

Passive parks are those that do not have sports fields or facilities, such as a rink or court where youths and adults play in organized leagues. Las Trampas is a regional preserve that provides passive recreational opportunities (with an emphasis on open space and preservation of natural habitat). Las Trampas does not currently have active recreational opportunities, and the proposed project does not include active recreational facilities. The proposed project would consist of an expansion of the existing wilderness preserve (i.e., additional trail mileage, acreage, and 25 parking spaces); it would not significantly increase vehicle trips. The project would generate 311 trips on a typical Saturday (as described above). Based on the CCTA Guidelines, the project would have a less than significant impact with regards to VMT.

In an attempt to provide additional analysis, and one that is quantifiable, LSA used the California Emissions Estimator Model (CalEEMod) to correlate the effect of changes in project-related ADT to the resulting VMT and GHG emissions. This model, which uses residential uses to estimate GHG emissions, was selected because it is provided by the California Air Resources Board to be used Statewide for developing project-level GHG emissions. Because the primary purpose of reducing VMT is to minimize GHG emissions, converting VMT to GHG emissions and then determining if the VMT will result in exceedances of the GHG thresholds provides a way to evaluate the significance of VMT. CalEEMod was used with the built-in default trip lengths and types to show the vehicular GHG emissions from incremental amounts of ADT. Table 4.8.J shows the resulting annual VMT and GHG emissions from the incremental ADT that would occur with the proposed project.

[6] Contra Costa County Public Works Department. 2020. Contra Costa County Transportation Analysis Guidelines. June 23.

Table 4.8.J: Representative VMT and GHG Emissions from CalEEMod

Average Daily Trips (ADT)	Annual Vehicle Miles Traveled (VMT)	GHG Emissions (Metric Tons CO_2e per year)
200	683,430	258
300	1,021,812	386
400	1,386,416	514
500	1,703,020	643
600	2,043,623	771

Source: CalEEMod Version 2016.3.2. Example project used: 50 single-family homes in Orange County.
CalEEMod = California Emissions Estimator Model
CO_2e = carbon dioxide equivalent
GHG = greenhouse gas

The Bay Area Air Quality Management District (BAAQMD) has defined the GHG emissions threshold of significance as 1,100 MT CO_2e/year.[7] The CalEEMod results, shown in Table 4.8.J, identifies ADT, annual VMT, and the corresponding amount of GHG emissions in metric tons of CO_2e/year. As the Circulation Assessment (Appendix F to the Draft EIR) discloses, the weekend is considered to be the peak period of park activities. The project would generate 311 ADT on weekends. On weekdays, the project would generate 131 trips, as many park patrons are at work or school. Based on CalEEMod, a project that generates 311 ADT would have a less than significant transportation impact related to VMT as the amount of GHG emissions would be less than 1,100 MT CO_2e/year.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The following discussion evaluates the potential for increased safety risks from the proposed staging area for vehicles, bicyclists, and pedestrians. The analysis included input from Park District staff familiar with the Las Trampas area. Park District staff has made the observation that the accidents that occur on Bollinger Canyon Road tend to be speed related and result in vehicles running off the road. In addition to this local input, LSA conducted a review of reported accidents in the study area, as described below.

Accident History. As described in the Circulation Assessment (Appendix F), LSA collected accident data for Bollinger Canyon Road from Crow Canyon Road to its northern terminus at the Bollinger Canyon Staging Area from the Safe Transportation Research and Education Center's online Transportation Injury Mapping System (TIMS). A total of eight accidents were reported for the 5-year period from January 1, 2015, to December 31, 2019. This period represents the most recent 5-year period for which TIMS can provide a complete accident history.

Only three of the eight reported accidents occurred along Bollinger Canyon Road, with the five remaining accidents a result of unsafe behavior along Crow Canyon Road. The three accidents on Bollinger Canyon Road (less than one accident per year) were caused by unsafe speeds or automobile right-of-way and are consistent with Park District staff observations. The five remaining

[7] Bay Area Air Quality Management District. 2017. California Environmental Quality Act Air Quality Guidelines. May.

accidents at the intersection of Bollinger Canyon Road and Crow Canyon Road were also attributed to unsafe behavior, with all of the passenger car-involved accidents caused by either unsafe speeds or unsafe lane changes.

Therefore, there is no consistent cause other than unsafe behavior for either the three accidents on Bollinger Canyon Road or the five accidents at the intersection. This indicates that the causes of these accidents are not a result of pronounced hazard in the roadway's geometry or structure. Detailed collision reports are included as an appendix to the Circulation Assessment (included as Appendix F of this Draft EIR).

Old Time Corral Staging Area Safety Review. The California Department of Transportation (Caltrans) Highway Design Manual, Sixth Edition[8] recommends an unobstructed corner sight distance on a 60 mile-per-hour (mph) road of 660 feet. Even though Bollinger Canyon Road has a posted speed limit of 45 mph, a 60-mph sight line distance was taken into consideration in preliminary engineering plans for the staging area from the engineering firm of Carlson, Barbee & Gibson. The latest speed counts along Bollinger Canyon Road conducted by the Contra Costa County Public Works Department reveals 85th percentile speeds of 46 to 50 mph, which are in line with the posted speed limit of 45 mph. Specifically, these counts were collected along Bollinger Canyon Road 4,500 feet north of Deerwood Drive from March 25, 2014, to March 26, 2014. Appendix D of the Circulation Assessment provides the County speed counts.

Given the flat and straight roadway geometric of Bollinger Canyon Road adjacent to the proposed staging area, a sight distance design speed of 60 mph is not unreasonable.

The Old Time Corral Staging Area driveway would be located in a manner that provides unobstructed sight lines to allow drivers to detect vehicles 660 feet to both the north and the south.

The proposed Old Time Corral Staging Area would be set back from behind the County right-of-way for Bollinger Canyon Road, approximately 35 feet from the traveled roadway. This setback between the edge of the roadway and the County right-of-way is currently unpaved, level, all-weather compacted gravel and can provide adequate space for wider-turning vehicles.

The proposed staging area parking lot meets County requirements for off-street parking lots of 18-foot long parking stalls accessed from a 25-foot-wide drive aisle. Advance signage may be provided approximately where the sight distance lines end to inform passing drivers of the upcoming staging area.

Trail Assessment. Mobility safety of different types of trail users does not end in the vehicular parking areas. This section addresses mobility-related safety concerns between different types of trail users on the trails in the project area. Table 4.8.G summarizes all trails, both existing and proposed, that could be affected by users of the Old Time Corral Staging Area.

Mobility issues that can affect the safety of various users include the potential speed differential and user conflict points between bicyclists, equestrians, and pedestrians (e.g., runners, hikers, dog

[8] California Department of Transportation. 2017. *Highway Design Manual,* Sixth edition. November 20.

walkers) at staging areas, access points, and other locations where motorized vehicles may be present. Existing trail usage observations reveal that pedestrians use the majority of trails in the preserve. Mountain biking and equestrian users make up a nominal percentage of preserve users. The proposed trails shown in Table 4.8.K would not be anticipated to result in a deviation from the existing mode of preserve usage. As such, potential conflicts between different types of trail users are anticipated to be minimal on these trails.

Table 4.8.K: Las Trampas LUPA Trails

Name	Property	Description	Type	Width	Mileage
Proposed Trails					
Sabertooth Trail	Chen	Calaveras Ridge Trail (CRT) connector	EVMA/Multi-use	up to 12 feet	1.1
Extension of the Calaveras Ridge Trail	Peters Ranch	CRT connector	Multi-use	up to 6 feet	0.9
Heritage Pear Trail	Podva	CRT connector	EVMA/Multi-use	up to 12 feet	1.4
Warbler Loop Trail	Chen	CRT connector		up to 6 feet	0.8
				Total Proposed Trails	**4.2**
Existing Trails (and Already Open)					
Calaveras Ridge Trail through Chen and Elworthy properties	Chen	CRT connector	EVMA/Multi-use	up to 12 feet	1.3
Fiddleneck Trail	Elworthy	CRT connector	EVMA/Multi-use	up to 12 feet	0.6
				Total Existing Trails	**1.9**
				Total Las Trampas LUPA Trail Mileage	**6.1**

Source: Source: East Bay Regional Park District (2020)
EVMA = emergency vehicle and medical access
GHAD = Geologic Hazard Abatement District
LUPA = Land Use Plan Amendment
Rec = recreational

Trail design would account for features conducive to the International Mountain Biking Association's (IMBA) guidance on trail etiquette and safety for equestrians, hikers, and mountain bikers.[9] The Park District will investigate the possible implementation of IMBA multiuse trail signs to better promote safe trail usage.

Based on the analysis of transportation operations, accident history, and compliance with applicable safety guidance at access points, implementation of the proposed project would not increase hazards due to a design feature or incompatible use. This impact would be less than significant and no mitigation measures would be required.

d. Would the project result in inadequate emergency access?

The project would include a total of 4.2 miles of new trails that would be open to the public. To help offset the challenging access to the steep, rugged terrain leading to ridge tops, park usage accommodations would include emergency vehicle and medical access (EVMA) trails thereby improving emergency vehicle access within the project site. In addition, emergency access would still be possible along all roadways during and after construction of the proposed project.

[9] "Rules of the Trail". International Mountain Biking Association. Available online at: www.imba.com/sites/default/files/Team_IMBA/RulesOfTheTrail.pdf (accessed July 29, 2021).

Construction of the proposed project would not require any lane closures along Bollinger Canyon Road, and because all improvements would occur within the project site, construction vehicle staging would not block any lanes or access along Bollinger Canyon Road.

Additional vehicle traffic resulting from construction and operation of the project would not significantly impact the operations of any of the surrounding roadways or intersections, as discussed above in Section 4.8.4.1.a. Vehicle access to the parking area at the Old Time Corral Staging Area would be designed to meet the requirements of Contra Costa County and the Park District. Therefore, the proposed project would not result in inadequate emergency access, this impact would be considered less than significant, and no mitigation measures would be required.

4.8.4.2 Cumulative Impacts

A proposed project would have a significant effect if it—in combination with other projects—would contribute to a significant cumulative impact related to transportation. To determine, present and reasonably foreseeable projects within the vicinity of the project, Park District staff provided information on the nearby Faria Preserve and the Chang projects. These two projects, given their adjacency to the project site and potential impacts to transportation facilities, constitute the cumulative scenario for the proposed project's cumulative transportation analysis. The Faria Preserve project is within the San Ramon city limits, west of I-680 and south of the Danville town limit, and would include 740 residential units, a 1.5-acre house of worship site, a 2.6-acre educational facility site, a 12.9-acre community park, and a 0.7-acre rose garden. The Chang project site is at the northwest corner of Bollinger Canyon Road/Crow Canyon Road, within the San Ramon city limit, and would include 43 single-family, large-lot homes and 18 accessory dwelling units.

The analysis included above (see Table 4.8.I) assesses the potential impacts to level of service at intersections from the proposed project, as well as the proposed project in combination with the cumulative projects discussed above. The Faria Preserve project and the Chang project would result in less-than-significant impacts related to level of service of roadways and intersections. As a result, the proposed project would not combine with the Change and Faria Preserve projects to result in significant cumulative impacts on area intersections or roadways.

For the reasons discussed above, the proposed Project would not result in significant impacts pertaining to transit, bicycle or pedestrian facilities and plans. As discussed above in Section 4.8.1.2, the proposed project would not affect the right-of-way for a future class II bicycle facility along Bollinger Canyon Road. Furthermore, the proposed project would not include any activities or construction of any structures that would decrease the performance or safety of public transit, bicycle, or pedestrian facilities. The Faria and Chang projects would not result in significant impacts to transit, bicycle or pedestrian facilities and plans.[10,11] As a result, the proposed project's cumulative contribution to potential impacts to transit, bicycle or pedestrian facilities and plans would be considered less than significant.

[10] AECOM. 2013. Draft Initial Study/Mitigated Negative Declaration for Faria Preserve Community Project.
[11] First Carbon Solutions. 2017. Final Chang Property Development Initial Study/Mitigated Negative Declaration.

The proposed Project would not result in significant impacts related to design hazards and emergency access because it would be designed to meet local design standards as well as Park Districts requirements to avoid hazards and limited access. The Chang project would not result in any significant impacts to design hazards and emergency access.[12] However, the Faria project would result in significant safety impacts related to the intersection of Deerwood Road and San Ramon Valley Boulevard. A mitigation measure was identified to reduce the potential operational impact at the intersection of Deerwood Road and San Ramon Valley Boulevard to a less-than-significant level. The proposed project is not expected to impact the intersection of Deerwood Road and San Ramon Valley Boulevard because it is approximately one mile east of Bollinger Canyon Road, the primary access road to the project site. Intersections even closer would operate at LOS A and B and trips would dissipate as they travel further from the project site. Cumulative impacts relating to design hazards and emergency access would be less than significant.

As described above in Section, 4.8.4.1.b, the proposed project's impacts relating to VMT would be less than significant because it would not result in a significant number of daily vehicle trips that would result in significant GHG emissions. Under cumulative conditions, additional residential uses would be developed near the project site. As a result, vehicle trips associated with the proposed project would be shortened because the residential land uses would be located closer to the project site than existing residential uses. The change in land uses near the project site would reduce the VMT associated with the proposed project. As a result, cumulative impacts related to VMT would be considered less than significant.

[12] First Carbon Solutions. 2017. Final Chang Property Development Initial Study/Mitigated Negative Declaration.

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4.9 WILDFIRE

This section describes existing site characteristics related to wildfire risks and hazards that could be affected by implementation of the proposed project. Laws, regulations, plans, and policies related to wildfire that may be relevant to the proposed project are described.

It should be noted that after completion of the Initial Study (included in Appendix A), it was determined that the analysis of risks related to wildfires (refer to Section 3.9.g, Hazards and 3.20, Wildfire of the Initial Study) should be reevaluated in light of the recent increase in number and severity of wildfire events that have occurred throughout the State, to ensure that these impacts are thoroughly addressed.

4.9.1 Setting

4.9.1.1 Regulatory Setting

The following regulatory framework discussion sets the context for the range of issues related to wildfire that the Park District considered in the evaluation of the potential for the proposed project to have a significant effect pertaining to wildfire.

Federal Regulations. The following federal laws or regulations pertaining to wildfire are applicable to the proposed project.

> ***National Incident Management System (NIMS).*** The NIMS provides a systematic, proactive approach to guide government agencies, nongovernmental organizations, and the private sector to work together to prevent, report, recover from, and mitigate the effects of fire incidents, regardless of cause, size, location, or complexity, to reduce the loss of life and property harm to the environment. Contra Costa County, the City of Danville, and the City of San Ramon participate in NIMS, which improves each jurisdiction's ability to prepare for and respond to potential incidents and hazard scenarios.

State Regulations. The following State laws and regulations pertaining to wildfire are applicable to the proposed project.

> ***CAL FIRE and Resources Assessment Program.***CAL FIRE publishes maps that predict the threat of fire for each county within the State. Local Responsibility Areas (LRAs), State Responsibility Areas (SRAs), and Federal Responsibility Areas (FRAs) are classified as either Very High Fire Hazard Severity Zone (VHFHSZ) or non-VHFHSZ based on factors including fuel availability, topography, fire history, and climate. The 2012 Strategic Fire Plan for California was generated by CAL FIRE to provide guidelines and objectives to account for associated fire impacts.
>
> ***California Fire Code.***The California Fire Code (CFC) includes regulations for emergency planning, fire service features, fire protection systems, hazardous materials, fire flow requirements, and fire hydrant locations, distribution, and spacing. The CFC, relating to wildfire, provides guidelines for the clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

2018 California Strategic Fire Plan. This statewide plan is a strategic document that guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

California State Hazard Mitigation Plan. The purpose of the State Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, State, and federal agencies as well as the private sector.

California Government Code. California Government Code Section 51175 defines VHFHSZ and designates lands considered by the State to be a very high fire hazard. California Government Code Section 51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (e.g., building design and construction requirements that use fire-resistant building materials) and provides protection of structure projections (e.g., porches, decks, balconies, and eaves) and structure openings (e.g., attics, eave vents, and windows).

California Public Resources Code (PRC). The State's Fire Safe Regulations are set forth in PRC Section 4290, which include the establishment of SRAs. PRC Section 4291 sets forth defensible space requirements, which are applicable to anyone that "… owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush covered lands, grass-covered lands, or land that is covered with flammable material" (Section 4291(a)).

Assembly Bill 337. Per Assembly Bill (AB) 337, local fire prevention authorities and CAL FIRE are required to identify VHFHSZ in LRAs. Standards related to brush clearance and the use of fire-resistant materials in a Fire Hazard Severity Zone (FHSZ) are also established.

California Code of Regulations (CCR) Title 14 (Natural Resources). Division 1.5 (Department of Forestry and Fire Protection), Title 14 of the CCR establishes a variety of wildfire preparedness, prevention, and response regulations.

CCR Title 19 (Public Safety). Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Executive Order N-04-19. On January 9, 2019, Governor Newsom announced Executive Order (EO) N-04-19, which requires State agencies to identify innovative and sustainable solutions to address the State's wildfire crisis, such as upgraded fire detection technology.

Executive Order N-05-19. On January 9, 2019, Governor Newsom also announced EO N-05-19, which requires CAL FIRE and other State agencies to compile policy and regulatory recommendations concerning wildfire mitigation, emphasizing environmental sustainability and public health. EO N-05-19 requires the incorporation of socioeconomic analysis when conducting risk management of wildfires and mandates that agencies identify geographic areas with populations that are more vulnerable to the impacts of wildfires.

Local Resource Protection Policies. The project area shares its boundary with other District parklands, EBMUD properties, a Geological Hazard Abatement District (GHAD) associated with the Faria Preserve residential development in the City of San Ramon, and several private properties. Most of the project area is in unincorporated Contra Costa County, with smaller areas lying within the communities of San Ramon and Danville.

City and County General Plan Policies. City and County general plan policies provide guidance for District parklands from the planning phases through project implementation. Relevant city and county general plan policies pertaining to wildfire in the project area are described below in Table 4.9.A: City and County Wildfire Goals and Policies.

Table 4.9.A: City and County Wildfire Goals and Policies

Goal/Policy Item Number	Goal/Policy
Contra Costa County General Plan – Safety Element and Public Facilities/Services Element	
Goal 10-N	To provide for a continuing high level of public protection services and coordination of services in a disaster.
Policy 10-83	The County will adopt and implement a comprehensive hazard mitigation plan to minimize the impacts of natural and man-made disasters pursuant to the requirements of the Federal Disaster Mitigation Act of 2000.
Policy 10-84	The Office of Emergency Services, in cooperation with cities within the County, shall delineate evacuation routes and, where possible, alternate routes around points of congestion.
Policy 10-85	The Office of Emergency Services, in cooperation with public protection agencies, shall delineate emergency vehicle routes for disaster response, and where possible, alternate routes where congestion or road failure could occur.
Policy 10-90	Policies related to wild land fire risk are contained in the Fire Services section of the Public facilities Element.
Policy 10-91	Restrict homes built in rural areas or adjacent to major open space areas from having roofs which are covered with combustible materials.
Goal 7-Y	To ensure a high standard of fire protection, emergency, and medical response services for all citizens and properties throughout Contra Costa County.
Goal 7-AB	To minimize the cost of fire protection services through utilization of modern fire protection practices and technologies.
Goal 7-AD	To provide special fire protection for high-risk land uses and structures.
Policy 7-71	A set of special fire protection and prevention requirements shall be developed for inclusion in development standards applied to hillside, open space, and rural area development.
Policy 7-72	Special fire protection measures shall be required in high risk uses (e.g. mid-rise and high-rise buildings, and those developments in which hazardous materials are used and/or stored) as conditions of approval or else be available by the district prior to approval.
Policy 7-73	Fire fighting equipment access shall be provided to open space areas in accordance with the Fire Protection Code and to all future development in accordance with Fire Access Standards.
Policy 7-80	Wildland fire prevention activities and programs such as controlled burning, fuel removal, establishment of fire roads, fuel breaks and water supply, shall be encouraged to reduce wildland fire hazards.
Town of Danville 2030 General Plan – Resources and Hazards Element	
Goal 25	Prevent catastrophic fires and minimize the loss of property and life due to fire hazards in Danville.
Policy 25.02	Cooperate with the San Ramon Valley Fire Protection District in efforts to reduce fire risks through controlled burning and fuel removal.
Policy 25.03	Assure provision of adequate access for fire equipment to all developed and open space areas. *This should include turn-around areas at the end of deadend public streets, and minimum road widths of 20 feet in high wildfire hazard areas. Consistent with the Local Hazard Mitigation Plan, an additional 10 foot clearance area should be maintained on the shoulders of driveways and road segments more than 50 feet long within high fire hazard areas*
Policy 25.04	Maintain a response time of less than five minutes for emergency fire calls, to be met a minimum of 90 percent of the time and/or a fire station within 1.5 miles of all residential and nonresidential development. Where this standard cannot be met, and/or where severe wildland fire hazards exist, require special mitigation measures for fire prevention as necessary.

Table 4.9.A: City and County Wildfire Goals and Policies

Goal/Policy Item Number	Goal/Policy
Policy 25.06	Require the maintenance of "defensible space" (e.g., areas free of highly flammable vegetation) around homes in fire prone areas. Require the clearing or thinning of fire-prone vegetation within 30 feet of access and evacuation routes, and routes to critical facilities.
City of San Ramon General Plan 2035 – Safety Element	
Policy 9.5-G-1	Minimize the risks to lives, property, and natural environment due to fire hazards.

Source: Contra Costa County General Plan (2005), Town of Danville 2030 General Plan (2013), San Ramon General Plan 2035 (2015)

East Bay Regional Park District. The Park District has many policy documents that apply to the proposed project pertaining to wildfire. Each are summarized below.

2013 Park District Master Plan. The 2013 Park District Master Plan defines the long-term vision for lands managed by the District.

The Master Plan provides a decision-making framework and identifies policies that will achieve District-wide objectives. Development objectives, land use classifications, and planning and management guidelines are established by the Master Plan. The Master Plan includes a section pertaining to the Wildfire Hazard Reduction and Resource Management Plan; however, the Master Plan does not contain specific goals and policies relating to wildfire.

Ordinance 38. District Ordinance 38 sections related to fire and wildfire impacts on District parklands are summarized in Table 4.9.B: Ordinance 38 Section Relevant to Wildfire, below.

Table 4.9.B: Ordinance 38 Section Relevant to Wildfire

Section No.	Goal/Policy
Section 404	**Fires.** No person shall build, light or maintain any open outdoor fire on park property except in those facilities or areas provided and so designated for that purpose. Exceptions to this requirements must be obtained in writing from the District Fire Chief. No person shall leave a fire unattended on District parklands.
Section 404.1	**Personal Cooking Appliances.** Personal appliances such as gas or propane camp stove, portable barbecue or hibachi may be used under the following conditions: a) Placement in an area that will not scorch, burn or otherwise damage lawns or table tops. b) Placement in an area at least 30 feet from any flammable material such as grass, weeds, wood chips, brush or buildings. c) All burning fuel such as wood or charcoal is thoroughly extinguished before being disposed of in an existing fireplace, fire put or barbeque grill. It is unlawful to dispose of coals in garbage cans or refuse bins.
Section 404.2	**Restriction.** No person shall smoke or build fires of any kind in areas where prohibited and posted during declared fire season. Extreme conditions may cause the elimination of all open flames for any purpose, or the evacuation or closure of a park.
Section 404.3	**Smoke-Free Parks.** Smoking is prohibited in the East Bay Regional Park District. "Smoking" means inhaling, exhaling, burning, or carrying any lighted pipe, cigar, cigarette, weed, plant or other combustible organic or chemical substance, the smoke from which is specifically designed or intended to be inhaled or drawn into the nose or mouth. In addition, "smoking" for the purpose of this Ordinance includes the use of any vapor device, of any product name or descriptor, which releases gases, particles or vapors into the air as a result of combustion, electrical ignition or vaporization intended to be drawn into the nose or mouth (excluding any United States Food and Drug Administration approved nebulized medication) (added 4/16, rev. 3/19).
Section 409	**Miscellaneous Regulated Activities.** No person shall engage in any of the following activities within the District except in areas specifically designated and set aside from time to time by the Board for such activities.

Table 4.9.B: Ordinance 38 Section Relevant to Wildfire

Section No.	Goal/Policy
Section 409.1	Use or possess fireworks of any kind.
Section 907	**Prohibited or Restricted Area.** To insure the safety and health of persons, to avoid interference in development, construction, management, and operations to protect the lands of the District and its neighbors during high risk fire weather, or to provide for the security, safeguarding and preservation of persons and property in the District and portions thereof, the General Manager or his designee may from time to time upon such finding declare an area closed, entry prohibited, entry regulated, or limited to further entry, and specify the period therefore. If the order is to close an area, the order may exclude such reasonable categories of persons who may enter therein in the conduct of such proper activities or official duties as the General Manager may prescribe. If the order is to limit the number person in an area, no person shall enter the area unless specifically authorized. When by order a prohibited or limited areas has been so declared, no person so prohibited shall enter therein, and all prohibited person within such area at the time it is so declared shall leave the same without any appreciable delay, and in so doing shall obey and abide by all instructions of the authorized District employee.

Source: East Bay Regional Park District, Ordinance 38 (Revised 2019)

General Conditions. Article 26, Fire Hazards and Preventions of the Park District's General Conditions includes specifications to reduce wildfire risk on parklands and states:

a. The Contractor will be held responsible for fire ignited by the Contractor's employees, subcontractors, or equipment. Employees shall not be allowed to start fires. No open flames shall be permitted.

b. The Contractor shall take necessary precautions to guard against and eliminate fire hazards that may cause damage to construction work, building materials, equipment, public, and private property, including grassland, brush, and trees.

c. Flammable materials shall not be poured into drain lines, but shall be disposed of in a legal manner.

d. Fire hydrants shall be kept accessible to fire-fighting equipment at all times.

e. Contractors shall comply with State law requirements for burning and use of combustion engines including but not limited to Public Resources Code Sections 4427, 4431, 4435, and 4442.

Wildfire Hazard Reduction and Resource Management Plan. The Wildfire Hazard Reduction and Resource Management Plan[1] (Wildfire Hazard Plan) provides sound, long-term strategies for reducing fuel loads and managing vegetation within the Park District's jurisdictional boundaries to minimize the risk of Diablo wind driven catastrophic wildfire along the wildland-urban interface. The following plan goals, objectives and guidelines would be applicable to the proposed project pertaining to wildfire:

[1] East Bay Regional Park District. 2009. Wildfire Hazard Reduction and Resource Management Plan. July.

- **Goals**
  - Reduce fire hazards on District-owned lands in the East Bay's wildland-urban interface (WUI) to an acceptable level.
  - Maintain and enhance ecological values for plant and wildlife habitat consistent with fire reduction goals.
  - Preserve aesthetic landscape values for park users and neighboring communities.
  - Provide a vegetation management plan which is cost-effective and both financially environmentally sustainable to Park District on an on-going basis.

- **Objectives**
  - Reduce the potential for loss of human life and property damage to structures and public improvements from wildfire.
  - Reduce the potential for loss of environmental, cultural, aesthetic or recreational resources due to catastrophic wildfire.
  - Ensure that during the planning for and implementation of all fuel reduction activities that the protection, restoration and enhancement of biologically diverse habitats and environmental resources, including cultural resources, is given full consideration, and specific resource management objectives and actions are incorporated into all fuel reduction treatment plans.
  - Continue to evaluate the location, adequacy and maintenance of Park District's fuel reduction zones.
  - Meet resource management goals and reduce costs, strive to create and maintain over time habitats characterized by low-fire hazard vegetation, optimal ecological functioning, and biodiversity when preparing fuel reduction actions plans and when undertaking treatment activities.
  - Provide a menu or vegetation treatment and maintenance that take into consideration habitat restoration and address topographic situations, vegetation types, and resource management objectives. Treatment methods my include: hand labor techniques; mechanical treatments; chemical applications; prescribed burning; and grazing.
  - Evaluate the environmental and aesthetic effects of vegetation management treatment methods and options; and avoid, minimize and/or mitigate the potential adverse effects of vegetation management options on the environment, and especially on special-status species and other species of concern.
  - Provide a plan that enables Park District to make informed, adaptive decisions on an annual basis concerning ongoing vegetation management based on overall benefits; potential environment effects; and costs.
  - Encourage other agencies, organizations, and park neighbors to create "fire safe" areas of at least 100 feet around private homes, structures, and facilities to reduce

the threat of wildfires moving off of private lands or parklands and increase the ability of emergency responders to successfully fight wildfires once started.

- Increase the ability of Park District Fire Department, emergency responders, State and local fire departments, and District staff to suppress wildfire in the WUI and protect the public's health, safety, and welfare, as well as public and private property.
- Increase the ability of the Park District Fire Department, emergency responders, State and local fire departments, and District staff to evacuate people from parklands and adjoining lands during a wildfire or other emergency incident.
- Create an economically- and environmentally sustainable fuels management program.

Plan Guidelines.

Wildfire Hazard Reduction. The following guidelines pertain to wildfire hazard reduction activities to be undertaken on lands within Park District's jurisdiction, where appropriate, that fall with the Study Area of the Plan:

1.1 Aim to reduce fuel loads to a level that would produce no greater than an 8-foot flame length within 200 feet of structures during a fire incident, which represents a nationally recognized standard over which erratic fire behavior and difficulty in control and suppression is anticipated.

1.2 Evaluate and treat, as necessary, trees and shrubs on ridgetops along the WUI for fuel conditions and surrounding topography to reduce the potential for wildfire reaching the crowns of trees ("crowning") leading to burning materials and embers carried long distances under high wind conditions and igniting additional fires well ahead of the main flame front.

1.3 Where active management, such as hand labor or mechanical treatments, prescribed burning, or fuel reduction zone construction is necessary to reduce wildfire hazard conditions, such efforts will be consistent with encouraging low fuel hazard, low maintenance, sustainable ecosystems. Pre-project site assessments will be conducted to identify and protect sensitive resources, as needed.

1.4 Continue to maintain and manage Park District's established ridge top fuel reduction zone, as necessary, to meet the goals, objectives and guidelines established in the Plan.

1.5 Annually prioritize treatment areas and give preference to maintenance of previously treated areas. New treatment areas should focus on:

- Wildland/urban interface areas at risk of spreading wildfire to adjacent urban properties, defined as "District land within 200 feet of a private

structure under Diablo Wind conditions" for Hill parks, and "Under a condition in which winds blow uphill" for Measure CC Shoreline parks. This may vary, depending on such conditions as slope of the property and type of vegetation present.

- Lands within 200 feet of high-value or irreplaceable District facilities and park residences.
- The location of vegetation types, particularly Eucalyptus and Monterey pine, associated with threats from torching and crown fires that cause ember flight.
- Areas critical to strategic fire fighting operations in the event of a wildfire.
- Wildfire evacuation and access routes.

1.6 The Park District will employ methods that meet resource management objectives, provide environmental benefits, and are economically feasible to reduce and maintain fuel loads at acceptable levels. Park District will consider a full range of options for managing wildland vegetation when preparing action plans for specific areas.

1.7 Ensure that treated areas aid in containment when high hazard vegetation types are modified to create discontinuous units that will aid in confining wildfires to discrete areas and improving firefighting response.

1.8 Wildfire hazard reduction treatments may involve: the use of hand labor treatments, mechanical treatments, herbicide and other chemical applications, prescribed burning, and/or grazing techniques; the construction, maintenance, and operation of access roads, trails, and/or fuel reduction zones to manage fuels; improved firefighter response times; and effective fire containment. All appropriate wildfire hazard reduction methods will be used in a manner consistent with existing regulations and policies regarding species diversity and habitat restoration and enhancement.

1.9 Establish and maintain a system of Strategic Fire Routes throughout the parks, based on existing roads and trails, to facilitate and support emergency vehicle access, evacuation, and strategic firefighting response; to reduce roadside ignition potential; to support the development of fire management units; and to reduce the fuel load in critical locations adjacent to roads to provide time for successful initial wildfire attack. When accomplishing the following roadside vegetation management standards for the designated Strategic Fire Routes, follow the performance standards for each vegetation type established in the Plan:

- **Road Width:** Maintain a minimum clearance of 10 feet and maximum clearance of 20 feet from the edge of Strategic Fire Routes to allow for varied clearance distances. Varying the clearance distances will preserve aesthetic values along these routes by eliminating the potential for clearance to create a "hedgerow" effect.

- **Vertical Clearance:** Maintain a minimum vertical clearance of 13.5 feet for all Strategic Fire Routes to allow fire apparatus access.

1.10 Adopt as a regional standard Section 17 of the Uniform Fire Code Division II Environmental Hazards Control of Hazardous Fire (as follows and paraphrased): *The Fire Chief may remove and clear within 10 feet on each side of roadway all flammable vegetation or other growth. The Fire Chief may entre upon private property to clear. This does not apply to single specimens of trees, ornamental shrubbery or cultivated groundcovers provided that they do not form a means of readily transmitting fire. "Roadway" applies to portion of highway or private street improved or ordinarily used for vehicular traffic. This section also enables the chief to require reasonable alternative measures.*

1.11 Identify and support additional roadside clearance projects for the purpose of reducing wildfire hazards using project specific information based on site conditions, fire behavior and suppression strategies. Consider the following strategies when identifying clearance projects:

- In strategic areas, where highly flammable brush or eucalyptus trees are adjacent to the road, establish 30 feet of sheltered fuel reduction zone or either side of the road (or additional distance as required by adjacent slopes or vegetation height).

    - Remove shrubs to create an open mosaic of grassland and less than 30 percent shrub density.

    - Remove any ladder fuels beneath the eucalyptus trees (loose bark and low hanging branches) to approximately 14 feet.

    - Remove trees to thin dense stands of eucalyptus along roads to achieve a long-term foal of phases elimination, where appropriate.

    - Consider treating the understory of native oaks, bays and other trees to reduce their potential for a crown fire, where appropriate.

    - Retain trees, ornamental shrubbery and cultivated ground covers that do not form a means of readily transmitting fire.

- Modify vegetation to create potential containment areas taking advantage of existing roads and topographic features.

- Where appropriate, incorporate safety zones for firefighters by modifying additional vegetation to reduce the flame length or other hazards.

Resource Management. The following guidelines pertain to resource management activities on Park District lands.

2.1 Manage existing vegetation types over tome to attain low fire hazard conditions. When feasible, convert areas to alternative low-hazard vegetation types (but only where repetitive treatment is infeasible to obtain low fire hazard conditions, or where vegetation type conversion is recommended in conjunction with other resource management goals, such as the reduction of invasive plants or conversion to a more environmentally suitable vegetation type).

2.2 Undertake vegetation management and fuel reductions activities to maintain and enhance diverse habitats and attempt to achieve a high representation of native flora. When planning and undertaking treatment activities, recognize the physiological and ecological needs and requirements of the native vegetation, and consider a full range of options for managing vegetation in these areas to ensure that preference is given to treatment options which allow for the most environmental benefits with the least fiscal and environmental costs.

2.3 Conduct vegetation management to maintain and enhance native vegetation, where feasible; identify and protect special-status species prior to and during any treatment actions and include, monitoring and vegetation enhancement activities as needed in representative treatment plans to ensure the continued protection of such species.

2.4 Consider “keystone” and “indicator species,” as well as locally rare and unusual plant species when planning and implementing treatment actions and preparing prescriptions for habitat protection and enhancement.

2.5 Park District will incorporate integrated pest management (IPM) plans for noxious invasive plants (such as broom, acacia, yellow starthistle, fennel, and oblong spurge) where feasible when planning for and implementing fuel reduction treatment actions to minimize their widespread encroachment on park lands. Treatment actions undertaken will consider a full range of reasonable options for managing invasive plants in areas with native species.

2.6 Riparian and other wetland environments will be managed to preserve and enhance the natural and beneficial values of these areas and prevent the destruction, loss, or degradation of habitat. Creeks, streams, and other wetlands will be retained in their natural state whenever possible to maintain water quality, biotic diversity, aesthetic values, and recreational opportunities. Vegetation management actions that may potentially impact wetland areas will be reviewed by qualified personnel prior to implementation and will include protective measures where feasible to prevent destruction, loss, or degradation of these areas. Post-treatment monitoring and follow-up actions will be undertaken to ensure wetland areas are preserved and/or enhanced during and following any vegetation management actions in the surrounding areas.

2.7 Park District will protect and maintain the habitats of rare, threatened, endangered, or otherwise sensitive species during and following any vegetation management actions, where possible. Further guidance for determining appropriate management actions for these species and their habitats will be sought from biologists and other qualified personnel, and management actions based on this guidance will be carried out to maintain, increase, or restore population levels and viability. A monitoring program for listed species within treated areas will be conducted to record condition of habitats in order to better inform future vegetation management actions.

2.8 Park District will consider the visual character and aesthetic resources of the parks when planning for and implementing fuel reduction treatments.

2.9 Where deemed necessary by District staff for site restoration after fuel reduction activities, seeding and planting of native species is allowed consistent with Park policies and individual park land use and resource management plans.

3.1 In response to changing conditions and regulatory agency requirements and in recognition that analysis of fire hazards and vegetation is an ongoing and dynamic process, Park District will continue to review and update the Plan, including but not limited to procedures, GIS mapping, description of fuel types, potential treatment areas, and prescribed mitigation measures over time.

3.2 Park District will prepare an annual Fuels Treatment Plan for review through the District Budget Process.

3.3 Park District will continue to coordinate with the adjacent cities, counties, special districts, State and federal agencies that own and manage public lands, facilities and infrastructure, including roadways, and those that regulate private lands in the Plan study area to ensure that adjacent vegetation management programs are coordinated, information is shared,

roadside vegetation clearance is maintained, and emergency evacuation, egress and ingress can be provided.

3.4 Park District will continue its outreach and education programs with stakeholders, neighborhood groups, and local organizations in an effort to reduce fire hazards on lands adjacent to parklands; assist private land owners with prioritizing and planning long term fuel reduction and fire safe landscaping strategies; and support State laws regarding the establishment and maintenance of a state-designated defensible space zone around homes, local hazard abatement ordinances, and fire codes.

3.5 The Park District will include cost-effectiveness and cost criteria in decision making and management of the vegetation management program.

3.6 The Park District will consider combining recommended vegetation treatment areas located in close proximity to one another that contain similar vegetation types and require similar fuel treatment and maintenance activities to increase locational efficiencies and reduce program management costs, where appropriate.

3.7 Should the Park District identify new area not previously mapped and evaluated as part of a recommended treatment area that requires treatment to modify vegetation for the purpose of reducing wildfire hazards the District will assess the area to define the extent of the new treatment, and identify treatment prescriptions for fuel reduction, vegetation management and environmental protection, following the objectives, guidelines and best management practices identified in this Plan.

Because the project site was not yet transferred to the Park District at the time that the Wildfire Hazard Plan was prepared, the Wildfire Hazard Plan does not include site-specific vegetation treatment goals, treatment actions, or best management practices (BMPs) for the project site. Nevertheless, the goals, actions, and BMPs relating to fire hazard reduction in the Wildfire Hazard Plan would apply to the proposed project.

Fire Danger Operating Plan and Procedures. The Park District, in 2010, approved the *East Bay Regional Parks Fire Danger Operating Plan and Procedures* which describes the District's operational decisions and procedures based on the National Fire Danger Rating System (NFDRS). Data for five designated fire danger rating areas (FDRA) are provided by the Park District in the *Fire Danger Operating Plan and Procedures* document. Las Trampas and the project site are located in the North Central FDRA.[2]

[2] East Bay Regional Park District, Fire Danger and Weather Information, Website: https://www.ebparks.org/about/fire/fire_danger_and_weather_information/default.htm (accessed September 8, 2021).

The *Fire Danger Operating Plan and Procedures* includes Las Trampas; however, the project site is not included in the document since it was not yet part of Las Trampas when the document was approved. The *Fire Danger Operating Plan and Procedures* document is in the process of being updated and will incorporate the project site and apply to the project. As outlined in the *Fire Danger Operating Plan and Procedures*, the Park District utilizes the following indices to assess weather and fuel status and set corresponding restrictions:

- **Motorized Vehicle Travel Off Designated Roads.** The Park District uses the Keetch-Byram Drought Index to measure soil moisture to track the growth and drying cycle of grass, which is the principal fuel in which vehicle fires start and spread. When the index is greater than 200 for five continuous days and expected to remain there for the remainder of the fire season, motorized vehicle travel is restricted off of designated roadways.

- **Fire Danger.** The Park District uses the Burning Index to measure fuel conditions (moisture levels in live and dead plants) and the wind's effect to assess the fire behavior and the effort to contain a fire. The Burning Index relates to the average flame length and fire intensity expected. When the index is greater than 45 for five continuous days and expected to remain there for the remainder of the fire season, smoking is restricted in wildland areas. In the North Central FDRA, a Burning Index of 48 to 54 is considered a "very high" fire danger rating and 55 and above is considered an "extreme" fire danger rating.

Fire Restriction Levels. The Park District maintains fire danger information signs at its parks. The signs provide the public/employees/contractors visiting/working at the park information on fire danger levels and corresponding restrictions. The following Fire Danger Levels are used by the Park District: Low – No Restrictions; Moderate – No Restrictions; High – No Restrictions; Very High – Level 1 Restrictions; and, Extreme – Level 2 Restrictions.

When fire danger levels are low, moderate or high within the Park District, restrictions are not implemented. Typically, between July and October, fire danger levels within the Park District are rated very high or extreme resulting in the Park District implementing Level 1 and Level 2 Restrictions. The following would be implemented during Level 1 and Level 2 Restrictions:

- **Level 1 Restrictions**

    - Smoking allowed inside of enclosed vehicles, designated day-use picnic area, campgrounds, or developed recreational areas only.

    - Campfires and barbeques allowed inside of designated day-use picnic areas, campgrounds, or developed recreational areas only; gas-fueled stoves are permitted in all areas.

    - Vehicles are restricted to driving only on designated roadways; no cross-country driving.

- No use of gasoline-powered equipment (e.g., mowers in rough areas, weed eaters, chain saws, welders and generators) outside of irrigated areas, designated campground, or developed recreational areas, unless extra protection fire safety measures approved by the Fire Chief are implemented.

- **Level 2 Restrictions**

  - Smoking allowed inside enclosed vehicles only.

  - Open fires, campfires, or barbeques of any type are not allowed; gas-fueled stoves are permitted in all areas.

  - Vehicles are restricted to driving only on designated roadways; no cross-country driving.

  - No use of gasoline powered equipment (e.g., mowers in rough areas, weed eaters, chain saws, welders and generators) outside of irrigated areas, designated campgrounds or developed recreational areas; maintenance of irrigated areas is permitted. Road grading is permitted provided extra protection fire safety measures approved by the Fire Chief are implemented.

  - Contractors may continue working on Park District lands provided they institute extra protection fire safety measures approved by the Fire Chief; contractor operations must be directly supervised by Park District staff to ensure specified extra protection fire safety measures are implemented.

If the Park District Fire Department has limited resources to fight fires and the National Weather Service has declared a "Red-Flag Warning," the Park District will close its parks to public use. The National Weather Service will declare a Red-Flag Warning when Diablo Winds are blowing from the east, there is low relative humidity, low to moderate off-shore winds, or lightning storms are anticipated. The Park District posts closures and Level 1/Level 2 Restrictions at trailheads and staging areas of their parks as well as on the Park District's website.

4.9.1.2 Existing Conditions

Fire environments are dynamic systems and include many types of environmental factors and site characteristics. Fires can occur in any environment where conditions are conducive to ignition and fire movement. Areas of naturally vegetated open space are typically comprised of conditions that may be favorable to wildfire spread. The three major components of fire environment are topography, climate, and vegetation (fuels). The state of each of these components and their interactions with each other determines the potential characteristics and behavior of a fire at any given moment.

A wildfire is a nonstructural fire that occurs in vegetative fuels. Wildfire generally does not include prescribed or controlled fires set by firefighters to manage fuel loads in fire-prone landscapes. Wildfires can occur in undeveloped areas (such as the project site) and spread to urban areas where

the landscape and structures are not designed and maintained to be ignition-resistant. A wildland-urban interface (WUI) is an area where urban development is located in proximity to open space or "wildland" areas. Urban areas of Danville and San Ramon are located adjacent to the northeast and south/southeast boundary of the project site, respectively. The potential for wildland fires represents a hazard where development is adjacent to open space or within close proximity to wildland fuels or designated FHSZ. Steep hillsides and varied topography can also contribute to the risk of wildland fires. Fires that occur in WUI areas may affect natural resources as well as life and property.

Wildfire ignition sources may include: lightning, improperly managed camp fires, cigarettes, arson, sparks from automobiles, lawnmowers, and maintenance equipment, and other sources. Wildfire spread is often dramatically exacerbated when prolonged hot and dry weather conditions are coupled with strong wind events. The project site (as well as the San Francisco Bay region) typically experiences Diablo Wind events during the winter, spring and fall but these conditions can occur during the late summer as well.[3] Diablo Wind events are created when surface pressure in the Great Basin, an area east of the Sierra Nevada that reaches Utah and Rocky Mountains, builds much higher than surface pressure in the San Francisco Bay area causing strong easterly down sloping winds into the Sacramento Valley and up and over the Diablo range.[4] If a wildfire is occurring, Diablo Wind events can fan flames, exacerbate the burn rate and increase wildfire acreage. Climate change has increasingly led to conditions that are conducive to wildfire spread throughout much of the year. Key factors in assessing wildland fire risk include potential ignition sources, building materials and design, community design, structural density, the presence of slopes and vegetative fuels, fire occurrence and weather, as well as occurrences of drought.

CAL FIRE has mapped areas of significant fire hazards in the State through its Fire and Resources Assessment Program (FRAP). These maps place areas of California into different FHSZ, based on a hazard scoring system using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather where urban conflagration could result in catastrophic losses. As part of this mapping system, land where CAL FIRE is responsible for wildland fire protection and that is generally located in unincorporated areas is classified as a State Responsibility Area (SRA). Where local fire protection agencies (e.g., OCFA) are responsible for wildfire protection, the land is classified as a Local Responsibility Area (LRA). The FHSZ maps for Contra Costa County indicate that portions of the project site are designated as SRA High Fire Hazard Severity Zone and LRA High Fire Hazard Severity Zone.[5] Figure 4.9-1, Project Site Fire Hazard Severity Zones, shows the portions of the project site that are designated as SRA and LRA High Fire Hazard Severity Zones. The nearest SRA VHFHSZ is located approximately 0.5 mile northwest of the project site.

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3 AccuWeather, *What are Diablo winds?* Website: https://www.accuweather.com/en/severe-weather/what-are-diablo-winds/613878 (accessed September 7, 2021).

4 Ibid.

5 Office of the State Fire Marshal, *Fire Hazard Severity Zone Maps Contra Costa County LRA and SRA*, website: https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/ (accessed September 7, 2021).

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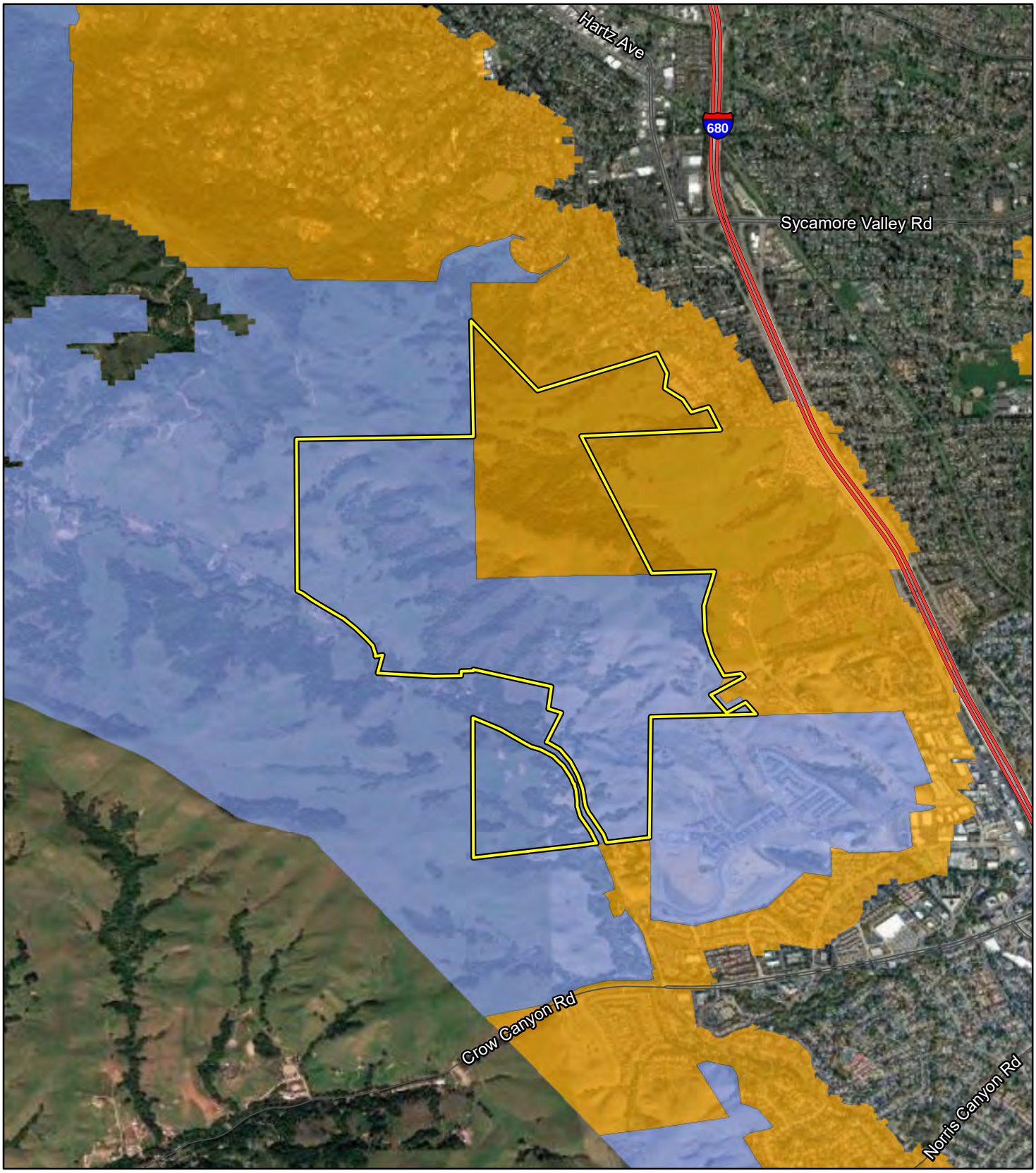

LSA

LEGEND

- Project Boundary
- LRA High Fire Hazard Severity Zone
- SRA High Fire Hazard Severity Zone

N

0 1250 2500
FEET

FIGURE 4.9-1

Las Trampas Wildfire Project

Project Site Fire Hazard Severity Zones

SOURCE: Google (2020); CALFIRE (2021)

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The Las Trampas Wilderness Regional Preserve, as well as the 756 acre project area, is occupied by wilderness areas where the dominant woodland vegetation on the western and southern exposures of Las Trampas and Rocky ridges is black sage, chamise, and buck brush. These are interspersed with toyon, hybrid manzanitas, elderberry gooseberry, chaparral currant, sticky monkeyflower, coffeeberry, coyote bush, poison oak, hollyleaf red berry, deer weed and dozens of other species, and creek dogwood along Bollinger Creek. Dominant trees in the project area include coast live oak, bay laurel, buckeye, big lead maple, canyon live oak, black oak, and scrub oak. Six fern species and large areas of grassland are also found within the project area.

The boundaries of the project site include existing Las Trampas parkland to the north, private residences and San Ramon Valley Boulevard to the east, private residences to the south, and Bollinger Canyon Road and private residences to the southwest. The topography of the project includes rolling foothills and a ridgeline where elevations range from approximately 500 feet in foothill areas to 1,450 feet along ridgeline areas. The existing characteristics of the parcels that would be included in the project are discussed as follows:

- **Peters Ranch Property.** The Peters Ranch property encompasses an approximately 58.84-acre area within unincorporated Contra Costa County and borders the Town of Danville to the north and east, and City of San Ramon to the south. Park District staff can access the property from Fountain Springs Drive off San Ramon Valley Boulevard.

- **Chen Property.** The Chen property encompasses an approximately 228-acre area within unincorporated Contra Costa County, bordering the Town of Danville to the northeast, and is within the City of San Ramon's Sphere of Influence (SOI). Park District staff access the property from Bollinger Canyon Road, which makes up the southern border of the property, and from Las Trampas Regional Wilderness to the north through the Calaveras Ridge Trail. A staging area along the frontage of Bollinger Canyon Road would provide public access to this property.

- **Elworthy Property.** The Elworthy property encompasses an approximately 232-acre area within unincorporated Contra Costa County and the Town of Danville. Park District staff and park users can access the property from the Elworthy service road off San Ramon Valley Boulevard. At the terminus of the Elworthy service road, an existing staging area and trail connector to the Calaveras Ridge Trail provide access to the parkland property through an easement across private property.

- **Podva Property.** The Podva property encompasses an approximately 96-acre area within the Town of Danville. To the west of the property is Las Trampas. The property includes an access point and trail with public on-street parking from Wingfield Court and Midland Way, off San Ramon Valley Boulevard.

- **Faria Property.** The Faria property encompasses an approximately 141-acre area within unincorporated Contra Costa County. The property borders the City of San Ramon to the southeast. Bollinger Canyon Road splits the Faria property and runs from the northwest to southeast. This property would remain in land bank status until future acquisitions and/or regional trail connections to Park District property in San Ramon can be made.

CAL FIRE, in coordination with statewide multi-agencies, keeps a database of fire history in California. Timber fires 10 acres or greater, brush fires 30 acres or greater, and grass fires 300 acres or greater back to 1950 are included in this database. The only recorded fire near the project site occurred in 1954 (Cull Canyon Fire) in the southwest portion of Las Trampas and burned approximately 300 acres.[6]

As previously discussed, the project site is located in an SRA High Fire Hazard Severity Zone. San Ramon Boulevard and Bollinger Canyon Road accommodate traffic flows along the eastern and southern portion of the project site, respectively, and smaller roads from San Ramon Valley Boulevard provide access to the project area. The proximity of these existing roadways increases fire risk and influences the potential for human-caused wildfires to occur within Las Trampas and the project area under current conditions.

4.9.2 Research Methodologies

This section addresses factors that could expose people or structures to fire or post-fire flooding or landslides, risk or impair emergency response, or require installation of infrastructure that could exacerbate fire risk. Past case law supports that CEQA should evaluate a proposed project's impact on the environment (e.g., potential of a housing development to degrade air quality), rather than the environment's impact on a project (e.g., potential for an earthquake to destroy a housing development). In *California Building Industry Association v. Bay Area Air Quality Management District* (CBIA v. BAAQMD), the CBIA challenged BAAQMD's adoption of CEQA air pollutant significance thresholds that required analysis of impact on "new receptors" (residents and workers drawn to an area as a result of a proposed project). The California Supreme Court found that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users," except where a proposed project may exacerbate those environmental hazard or conditions that already existing. Therefore, this section does not directly focus on the risk of wildfire to the project, rather it addresses whether the project exacerbates the risk of a natural disaster pertaining to wildfire by bringing proposed project activities to a vulnerable area. The analysis is based on review of CAL FIRE FHSZ maps, location and regional hazard mitigation plans, and project conformance to applicable fire codes and plans.

4.9.3 Significance Thresholds

The thresholds for wildfire impacts used in this analysis are consistent with the current Appendix G of the State CEQA Guidelines. After completion of the Initial Study (included in Appendix A), it was determined that the analysis of risks related to wildfires (refer to Section 3.9.g, Hazards and 3.20, Wildfire of the Initial Study) should be reevaluated in light of the recent increase in number and severity of wildfire events that have occurred throughout the State, to ensure that these impacts are thoroughly addressed. Therefore, the applicable significance thresholds are identified below, and the analysis below further expands on the Initial Study analysis. Generally, if the proposed project

[6] Fire and Resource Assessment Program California Department of Forestry and Fire Protection (CAL FIRE), GIS Data Fire Perimeters through 2020, Website: https://frap.fire.ca.gov/mapping/gis-data/ (accessed September 7, 2021).

would be located in or near SRAs or lands classified as VHFHSZ, the proposed project may be deemed to have a significant impact with respect to wildfires if it would:

a. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires;

b. Substantially impair an adopted emergency response plan or emergency evacuation plan;

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes; or

e. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

4.9.4 Impact Analysis

The following describes the potential project impacts and cumulative impacts related to wildfire that would result from implementation of the proposed project.

4.9.4.1 Project Impacts

a. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The proposed project would include appending 756 acres of land into Las Trampas; development of new trail connections, a new staging area, and two walk-in entrances. Although no new structures would be built within Southern Las Trampas, the proposed project would provide new passive recreational facilities and access points that would increase the use and human activity within formerly inaccessible areas of Southern Las Trampas. Because human activities are the leading cause of wildfires in California and the United States, this increased use and activity has the potential to increase the sources of potential fire ignition and wildfire spread within Las Trampas and nearby areas, as further discussed below.

Construction. The project component of the proposed project to add 756 acres into Las Trampas, would not require construction; and therefore would not exacerbate wildfire risk. Construction of the new trail connections and development of a staging area and two walk-in entrances would require the use of small construction equipment and hand tools and may require some areas of Las Trampas to be temporarily closed to the general public. However, construction associated with the proposed project would not require the closure of the existing Elworthy Staging Area nor the Danville Fire Trail which currently provides access to the project site. In addition, construction of the proposed project would not require the closure of any roadways or block roadway lanes adjacent to the project site. Overall, the Park District Fire Department, and other emergency agencies would continue to be able to adequately access Las Trampas under emergency situations and visitors of

the area would still be able to adequately evacuate the preserve during project construction activities in the event of wildland fires.

Operation. Currently, the 12-car Elworthy Staging Area provides the only formal access to the project area. Vehicles accessing the new staging area at the Old Time Corral could ignite accidental wildfires through the dragging of vehicle parts, chains, or other malfunctioning equipment that could generate sparks. This is similar to the existing risk at the Elworthy Staging Area. People accessing the project site through new trail connections could also lead to the ignition of wildfires through debris burning, arson, open flame fires, equipment use, and unlawful activities that could increase with the provision of new entrances and opportunities for passive recreation. Similar to other access points in Las Trampas, the proposed project would install signage at walk-in access points and staging areas stating the current conditions at the park, rules for park patrons to follow, and prohibited activities. Such signage is a first defense in reducing human caused wildfires.

Routine maintenance activities on proposed facilities and trails would occur; however, staff and contractors performing maintenance activities would be required to follow the regulations and policies set forth by the Park District's Fire Department, Fire Danger Operating Plan and Procedures, fire restriction levels, and the Park District's Master Plan.

As discussed above in Section 4.9.1.1, the Park District maintains fire danger information signs at its parks, and would include such signs at the project site. The Park District's Fire Restriction Levels implements stricter policies for patrons during Level 1 (Very High) and Level 2 (Extreme) fire conditions. Level 1 restrictions include:

- Smoking allowed inside of enclosed vehicles, designated day-use picnic areas, campgrounds, or developed recreational areas only.
- Campfires or barbeques allowed inside of designated day-use picnic areas, campgrounds, or developed recreational areas only; gas-fueled stoves are permitted in all areas.
- Vehicles are restricted to driving only on designated roadways; no cross-country driving.
- No use of gasoline-powered equipment (e.g., mowers in rough areas, weed eaters, chain saws, welders and generators) outside of irrigated areas, designated campgrounds, or developed recreational areas, unless extra protection fire safety measures approved by the Fire Chief are implemented.

Level 2 restrictions include:

- Smoking allowed inside enclosed vehicles only.
- Open fires, campfires, or barbeques of any type are not allowed; gas-fueled stoves are permitted in all areas.
- Vehicles are restricted to driving only on designated roadways; no cross-country driving.

- No use of gasoline powered equipment (e.g., mowers in rough areas, weed eaters, chain saws, welders and generators) outside of irrigated areas, designated campgrounds, or developed recreational areas; maintenance of irrigated areas is permitted. Road grading is permitted provided extra protection fire safety measures approved by the Fire Chief are implemented.

- Contractors may continue working on District lands provided they institute extra protection fire safety measures approved by the Fire Chief; contractor operations must be directly supervised by a District representative to ensure specified extra protection fire safety measures are implemented.

If the Park District Fire Department has limited resources to fight fires and the National Weather Service issues a Red Flag Warning, the Park District may shut down access to their facilities, including the project site and Las Trampas.

Implementation of the Park District's Fire Danger Operating Plan and Procedures, Fire Restriction Levels, Master Plan Policies, Wildfire Hazard Plan, and State Regulations would ensure that the increased human presence and activity within Southern Las Trampas, as well as installation and maintenance of proposed project improvements, would not exacerbate the generation and/or spread of wildfire within or adjacent to the project area. Therefore, wildfire hazards would not be exacerbated with the proposed project, such that people or structures would be exposed to an increased risk of loss, injury, or death involving wildland fires, as compared to current conditions. Impacts would be less than significant, and no mitigation measures are required.

b. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

Access to the proposed project site under existing conditions is from the Elworthy Staging Area at Elworthy Ranch Circle in the Town of Danville. This staging area also provides access to the Danville Fire Trail which allows emergency access and or evacuation to and from the project site. The proposed project would add a new staging area and two new walk in entrances, increasing the number of access points to the project area. Proposed trails would increase internal connections to and through Southern Las Trampas. Construction and operation period impacts related to emergency access are discussed below.

Construction. The main component of the proposed project, the LUPA, to add 756 acres into Las Trampas, would not require construction; and therefore, would not impair an adopted emergency response plan or emergency evacuation plan. Construction of the new trail connections, and development of a staging area and two walk-in entrances would require the use of small construction equipment and hand tools and may require some areas of Las Trampas to be temporarily closed to the general public. However, construction associated with the proposed project would not require the closure of the existing Elworthy Staging Area nor the Danville Fire Trail, which currently provides access to the project site. In addition, construction of the proposed project would not require the closure of any roadways or block roadway lanes adjacent to the project site. Overall, the Park District Fire Department, and other emergency agencies would continue to be able to adequately access Las Trampas under emergency situations and visitors of the area would still be able to adequately evacuate the preserve during project construction

activities. The proposed project, during construction, would not substantially impair an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant and no mitigation measures would be required.

Operation. With project implementation, an additional 756 acres of land would be added to Las Trampas. The majority of this land would be open for public use, thereby increasing the number of daily activities and visitors accessing the area when compared to existing conditions. Even though more area would be added to Las Trampas and more visitors are expected to access the site, the Park District would continue to implement emergency response plans and emergency evacuation plans in the event of a wildfire (or other emergency) through the *Fire Danger Operating Plans and Procedures* document and the *Wildfire Hazard Reduction and Resource Management Plan* prepared by Park District. The proposed project would be included in the *Fire Danger Operating Plans and Procedures* that the Park District is currently updating; and therefore, would be protected under an adopted emergency response plan/emergency evacuation plan pertaining to wildfires. The *Wildfire Hazard Reduction and Resource Management Plan* includes guidelines for Strategic Fire Routes to support implementation of emergency evacuation plans:

> **1.9** Establish and maintain a system of Strategic Fire Routes throughout the parks, based on existing roads and trails, to facilitate and support emergency vehicle access, evacuation, and strategic firefighting response; to reduce roadside ignition potential; to support the development of fire management units; and to reduce the fuel load in critical locations adjacent to roads to provide time for successful initial wildfire attack. When accomplishing the following roadside vegetation management standards for the designated Strategic Fire Routes, follow the performance standards for each vegetation type established in the Plan:
>
> - **Road Width:** Maintain a minimum clearance of 10 feet and maximum clearance of 20 feet from the edge of Strategic Fire Routes to allow for varied clearance distances. Varying the clearance distances will preserve aesthetic values along these routes by eliminating the potential for clearance to create a "hedgerow" effect.
>
> - **Vertical Clearance:** Maintain a minimum vertical clearance of 13.5 feet for all Strategic Fire Routes to allow fire apparatus access.

The proposed project would also include new trail connections, a new staging area, and two walk-in entrances in areas where previous access to Las Tramps was not permitted. The Old Time Corral Staging Area located adjacent to Bollinger Canyon Road would provide public parking and access to the Sabertooth Trail, Warbler Loop Trail and western areas of Las Trampas; the Podva Walk-in Entrance would provide pedestrian/bicyclist access to the northeastern portion of Las Trampas; and, the Saudade Walk-In Entrance would provide pedestrian/bicyclist access to the southern part of Las Trampas in the proposed Faria Dedication area. Other public trails and public access points into Las Trampas would also be provided in the Faria Dedication area in the southernmost part of Las Trampas. All of these new staging, public access, trail connection, trail features, and walk-in access points would be part of the updated *Fire Danger Operating Plans and Procedures* currently being prepared by the Park District and would also provide additional access and evacuation routes for

emergency personnel (Emergency Vehicle Management Access [EVMA]) and visitors in Las Trampas. As such, the existing *Fire Danger Operating Plans and Procedures* that is implemented by the Park District at other facilities would apply to the project site.

As indicated previously, the proposed project is located in an SRA High Fire Hazard Severity Zone. San Ramon Boulevard and Bollinger Canyon Road accommodate traffic flows along the eastern and southern portion of the project site, respectively, and smaller roads from San Ramon Valley Boulevard provide access to the project area. As previously noted in Section 4.9.1.1, the proximity of these roadways to the adjacent undeveloped lands within Southern Las Trampas presents an existing risk for human-caused wildfires to occur. Operation of the proposed project would result in an increase in vehicle traffic on San Ramon Valley Boulevard, Bollinger Canyon Road, and the smaller roads that provide access to the project site. The increase in vehicle traffic associated with the proposed project would not adversely affect intersection operations, as shown in Section 4.8 Transportation of this EIR; thus, the project would not interfere with emergency evacuation or emergency response efforts.

The increase in vehicle traffic associated with the proposed project, as well as increased access to the project site could increase wildfire risk associated with the proposed project. However, in the event of fire ignition in these areas, similar to existing conditions, initial 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 be dispatched). This response would not be affected by the proposed project improvements. Engines and a water tender as well as overhead personnel would also respond from the Park District's Fire Station I (Tilden). Response times to the proposed project site would be 30 to 45 minutes depending on the time of day and responding agencies. The Park District has a Mutual Aid Agreement in place with the San Ramon Valley Fire Protection District. This agreement sets forth plans for coordinated response to emergencies, evacuations, 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) such as the project site. As such, emergency responses would be coordinated between the Park District and other emergency agencies to ensure that emergency responses are effective and not impaired. Given the low vehicular trip generation of the project, none of the response times from these agencies would be adversely affected by the proposed improvements.

For the reasons discussed above, implementation of the proposed project would not substantially impair an adopted emergency response plan or emergency evacuation plan that applies to the project area or its vicinity. Impacts would be less than significant, and no mitigation measures would be required.

Significance without Mitigation: Less than Significant.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The proposed project would include appending 756 acres of land into Las Trampas; new trail connections; development of a staging area and two walk-in entrances; and installation of a new corral.

Project implementation would include the development of a staging area off Bollinger Canyon Road on the Chen property to serve as the southern gateway to Las Trampas; development of a corral within the grading footprint of the proposed staging area to replace the existing cattle corral that is at the site of the proposed staging area; the development of 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; and the designation of an existing 0.5-mile access road 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.

Construction. The project would not require the construction, installation or maintenance of any associated infrastructure that could exacerbate fire risk or result in temporary or ongoing impacts to the environment. Development of a staging area and new corral at the currently existing corral site along Bollinger Canyon Road would not require the installation of emergency water sources, power lines, or other utilities. No fuel breaks would be constructed as part of this project. The proposed project includes the installation of access roads that aid in wildfire protection through the development of the 1.1-mile access road on the Chen property and the designation of the existing 0.5-mile access road on the existing Las Trampas parkland as a natural surface, multi-use trail that will continue to allow emergency and maintenance vehicles access to the project site and the existing Las Trampas parkland. Staff and contractors constructing the access road on the Chen property would comply with the standard construction Best Management Practices to avoid or minimize potential wildfire risks during construction.

Operation. The proposed project would include routine ongoing maintenance of the passive recreational facilities and access points. Staff and contractors performing maintenance activities would be required to follow the regulations and policies set forth by the Park District's Fire Department, *Fire Danger Operating Plan and Procedures*, fire restriction levels, and the Park District's Master Plan. Operation of the corral would be primarily used only twice a year in December and July; therefore, there would be minimal fire risk.

Based on the above discussion, installation and maintenance of associated infrastructure for the project would not exacerbate fire risk and would have minimal impacts to the environment. Impacts would be less than significant, and no mitigation measures are required.

Significance without Mitigation: Less than significant.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Landslides and other forms of mass wasting, including mud flows, debris flows, and soil slips, occur as soil moves downslope under the influence of gravity. Landslides are frequently triggered by

intense rainfall or seismic shaking but can occur as a result of erosion and downslope runoff caused by rain following a wildfire. The California Department of Conservation and California Geologic Survey classifies the project site and Las Trampas with a very high landslides susceptibility (Classes VIII, IX and X) because of the very steep slopes in hard rocks and moderate to very steep slopes in weak rocks found in the area.[7] According to the Federal Emergency Management Administration (FEMA) Flood Hazard Map, the project site partially lies in Flood Insurance Rate Map (FIRM) Panels 06013C0445F, 06001CO120G, and 06013C0461F. FEMA has mapped a 100-year flood hazard zone surrounding the creek that parallels Bollinger Canyon Road and 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).

If a wildfire were to go through the project site, there is potential for secondary effects such as landsliding and flooding that could occur during and after rain events. The proposed project would include minor grading activities and construction of a new staging area that would slightly alter existing drainage patterns; however, these activities would not cause big enough changes in the project area to increase post-fire instability or flooding issues. The Park District also implements actions through policies and regulations included in the Park District's Fire Danger Operating Plan and Procedures and the Wildfire Hazard Reduction Plan for post-fire maintenance and clean up that would include revegetating burnt areas to reduce soil erosion and landslides and removing silt and buildup in known drainage areas to reduce flooding during post-fire rainfall events. Per the policies and guidelines of the Park District's Fire Danger Operating Plan and Procedures, Fire Restriction Levels, and Master Plan Policies, the Park District would also close Las Trampas to the public if a wildfire were to occur until post-fire conditions are safe enough to not cause injury or death to visitors. There are no structures that would be affected in the event of a landslide or downstream flooding. The drainage on the Chen property flows east from the property along Bollinger Canyon Road and is not adjacent to any structures.

Based on the above discussion, implementation of the Park District's Fire Danger Operating Plan and Procedures, Fire Restriction Levels, Master Plan Policies, and Wildfire Hazard Plan would reduce potential injury to visitors, staff, or damage to structures from post-fire landslide or flooding conditions. Impacts would be less than significant, and no mitigation measures are required.

Significance without Mitigation: Less than Significant.

e. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Topography influences the movement of air, thereby directing a fire course. For example, if the percentage of uphill slope doubles, the rate of spread in wildland fire will likely double. Wind events, such as Diablo Winds, magnify the risks of wildfire in the project area under current conditions and have the potential to expose inhabitants of Danville and San Ramon to the east and single-family residential units to the west, to elevated pollutant concentrations from a wildfire and the

[7] California Department of Conservation, Landslides, The California Landslide Inventory, Website: https://maps.conservation.ca.gov/cgs/lsi/app/ (accessed September 7, 2021).

uncontrolled spread of wildfire from open spaces within the project site. The proposed project would include adding land into Las Trampas; new trail connections, and development of a staging area and two walk-in entrances. The proposed project would increase human activity in Southern Las Trampas, and this area is characterized by steeply sloping terrain and wind conditions that are already conducive to wildfire spread. In addition, development of the proposed improvements would require grading that has potential to create new slopes within the project site, which could create new conditions conducive to wildfire spread. The proposed project's potential to exacerbate wildfire risks, due to the increased human activity in an area with existing wildfire risks associated with existing topographical, prevailing wind, and vegetation conditions, is discussed in this section.

Detailed grading and construction plans for the project have not yet been developed; however, the proposed project would be designed to implement the least amount of grading possible to minimize the potential for the creation of new slopes. As the 756 acres being added to Las Trampas and the existing land in Las Trampas is already hilly and steeply sloped in some areas, newly graded areas associated with project components would not change the topographical characteristics of the project site or Las Trampas in such a way that create new topographical conditions that would increase the spread of wildfire. Implementation of new trail connections would instead occur in areas of the project site that are already sloped; therefore, any grading that would occur with these project components would soften such slopes into flatter, easier to access areas.

The Diablo wind pattern typically occurs in the spring and fall and blows offshore from the northeast. Other onshore wind events in the project area can occur throughout the year (typically in the winter) but are typically not as long lasting or strong as Diablo wind events. Prevailing winds in the project area are from the west in February through November and from the north from November to February.[8] Implementation of the proposed project does not include any components that would affect prevailing wind in the project area nor affect Diablo wind events that currently occur. The proposed project is located just west of the Town of Danville and west/north of the City of San Ramon and just east of unincorporated Contra Costa County land occupied by single-family large lot residential units. As discussed above, wind events, such as Diablo Winds, magnify the risks of wildfire in the project area and have the potential to expose inhabitants of Danville and San Ramon to the east and single-family residential units to the west, to elevated pollutant concentrations from a wildfire and the uncontrolled spread of wildfire from open spaces within the project site. Each of these jurisdictions have regulations in place (i.e., building code, evacuation notification) to protect structures and inhabitants from wildfire that could start in the open space areas of the proposed project and Las Trampas and be fanned by prevailing wind or Diablo wind events. Additionally, the Park District's Fire Department, Master Plan, Ordinance 38, General Conditions, Wildfire Hazard Reduction and Resources Management Plan, and Fire Danger Operating Plan and Procedures provides regulations that further reduce the risk of wildfire ignition, spread, or fanning by winds, in the Park District's jurisdiction. During wildfire and wind events, the Bay Area Air Quality Management District (BAAQMD) staff monitors and offers air quality alerts, advisories, forecasts, and an interactive online map to view current air quality conditions in the region. The

[8] Weatherspark, Climate and Average Weather Year Round in Danville, Website: https://weatherspark.com/y/1069/Average-Weather-in-Danville-California-United-States-Year-Round (accessed September 8, 2021).

BAAQMD's tools allow the general public to make informed decisions about air quality issues created by smoke from wildfires and helps the general public in deciding to leave the area for better air quality options during such events.

Another factor that influences the spread of wildfire and increases the opportunity of ignition is vegetation composition. The project site and Las Trampas is occupied by wilderness areas where the dominant woodland vegetation on the western and southern exposures of Las Trampas and Rocky ridges is black sage, chamise, and buck brush. These are interspersed with toyon, hybrid manzanitas, elderberry gooseberry, chaparral currant, sticky monkeyflower, coffeeberry, coyote bush, poison oak, hollyleaf red berry, deer weed and dozens of other species, and creek dogwood along Bollinger Creek. Dominant trees in the project area include coast live oak, bay laurel, buckeye, big lead maple, canyon live oak, black oak, and scrub oak. Based on the existing vegetated characteristics, in the event of fire ignition that could occur as a result of increased human activity at the site, the proposed project has the potential to exacerbate wildfires in the area and expose downwind residents to increased pollutant concentrations. However, the Park District has a well-established vegetation management program through all of their parks that would be implemented by the project. The Park District's Fire Department, Master Plan, Ordinance 38, General Conditions, Wildfire Hazard Plan, and Fire Danger Operating Plan and Procedures provides regulations for vegetation management to reduce fire fuel within their park system. In compliance with the Wildfire Hazard Plan, the Park District's Fire Department creates an annual work plan of fuel treatment projects that would also be applicable to the proposed project. Finally, the Park District has created a Goat Grazing Program, which uses grazing animals on Park District properties as a practical and economic resource management tool which helps reduce fire hazards by controlling the amount and distribution of grasses and other fuel inside of parks.

Furthermore, during wildfire and wind events, the BAAQMD monitors and offers air quality alerts, advisories, forecasts, and an interactive online map to view current air quality conditions in the region. The BAAQMD's tools allow the general public to make informed decisions about air quality issues created by smoke from wildfires and helps the general public in deciding to leave the area for better air quality options during such events.

As discussed above under Section 4.9.1.1.a, the project has the potential to increase human activity in the project area, thereby increasing the risk of wildfire ignition and spread; however, this increase would not be substantial, and would be controlled through implementation of existing regulations and policies set forth by the Park District's Fire Department, Fire Danger Operating Plan and Procedures, fire restriction levels, and the Park District's Master Plan. In addition, although existing and proposed project conditions have the potential to expose inhabitants of Danville and San Ramon to the east and single-family residential units to the west, to elevated pollutant concentrations from a wildfire associated with existing topographical, wind, and vegetation conditions, the Park District's existing regulatory requirements and policies, including the Park District's Fire Department, Master Plan, Ordinance 38, General Conditions, Wildfire Hazard Plan, and Fire Danger Operating Plan and Procedures, would be applicable to the proposed project and the design of proposed project improvements would minimize this threat. In addition, as discussed above, BAAQMD monitors air quality and issues alerts to notify nearby communities of wildfires and poor air quality. Taken together, potential wildfires would be addressed by emergency responses

and active vegetation management consistent with Park District policies, and public alerts and notices would assist in reducing impacts from pollutant concentrations to project occupants and the surrounding community. As a result, potential impacts would be less than significant, and no mitigation measures would be required.

Significance without Mitigation: Less than significant.

4.9.4.2 Cumulative Impacts

The purpose of this section is to evaluate any additional incremental impact that the proposed project is likely to cause over and above the combined impacts of recently approved cumulative projects. Present and reasonably foreseeable proposed projects include the Faria Preserve project and the Chang project. The Faria Preserve project is within the San Ramon city limits, west of I-680 and south of the Danville town limit, and would include 740 residential units, a 1.5-acre house of worship site, a 2.6-acre educational facility site, a 12.9-acre community park, and a 0.7-acre rose garden. The Chang project site is at the northwest corner of Bollinger Canyon Road/Crow Canyon Road, within the San Ramon city limit, and would include 43 single-family, large-lot homes and 18 accessory dwelling units.

Implementation of the Faria Preserve project would result in a less-than-significant impact related to exposing people or structures to wildland fire following the incorporation of a mitigation measure that requires the project to implement the Open Space Management Plan approved by the San Ramon Valley Fire Protection District. Implementation of the Chang project would not result in a potentially-significant impact related to wildland fires that would require mitigation.

As discussed above, the proposed project would introduce people to the project site through new trails and access points into the project site. However, due to the existing topography and conditions of the project site, the new features constructed in the project site, such as trails and staging area, would not exacerbate an existing wildfire risk. The addition of more people to the project site would potentially increase the risk of wildfire, however, as stated above, the Park District has policies and operating procedures that reduce potential wildfire risks. Combined with the cumulative projects, implementation of the proposed project is not anticipated to contribute to increased wildfire risk because the policies and procedures implemented by the Park District, as well as local emergency responses, would not result exacerbate the wildfire risks within the project site or surrounding areas. Therefore, the proposed project impacts would not combine with reasonably foreseeable cumulative projects to create a cumulatively considerable impact related to wildfire, and this impact would be less than significant.

5.0 OTHER CEQA CONSIDERATIONS

Section 15126 of the CEQA Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. This chapter provides an overview of the potential impacts resulting from the implementation of the proposed project based on the analyses presented in Chapter 4.0 of this EIR. The topics covered in this chapter include impacts found not to be significant, growth inducement, significant and unavoidable impacts, and significant irreversible changes. A more detailed analysis of the effects the proposed project would have on the environment and proposed mitigation measures to minimize significant impacts are provided in Sections 4.1 through 4.9 of this EIR.

5.1 GROWTH INDUCEMENT

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project or the construction of additional housing, either directly or indirectly, could foster economic or population growth in the surrounding environment. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are only sparsely developed or are underdeveloped. This section evaluates the potential of the proposed project to induce growth. Not all aspects of growth inducement are negative; rather, negative impacts associated with growth inducement occur only where the growth associated with the proposed project would cause adverse environmental impacts.

The proposed project is not expected to result in direct or indirect growth inducement because the project proposes the preservation of parkland and natural resources. No housing is proposed as a part of the project, and no land use that would substantially increase employment opportunities is proposed. Furthermore, construction activities associated with the proposed project would not likely generate employment opportunities, such that the need for new housing would occur.

5.2 SIGNIFICANT IRREVERSIBLE CHANGES

Section 15126.2(d) of the CEQA Guidelines requires an EIR to discuss the extent to which the proposed project would commit nonrenewable resources to uses that future generations would probably be unable to reverse. The three CEQA-required categories of irreversible changes are discussed below.

5.2.1 Changes in Land Use Which Commit Future Generations

The proposed project would guide future uses within the project site and would also involve the construction of facilities that would allow for public access to the project site. Although the proposed project would commit future generations to using the project site for recreational and natural resources conservation, such a commitment is consistent with current land uses.

5.2.2 Irreversible Damage from Environmental Accidents

Demolition and construction activities associated with construction of the proposed project would involve some risk for environmental accidents. However, accidental spills and soil contamination, would be addressed by the Park District, and would follow professional industry standards for safety and construction. Although there is a possibility for contaminated soil to be encountered during of the staging area and/or ground disturbance associated with project construction, it is likely that such contamination may have resulted from agricultural operations. However, the risks of accidental contamination from handling construction materials or transport of these materials off site would not be considered significant through compliance with the many federal, State, and local regulations regarding the handling and disposal of such construction materials. Additionally, the land uses proposed by the project would not include any uses or activities that are likely to contribute to or be the cause of a significant environmental accident, such as industrial-related spills or leaks. As a result, the proposed project would not pose a substantial risk of environmental accidents.

5.2.3 Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes issues related to increased energy consumption, conversion of agricultural lands, and lost access to mining reserves. The proposed project would require resources for construction and ongoing maintenance, which would irreversibly commit some materials and non-renewable energy resources. Materials and resources used during construction would include, but are not limited to, non-renewable and limited resources such as oil, gasoline, sand, gravel, asphalt, and steel. During the operational phase of the proposed project, energy sources including oil and gasoline would be used for transportation of people to and from the project site.

As discussed in Section 4.6, Energy, of the Initial Study (included as Appendix A of this EIR) the projected energy impacts would not result in a significant adverse impact. In addition, the proposed project would comply with Title 24 of the California Code of Regulations (CCR) that requires conservation practices that would limit the amount of energy (California Energy Code Building Energy Efficiency Standards [Title 24, Part 6]) consumed through construction of the project. The use of such resources would continue to represent a long-term commitment of essentially non-renewable or slowly renewable resources.

The proposed would not result in an increase in water demand, but the proposed on-site vault toilets would result in an increase in wastewater generation. However, this increase in wastewater would not be a substantial increase because the proposed project would not result in a population increase.

Although the construction and ongoing operation of the proposed project would involve the use of non-renewable resources, through the inclusion of applicable standards and regulations, the proposed project would not represent an unjustified use of such non-renewable resources.

5.3 SIGNIFICANT UNAVOIDABLE IMPACTS

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. As determined in

this EIR, implementation of the proposed project would not result in significant and unavoidable adverse impacts. With implementation of mitigation measures, potential impacts related to aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and noise, would not occur.

5.4 IMPACTS FOUND NOT TO BE SIGNIFICANT

Under CEQA, environmental issues for which there is no likelihood of an impact do not need to be analyzed in the EIR. The following environmental issues were found to result in no impacts by the Initial Study and are not analyzed further in this EIR.

- Agriculture and Forest Resources
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems

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6.0 ALTERNATIVES

This chapter presents the California Environmental Quality Act (CEQA) alternatives analysis for the proposed project. According to the CEQA Guidelines Section 15126.6:

> *An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.*

The CEQA Guidelines recommend that an EIR briefly describe the rationale for selecting the alternatives to be discussed (CEQA Guidelines Section 15126.6[c]). The nature and scope of the "reasonable range of alternatives" to be discussed is governed by the "rule of reason." The goal of the alternatives analysis considers the following factors:

- The extent to which the alternative would accomplish most of the basic goals and objectives of the project;
- The extent to which the alternative would avoid or lessen the identified significant and unavoidable environmental effects of the project;
- The feasibility of the alternative, taking into account site suitability, availability of infrastructure, general plan consistency, and consistency with other applicable plans and regulatory limitations;
- The extent to which an alternative contributes to a "reasonable range" of alternatives necessary to permit a reasoned choice; and
- The requirement of the CEQA Guidelines to consider a "no project" alternative and to identify an "environmentally superior" alternative in addition to the no-project alternative.

6.1 SELECTION OF ALTERNATIVES

Section 21100 of the Public Resources Code and Section 15126.6 of the CEQA Guidelines require an EIR to identify and discuss a No Project alternative and a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the proposed project and that would avoid or substantially lessen any of the significant environmental impacts. When selecting a set of alternatives to analyze, Section 15126.6(f) of the CEQA Guidelines also discusses the consideration of alternative locations and determination of whether any of the significant effects of a proposed project would be avoided or substantially lessened by putting the project in another location.

Based on the criteria listed above, two alternatives have been selected to avoid or substantially lessen the significant impacts of the proposed project. Therefore, the alternatives considered in this Draft EIR include the following:

- **Alternative 1: No Project Alternative.** This alternative assumes the project site would remain in its current state and no improvements or additional recreational access would occur.

- **Alternative 2: Relocated Staging Area Alternative.** This alternative would include all of the components of the proposed project, but it would locate the proposed Old Time Corral Staging Area approximately 300 feet north of the currently proposed location.

- **Alternative 3: No Staging Area Alternative.** This alternative would include all of the components of the proposed project, with the exception that the proposed Old Time Corral Staging Area would not be developed.

6.2 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

State CEQA Guidelines Section 15126.6(c) provides that an EIR "should also identify any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts." The following alternative was considered but was dismissed from further consideration as explained below.

- **Off-Site Alternative.** This alternative was not considered feasible, because the Park District owns and maintains the Las Trampas Regional Preserve and the basic objectives of the project are to increase public access while maintaining the natural and cultural resources within the preserve. Therefore, none of the basic project objectives would be achieved with an off-site alternative. Although Park District staff considered a staging area on the Faria dedication open space property, it would have required extensive grading into the hillside with construction of retaining walls, while not providing adequate sight distances for vehicle ingress and egress along Bollinger Canyon Road. Furthermore, an off-site location would not have fulfilled the goals for acquisition of the Chen property to provide a public access point onto the Las Trampas Ridge. The location on the Faria property also has no flat areas within County right-of-way, is located in critical Alameda whipsnake habitat, and any trail connections from this location would be infeasible for maintenance and emergency vehicle access.

6.3 PROPOSED PROJECT

6.3.1 Project Characteristics

As described earlier in Chapter 3.0, Project Description, the proposed project would implement a Land Use Plan Amendment (LUPA) for the southern region of Las Trampas (Southern Las Trampas or project area) to formally incorporate approximately 756 acres. This addition would expand the amount of parkland in Las Trampas to a total of approximately 6,000 acres.

The LUPA provides a formal planning review for the expansion of Las Trampas, outlines public access connections, and catalogs and plans for important natural and cultural resources for five parcels in the project area. The five parcels include four that the Park District currently owns: Chen, Elworthy, Peters Ranch, and Podva. The Faria parcel is anticipated to be dedicated to the Park District as

mitigation for a proposed development project and will be included in a future land use planning process.

Each parcel represents separate access and natural resource opportunities and constraints. The LUPA describes and outlines recommendations for each parcel. On the Chen parcel, the LUPA recommends a staging area and Emergency Vehicle and Maintenance Access (EVMA) road and recreational trail connection. The LUPA also evaluates public access to Las Trampas and along the Calaveras Ridge Trail via Peters Ranch, as well as trail connections to the Podva parcel. Furthermore, the LUPA serves as a resource for park operations and maintenance, summarizing long-term management plans for the Podva and Faria conservation easements, detailing the grazing plan for all parcels, and outlining roles and responsibilities for park staff on all five subject parcels.

While the LUPA summarizes the long-term management plans for the Faria parcel, the Faria parcel will remain closed to the public in landbank status, and any potential recreational trails or parking will be part of a future planning process.

6.3.2 Project Objectives

6.3.2.1 Purpose

The Land Use Plan Amendment would serve as an amendment to the 1993 Las Trampas Land Use Development Plan. 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 near Bollinger Canyon Road on property owned by the Park District that would accommodate at least 25 vehicles, benches, restroom, trail connections, a cattle corral for use by the grazing tenant, 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 resource and provide open space, trails, and safe and healthful recreation and environmental education.

6.3.2.2 Purpose

The primary purpose of this LUPA is to provide a framework for natural resource management for the project area and associated public staging/access and trails in the southern portion of Las Trampas.

6.3.2.3 Key Plan Recommendations

The following key plan recommendations have been identified to support the proposed project goals:

- 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.

- Develop a staging area off Bollinger Canyon Road on the Chen property, at the site of an existing cattle corral, 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. The plan proposes to name the staging area "Old Time Corral Staging Area". Construction would include a new corral within the grading footprint of the staging area.

- Provide public access into Las Trampas from a walk-in entrance on the Podva property off Wingfield Court and Midland Way. The plan proposes to name this walk-in entrance "Podva Walk-in Entrance".

- Provide public access into Las Trampas from a walk-in entrance on the Peters Ranch property from the City of San Ramon trail system on the Geological Hazard Abatement District (GHAD) open space lands around the Faria Preserve subdivision. The plan proposes to name this walk-in entrance "Saudade Walk-in Entrance."

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

- Construct and develop 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 service road. The plan proposes to name this trail "Sabertooth Trail".

- Design and develop one new 0.8-mile loop trail on the Chen property from the proposed staging area. The plan proposes to name this trail "Warbler Loop 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 service road.

- Close and abandon 0.4 miles of an existing service road within the Peters Ranch property.

- 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 from the Podva property. The plan proposes to name this trail "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 designated as part of the "Heritage Pear Trail".

- Designate 99 percent of the project area as a natural unit, with less than one percent as a recreation/staging unit.
- Designate 201 acres as Special Resource Protection Areas, which would include three Special Resource Features: a 35-acre wetland complex area, and two areas encumbered with a conservation easement.

6.3.3 Significant Unavoidable Impacts of the Proposed Project

As described in Chapter 4.0, Environmental Evaluation, the proposed project would not result in any significant unavoidable impacts. All potential adverse environmental impacts identified in the Initial Study (Appendix A) and the EIR could be reduced to less-than-significant levels through implementation of mitigation measures. As a result, the EIR identifies mitigation measures to reduce potential impacts to less-than-significant levels related to biological resources. In addition, the Initial Study identified less-than-significant impacts following mitigation for the following environmental topics: air quality, cultural resources, geology and soils, hazards and hazardous materials, and noise.

For the purpose of this alternatives analysis, it is assumed that the alternatives would comply with applicable federal, State, and local regulations, policies, and ordinances. It is also assumed that all mitigation measures required for implementation of the proposed project would apply to the project alternatives and similar corresponding reductions in impacts would be achieved through such mitigation. Therefore, the following discussion focuses on the ability of the alternatives to reduce project impacts and the potential impacts of the project alternatives related to these issues.

6.4 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

6.4.1 Description

Under this alternative, no improvements identified for the proposed project would occur, and the project site would continue to be used for minimal agricultural grazing. Access within the project site would be limited to those areas already open to the public. Under this alternative no construction activities or long-term operations associated with the proposed project would occur.

6.4.2 Environmental Analysis

6.4.2.1 Aesthetics

Under this alternative, no changes to the project site would occur, and the existing open space and agricultural character of the project site would not change. The change in the character of the site would not change, and the proposed staging area along Bollinger Canyon Road would not be constructed. Because the No Project alternative would not result in any physical changes, this alternative would not alter the project site. Impacts to aesthetics would not occur and would therefore be less than the proposed project.

6.4.2.2 Agriculture and Forestry Resources

This alternative would not change the existing land uses within the project site. No forestry resources are located within the project site. With no changes to the land uses included under this alternative, this alternative would not impact agricultural resources and would result in fewer impacts related to the conversion of agricultural resources when compared to the proposed project.

6.4.2.3 Air Quality

Under this alternative, construction of the staging area and trails would not occur. Although the potential air quality impacts resulting from the proposed project are limited to construction, any potential impacts would be mitigated to less-than-significant levels through implementation of a mitigation measure that incorporates construction specifications to reduce emissions and dust. Agricultural grazing operations would continue to occur within the project site. Areas of the project site that are currently open to the public would remain open to the public. This alternative would result in fewer air quality impacts when compared to the proposed project.

6.4.2.4 Biological Resources

Under this alternative, the existing biological resources located within the project site would not be affected and potential impacts to plant and animals' species would not occur because the existing land uses would not change, and construction and operation of the proposed project would not occur. As a result, this alternative would result in fewer impacts to such resources when compared to the proposed project.

6.4.2.5 Cultural Resources

Although no known cultural resources are located within the project site, the proposed project would require implementation of mitigation measures to address the accidental discovery of cultural resources. Under this alternative, no development would occur and no cultural resources would potentially be affected. As a result, this alternative would result in fewer impacts to cultural resources and tribal cultural resources when compared to the proposed project.

6.4.2.6 Energy

Under this alternative, construction of the staging area and trails would not occur. As a result, energy used for the construction of the proposed project would not occur. The existing energy demand of the existing agricultural grazing uses would be less than the proposed project. As a result, this alternative would result in fewer impacts related to energy use when compared to the proposed project.

6.4.2.7 Geology and Soils

Under this alternative, no physical changes would occur within the project site. In addition, the likelihood of discovering paleontological resources or unique geologic features would not increase under this alternative as no physical disturbance would occur under this alternative. As a result, this alternative would result in fewer impacts related to geology and soils and unknown paleontological resources.

6.4.2.8 Greenhouse Gas Emissions

Under this alternative, construction of the staging area and trails would not occur. As a result, the greenhouse gas emissions occurring under the proposed project would not occur. This alternative would not result in new greenhouse gas emissions and existing emissions would remain unchanged because no changes in land use or access would occur. As a result, this alternative would result in fewer impacts resulting from greenhouse gas emissions when compared to the proposed project.

6.4.2.9 Hazards and Hazardous Materials

Under this alternative, changes in land use would not occur and the existing conditions related to the accidental release of, or exposure to, hazardous materials would remain the same. Although the existing agricultural grazing operations would continue to operate, the use of solvents or fuels related to maintenance of operations as proposed by the project would not occur. Therefore, this alternative would result in fewer impacts when compared to the proposed project.

6.4.2.10 Hydrology and Water Quality

Under this alternative, the existing pervious surfaces and agricultural land would not be altered. With no physical changes occurring within the project site, the existing drainage patterns near the proposed staging area and proposed trails would not be altered. In addition, this alternative would not create a potential to violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality, because this alternative would not change the existing conditions within the project site. As a result, this alternative would result in fewer impacts related to hydrology and water quality when compared to the proposed project.

6.4.2.11 Land Use and Planning

Under this alternative, the land uses within project site would not change from the existing agricultural grazing uses and existing trails. Similar to the proposed project, this alterative would not divide an existing community or conflict with an existing land use plan. As a result, this alternative would result in similar impacts when compared to the proposed project.

6.4.2.12 Mineral Resources

There are no mineral resources located within the project site, and no mineral resources would be adversely affected under this alternative or the proposed project. As a result, this alternative would similarly result in no impacts to mineral resources.

6.4.2.13 Noise

Under this alternative, construction of the proposed staging area and trails would not occur. The proposed project would result in construction-related noise that would be mitigated through the implementation of best management practices to reduce noise impacts on adjacent receptors. Agricultural grazing operations would continue to occur under this alternative and would generate noise. Compared to construction noise generated by the proposed project, this alternative would result in reduced fewer noise impacts.

6.4.2.14 Population and Housing

Under this alternative and the proposed project, population and housing would not be affected because the project would not displace any people or result in new residential units. As a result, this alternative would result in similar impacts when compared to the proposed project.

6.4.2.15 Public Services

Under this alternative, the population of the project site would not change and there would be no increased demand for public services, including fire protection, police protection, public schools, parks and recreational facilities. The proposed project would not increase the population of the project site, but it would result in an increase in recreational use and visitors within the project site. The increase in recreational use and visitors from the project would result in an insignificant increase in demand for public services and would not require mitigation. When compared to the proposed project, this alternative would result in fewer impacts.

6.4.2.16 Recreation

Unlike the proposed project, this alternative would not change the uses within the project site nor would it affect recreational facilities and no new facilities or trails would be constructed. As a result, this alternative would result in fewer impacts related to construction and/or expansion of the recreational facilities.

6.4.2.17 Transportation

Under this alternative no land uses would change and no development would occur on the project site. The proposed project would result in increases in vehicle trips and VMT to and from the project site, including the proposed staging area on Bollinger Canyon Road. Although the proposed project would increase vehicle trips and VMT, these impacts would be less than significant. Because the No Project alternative would not generate any increase in vehicle trips or VMT, this alternative would result in fewer impacts when compared to the proposed project.

6.4.2.18 Tribal Cultural Resources

This alternative would not result in any physical changes within the project site. Under the proposed project, mitigation measures would be implemented to reduce potential impacts related to tribal cultural resources. Because the proposed project would include ground-disturbing construction activities that could result in the discovery of tribal cultural resources, and this alternative would not affect tribal cultural resources, this alternative would result in fewer impacts when compared to the proposed project.

6.4.2.19 Utilities and Service Systems

Under this alternative, no land uses or physical changes would occur within the project site, and therefore, no increased demand for utilities and service systems, including water supply, wastewater, stormwater, and electricity, natural gas, and telecommunications would occur. The proposed project would include water service and wastewater would be handled through vault toilets and discharged into the Castro Valley Sanitary District sewer system. This would result in a

relatively minor increase in demand for services compared to the No Project alternative. This alternative would result in fewer impacts when compared to the proposed project.

6.4.2.20 Wildfire

This alternative would not change the existing uses within the project site, and would not exacerbate wildfire risks. The proposed project would include implementation of the Park District's Wildland Management Policies and Guidelines and Ordinance 38 to ensure that implementation of the proposed project would not result in increased risks or impacts associated with wildfire. Because the proposed project would result in physical changes to the project site and this alternative would not, this alternative would result in fewer impacts related to wildfire when compared to the proposed project.

6.4.3 Overview of Potential Impact/Comparison to Proposed Project

Under the No Project alternative, no development would occur in the project site. As discussed in Chapter 4 and in the Initial Study (included in Appendix A of this Draft EIR), the project would result in potential impacts to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and noise. These impacts would be fully mitigated. Under the No Project alternative, these potential impacts would not occur, and the mitigation measures included in the Initial Study and EIR would not be required. Overall, potential impacts under the No Project alternative would be fewer when compared to the proposed project as no physical impacts would occur.

6.4.4 Project Objectives

The No Project alternative would not achieve any of the basic project objectives. The No Project alternative would not include increased access, restoration of open space, or preservation of habitat.

6.5 ALTERNATIVE 2: RELOCATED STAGING AREA ALTERNATIVE

6.5.1 Description

Under this alternative, the proposed Old Time Corral Staging Area would not be located adjacent to Bollinger Canyon Road, and instead would be located 300 feet north of the proposed location, further away from Bollinger Canyon Road. The relocation of the staging area would limit views of the staging area from Bollinger Canyon Road, but would require a longer access road, approximately 300 feet in length, and site grading. The approximate location of the relocated staging area is shown on Figure 6-1. All other components of the proposed project would remain the same under this alternative.

6.5.2 Environmental Analysis

6.5.2.1 Aesthetics

Under this alternative, the staging area would be located further away from Bollinger Canyon Road, when compared to the proposed project. The location of the staging area and topographic features of the project site would result in limited views of the staging area from Bollinger Canyon Road.

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FIGURE 6-1

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LOCATION A: Proposed Old Time Corral Staging Area Location (approximate)

LOCATION B: Alternative 2 Relocated Staging Area Location (approximate)

Southern Las Trampas LUPA EIR
Relocated Staging Area Alternative

SOURCES: Nearmap 5/24/2021; LSA, 2021

FRE\P:\EBR1801 Las Trampas LUPA EIR\DEIR\02 Screen\Figures\Fig_6-1.ai (7/23/2021)

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However, under this alternative, an access road approximately 300-feet in length would be required for vehicles to reach the staging area from Bollinger Canyon Road. As a result, additional grading would be required within the project site that could alter the character of the project site. Other components of this alternative would result in similar impacts when compared to the proposed project, because only the location of the staging area would be different. Under this alternative, potential impacts related to scenic vistas, scenic resources, and lighting and glare would be similar when compared to the proposed project. However, compared to the proposed project, the Relocated Staging Area alternative would result in reduced impacts related to alteration of the existing character of the staging area site because the staging area would be located further away from Bollinger Canyon Road.

In addition, the Park District would ensure that new structures would be designed to blend in with the surroundings to the extent practicable. The proposed project and this alternative would not include lighting beyond minimal lighting at the restroom building for public safety purposes. Overall, this alternative would result in fewer impacts related to the visual character of the site based on the location of the proposed staging area.

6.5.2.2 Agriculture and Forestry Resources

This alternative would not change the agricultural grazing uses that would continue to occur as part of the proposed project. The project site does not contain any forestry resources. The proposed project would result in less-than-significant impacts related agriculture resources. Because this alternative would not substantially change the agricultural grazing operations within the project site, this alternative would result in similar impacts when compared to the proposed project.

6.5.2.3 Air Quality

This alternative would result in a staging area of approximately the same size as the proposed project, but with a longer access road. All other project components included under the proposed project would also occur under this alternative. Mitigation Measure AIR-1, identified in the Initial Study, addresses construction-related emissions and would apply to both the proposed project and this alternative. However, because this alternative would require more construction activities related to constructing a longer access road, this alternative would result in greater impacts than the proposed project.

6.5.2.4 Biological Resources

Under this alternative, the proposed staging area would be located further away from Bollinger Canyon Road and would require a longer access road and site preparation when compared to the proposed project. The proposed project would locate the staging area in a relatively flat area that is moderately exposed to ground-disturbing agricultural grazing uses. By locating the staging area at a higher elevation and in an area not adjacent to Bollinger Canyon Road, the potential environmental impacts related to special-status plant and wildlife species would result in greater impacts when compared to the proposed project. Under this alternative the staging area would be approximately the same size of the staging area proposed by the project (approximately 0.75 acres). However, the location of staging area would require an approximately 300-foot access road, and the staging area would be located in an area that is undisturbed and not currently used as a corral. Mitigation

Measures BIO-1, BIO-2, and BIO-3 address impacts related to the staging area and would apply to this alternative. All other mitigation measures required by the proposed project also apply to this alternative because no other components of the project would change.

6.5.2.5 Cultural Resources

Although no known cultural resources are located within the project site, the proposed project would require implementation of mitigation measures to address the accidental discovery of cultural resources. Mitigation Measures CUL-1a and CUL-1b address discovery of as-yet-unknown archeological resources and Mitigation Measure CUL-2 addresses discovery of as-yet-unknown human burials within the project site. Implementation of these mitigation measures, which are identified in the Initial Study, would reduce potential impacts to less-than-significant levels. Under this alternative, potential impacts related to cultural resources would be similar to the proposed project.

6.5.2.6 Energy

Under this alternative, construction of the proposed trails would occur but the proposed Old Time Corral Staging Area would be located further away from Bollinger Canyon Road. Energy usage, both related to construction and operation would be similar between the proposed project and this alternative because the components would remain similar. Although the staging area would be located in an area that is further away from Bollinger Canyon Road and grading of the relocated site would be required, the increase in energy consumption would be similar to the proposed project.

6.5.2.7 Geology and Soils

Potential impacts related to geology and soils would be greater under this alternative because additional grading would be required in order to construct a longer access road to the staging area, and additional soils movement would be required to locate the staging area at a higher elevation than the proposed project. Impacts relating to paleontological impacts would be similar to the proposed project because the proposed components would be similar and Mitigation Measure GEO-1, which is identified in the Initial Study and would require a paleontological monitor to be present for ground-disturbing activities below the soil zone.

6.5.2.8 Greenhouse Gas Emissions

Under this alternative, construction of the project components would include trails and a staging area. Although this alternative would include an alternate location of the staging area, the operational greenhouse gas emissions would be similar when compared to the proposed project because the overall buildout of the alternative would be similar to the proposed project. This alternative would result in less-than-significant impacts.

6.5.2.9 Hazards and Hazardous Materials

This alternative would include construction and operation of trails and a staging area located 300 feet north of the road frontage of Bollinger Canyon Road. As a result, Mitigation Measure HAZ-1, which is identified in the Initial Study and requires soil sampling, and if required soil cleanup

activities, would also apply to this alternative. This mitigation measure would reduce the potential impact to a less-than-significant level, but the impact would be similar to the proposed project.

6.5.2.10 Hydrology and Water Quality

Under this alternative, the potential changes to the project site would be greater than those proposed by the project. Changes related to impervious surface, groundwater recharge, and surface runoff would be similar. However, because this alternative would locate the staging area in an area not adjacent to Bollinger Canyon Road, the drainage pattern of the staging area would result in potential impacts that may require additional mitigation to ensure that drainage flows do not result in adverse impacts to the site and surroundings.

6.5.2.11 Land Use and Planning

This alternative includes similar components as the proposed project in an area that would not divide an established community nor result in inconsistencies with adopted plans or programs. Because this alternative is similar to the proposed project, this alternative would result in similar, less-than-significant impacts related to land use and planning.

6.5.2.12 Mineral Resources

There are no mineral resources located within the project site, and no mineral resources would be adversely affected under this alternative or the proposed project. As a result, this alternative would similarly result in no impacts to mineral resources.

6.5.2.13 Noise

Under this alternative, construction of the trails and staging area would occur as they would under the proposed project. Under the proposed project, the closest sensitive receptor is a single-family residence located approximately 40 feet west of the staging area location. Under this alternative, the staging area would be located further away from this sensitive receptor when compared to the proposed project. As a result, under this alternative, construction-related noise and operational noise would be generated further away and would result in fewer potential impacts. Like the proposed project, this alternative would implement mitigation to further reduce construction-related noise to a less than significant level through best management practices. As a result, this alternative would result in fewer impacts when compared to the proposed project.

6.5.2.14 Population and Housing

Under this alternative and the proposed project, population and housing would not be affected because the project would not displace any people or result in new residential units. As a result, this alternative would result in similar less-than-significant impacts when compared to the proposed project.

6.5.2.15 Public Services

Under this alternative, the population of the project site would not change, although with increased use of the project site, the demand for public services may increase. Similar to the proposed project, it is not expected that this alternative would require additional firefighters or police officers to serve

the project site. As a result, this alternative would result in less-than-significant impacts related to public services, and the potential impacts would be similar when compared to the proposed project.

6.5.2.16 Recreation

When compared to the proposed project, this alternative would include the same components and provide the same recreational opportunities. As a result, this alternative and the proposed project would not result in an increased recreational use that would lead to physical deterioration of park facilities. This alternative would result in less-than-significant impacts that would be similar to the proposed project.

6.5.2.17 Transportation

Under this alternative, the same components proposed by the proposed project would be constructed. As a result, this alternative would result in a similar increase in vehicle trips and VMT to and from the project site, including to the staging area located 300 feet north of the road frontage of Bollinger Canyon Road. Similar to the proposed project, this alternative would increase vehicle trips and VMT, but these impacts would be less than significant. In addition, with the use of EVMA trails, access throughout the project site would not limit the ability of emergency service providers. As a result, this alternative would result in similar impacts as the proposed project.

6.5.2.18 Tribal Cultural Resources

This alternative would include the construction of trails and a staging area that could result in the discovery of tribal cultural resources within the project site. Similar to the proposed project, Mitigation Measures CUL-1a and CUL-1b would be implemented to address discovery of as-yet-unknown archeological resources, and Mitigation Measure CUL-2 would be implemented to address discovery of as-yet-unknown human burials within the project site. Implementation of these mitigation measures, which are identified in the Initial Study, would reduce potential impacts to less-than-significant levels. Although this alternative would relocate the staging area, when compared to the proposed project, the potential less-than-significant impacts to tribal cultural resources would be similar.

6.5.2.19 Utilities and Service Systems

Under this alternative, the land uses and physical changes would occur within the project site would be similar to the proposed project, and would increase the demand for utilities and service system at a similar rate. Water would not be supplied to the project site, and wastewater would be transported for treatment within the Castro Valley Sanitary District sewer system. Under this alternative, the relatively minor increases in demand would result in less-than-significant impacts to utilities and service systems. As a result, this alternative would result in similar impacts as the proposed project.

6.5.2.20 Wildfire

Similar to the proposed project, this alternative would include implementation of the Park District's Wildland Management Policies and Guidelines and Ordinance 38 to ensure that there would not be

an increased risk of wildfire. Because the proposed project and this alternative would add the same components to the project site, this alternative would result in similar, less-than-significant impacts.

6.5.3 Overview of Potential Impact/Comparison to Proposed Project

Although the potential noise impacts of the Relocated Staging Area alternative would be reduced by locating the staging area further from sensitive receptors, the location of the staging area would result in greater impacts related to biological resources, geology and soils, and hydrology and water quality due to the physical impacts related to locating the staging area in an area further from Bollinger Canyon Road and the need for construction on undisturbed land.

6.5.4 Project Objectives

The Relocated Staging Area alternative would achieve some but not all of the project objectives as it would not minimize harm to biological resources or allow for Park District staff to adequately patrol the staging area from Bollinger Canyon Road.

6.6 ALTERNATIVE 3: NO STAGING AREA ALTERNATIVE

6.6.1 Description

Under this alternative, no improvements related to the proposed Old Time Corral Staging Area would occur. All other components of the proposed project would occur as proposed. The existing cattle corral located at the site of the Old Time Corral Staging would continue to operate, and a public access gate, similar to the Podva Walk-in Entrance would be located along Bollinger Canyon Road to provide access to the Sabertooth Trail. Under this alternative, all other construction activities and long-term operations associated with the proposed project would occur.

6.6.2 Environmental Analysis

6.6.2.1 Aesthetics

Under this alternative, the proposed staging area along Bollinger Canyon Road would not be constructed and no changes to the existing open space and agricultural character of this area of the project site would occur. Although this alternative would not result in any physical changes to the staging area location, this alternative would still result in physical changes caused by the development of trails and trailheads. A walk-in entrance would be located along Bollinger Canyon Road and the Sabertooth Trail would be extended to reach the walk-in entrance. The proposed project would result in less-than-significant impacts related to aesthetics. It would not substantially degrade the existing visual character of the site primarily because of the disturbed nature of the staging area location. The proposed project also would not adversely affect a scenic vista or damage scenic resources. This alternative would result in similar impacts to the proposed project because a trail and trailhead would still be located within the staging area location. As a result, this alternative would result in similar impacts when compared to the proposed project.

6.6.2.2 Agriculture and Forestry Resources

This alternative would not change the agricultural grazing uses that would continue to occur as part of the proposed project. The project site does not contain any forestry resources. The proposed

project would result in less-than-significant impacts related agriculture resources. Because this alternative would not substantially change the agricultural grazing operations within the project site, and the cattle corral would continue to operate in its current location, this alternative would result in less-than-significant impacts to agricultural resources. As a result, this alternative would result in similar impacts when compared to the proposed project.

6.6.2.3 Air Quality

Under this alternative, construction of the staging area would not occur, but all other project components included under the proposed project would occur. Mitigation Measure AIR-1, identified in the Initial Study, addresses construction-related emissions and would apply to both the proposed project and this alternative. Because this alternative would not include construction of the staging area, this alternative would result in less construction-related emissions. As a result, this alternative would result in fewer impacts related to air quality impacts when compared to the proposed project.

6.6.2.4 Biological Resources

Under this alternative, the proposed staging area would not be constructed, but all other project components would occur. A walk-in entrance would be located along Bollinger Canyon Road and the Sabertooth Trail would be extended to reach the walk-in entrance. By not including a staging area, potential impacts to special-status plant and wildlife species would be reduced when compared to the proposed project. In order to construct the walk-in entrance and trailhead, some disturbance would occur in the location of the staging area proposed by the project, and Mitigation Measures BIO-1, BIO-2, and BIO-3 would still apply to this alternative. However, because the overall area of disturbance would be significantly less under this alternative, this alternative would result in fewer impacts related to the staging area. All other mitigation measures required by the proposed project would still apply to this alternative because no other components of the project would change. As a result, this alternative would result in fewer impacts than the proposed project.

6.6.2.5 Cultural Resources

Although no known cultural resources are located within the project area, the proposed project would require implementation of mitigation measures to address the accidental discovery of cultural resources. Under this alternative, construction of the staging area would not occur; however, excavation and grading activities would occur throughout the remainder of the site due to development of the proposed trails and other improvements. Therefore, impacts to previously unidentified cultural resources could also occur. Mitigation Measures CUL-1a and CUL-1b address discovery of as-yet-unknown archeological resources and Mitigation Measure CUL-2 addresses discovery of as-yet-unknown human burials within the project site. Implementation of these mitigation measures, which are identified in the Initial Study, would reduce potential impacts to less-than-significant levels. Under this alternative, potential impacts related to cultural resources would be similar to the proposed project, although slightly reduced due to the reduced area of proposed disturbance, and these measures would apply to this alternative.

6.6.2.6 Energy

Under this alternative, construction of the proposed trails would occur but the proposed Old Time Corral Staging Area would not be constructed. Energy usage, both related to construction and operation would be slightly less without the construction and operation of the Old Time Corral Staging Area.

6.6.2.7 Geology and Soils

Under this alternative, less construction would occur when compared to the proposed project. In addition, Mitigation Measure GEO-1, which is identified in the Initial Study and requires a paleontological monitor to be present for ground-disturbing activities below the soil zone, would be implemented in order to address potential impacts related to paleontological resources. Because less grading would be required under this alternative, this alternative would result in fewer impacts when compared to the proposed project.

6.6.2.8 Greenhouse Gas Emissions

Under this alternative, construction of the staging area would not occur. Although this alternative would not include the staging area, the operational greenhouse gas emissions would be similar when compared to the proposed project because the trails included under the proposed project would still be constructed and would be operational. As a result, this alternative would result in similar impacts resulting from greenhouse gas emissions when compared to the proposed project.

6.6.2.9 Hazards and Hazardous Materials

Similar to the proposed project, this alternative would include construction and operation of trails, but would not include construction of the proposed staging area. As a result, Mitigation Measure HAZ-1, which is identified in the Initial Study and requires soil sampling, and if required soil cleanup activities, would also apply to this alternative. This mitigation measure would reduce the potential impact to a less-than-significant level, but the impact would be similar to the proposed project.

6.6.2.10 Hydrology and Water Quality

Under this alternative, the area of disturbance would be reduced when compared to the proposed project. As a result, changes related to impervious surface, groundwater recharge, and surface runoff would be less than compared to the proposed project. As a result, this alternative would result in reduced impacts related to hydrology and water quality when compared to the proposed project.

6.6.2.11 Land Use and Planning

This alternative includes the same trails as the proposed project in an area that would not divide an established community nor result in inconsistencies with adopted plans or programs. Because this alternative includes similar components as the proposed project, this alternative would result in similar, less-than-significant impacts related to land use and planning.

6.6.2.12 Mineral Resources

There are no mineral resources located within the project site, and no mineral resources would be adversely affected under this alternative or the proposed project. As a result, this alternative would similarly result in no impacts to mineral resources.

6.6.2.13 Noise

Under this alternative, construction of the trails would occur as proposed by the project; however, the proposed staging area would not be constructed. The closest sensitive receptor includes the single-family residence located approximately 40 feet west of the staging area location proposed by the project. Under this alternative, the staging area would not be constructed. As a result, less construction-related noise and operational noise would be generated and this alternative would result in fewer potential impacts. Like the proposed project, this alternative would implement mitigation to further reduce construction-related noise through best management practices. As a result, this alternative would result in fewer impacts when compared to the proposed project.

6.6.2.14 Population and Housing

Under this alternative and the proposed project, population and housing would not be affected because the project would not displace any people or result in new residential units. As a result, this alternative would result in similar less than significant impacts when compared to the proposed project.

6.6.2.15 Public Services

Under this alternative, the population of the project site would not change, although with increased use of the project site, the demand for public services may increase. Similar to the proposed project, it is not expected that this alternative would require additional firefighters or police officers to serve the project site. As a result, this alternative would result in less-than-significant impacts related to public services, and the potential impacts would be similar when compared to the proposed project

6.6.2.16 Recreation

Similar to the proposed project, this alternative would increase recreational opportunities because both would increase the number of trails within the project site and, as a result, an increased usage of the project site would occur. However, because this alternative does not include a staging area along Bollinger Canyon Road, fewer impacts related to construction or expansion of the recreational facilities would occur.

When compared to the proposed project, this alternative would include the same trails, but would not include the staging area. As a result, this alternative would result in fewer impacts related to physical deterioration of park facilities associated with construction of the staging area. Construction impacts related to the staging area include, but are not limited to, temporary air quality and noise impacts that would be mitigated to less-than-significant levels. However, without construction of the staging area, this alternative would result in less-than-significant impacts to recreation facilities, and would result in fewer impacts to recreation facilities when compared to the proposed project.

6.6.2.17 Transportation

Under this alternative, the staging area would not be constructed. As a result, this alternative would result in fewer vehicle trips and VMT to and from the staging area site. Similar to the proposed project, this alternative would result in new trails and would result in an increase vehicle trips and VMT, but these impacts would be less than significant. In addition, with the use of EVMA trails, access throughout the project site would not limit the ability of emergency service providers. As a result, this alternative would result in fewer impacts as the proposed project.

6.6.2.18 Tribal Cultural Resources

Similar to the proposed project, this alternative would include the construction of trails that could result in the discovery of tribal cultural resources within the project site. Similar to the proposed project, Mitigation Measures CUL-1a and CUL-1b would be implemented to address discovery of as-yet-unknown archeological resources, and Mitigation Measure CUL-2 would be implemented to address discovery of as-yet-unknown human burials within the project site. Implementation of these mitigation measures, which are identified in the Initial Study, would reduce potential impacts to less-than-significant levels. Although this alternative would not include the staging area, when compared to the proposed project, the potential less-than-significant impacts to tribal cultural resources would be similar due to the possibility of discovering unknown tribal cultural resources.

6.6.2.19 Utilities and Service Systems

Under this alternative, the land uses and physical changes would be limited to construction and operation of trails. An increase in the demand for utilities and service system would not occur because water would not be supplied to the project site, and wastewater would not be collected within the project site. Under this alternative, the use of utilities and service systems would not increase with the construction and operation of this alternative. As a result, this alternative would result in fewer impacts than the proposed project.

6.6.2.20 Wildfire

Similar to the proposed project, this alternative would include implementation of the Park District's Wildland Management Policies and Guidelines and Ordinance 38 to ensure that there would not be an increased risk of wildfire. Because the proposed project and this alternative would include the same trails as the proposed project, this alternative would result in similar, less-than-significant impacts.

6.6.3 Overview of Potential Impact/Comparison to Proposed Project

Under the No Staging Area alternative, the trails proposed by the proposed project would be constructed, but the staging area would not be constructed. As discussed in the Initial Study (included in Appendix A of this Draft EIR) and Chapter 4.0, the proposed project would require mitigation to reduce potential impacts to air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, and noise. Under this alternative, these potential impacts would occur, and the mitigation measures included in the Initial Study and EIR would be required.

6.6.4 Project Objectives

The No Staging Area alternative would achieve three of the four project objectives. This alternative would not meet the project objective of including a new staging area near Bollinger Canyon Road.

6.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of an Environmentally Superior Alternative. State CEQA Guidelines Section 15126.6(e)(2) states that if the No Project alternative is the Environmentally Superior alternative, then the EIR shall also identify an Environmentally Superior alternative among the other alternatives. Table 6.A provides, in summary format, a comparison of the level of impacts for each alternative to the proposed project.

The No Project alternative has the least impact to the environment because it would not result in any changes to the project site or new physical impacts. Among the other alternatives, the No Staging Area alternative would be the Environmentally Superior alternative.

Table 6.A: Comparison of the Environmental Impacts of the Proposed Project to the Project Alternatives

Environmental Topic	Proposed Project Level of Impact After Mitigation	Alternative 1: No Project Alternative	Alternative 2: Relocated Staging Area Alternative	Alternative 3: No Staging Area Alternative
Aesthetics	Less than Significant	Fewer	Fewer	Similar
Agriculture and Forestry Resources	Less than Significant	Fewer	Similar	Similar
Air Quality	Less than Significant with Mitigation	Fewer	Greater	Fewer
Biological Resources	Less than Significant with Mitigation	Fewer	Greater	Fewer
Cultural Resources	Less than Significant with Mitigation	Fewer	Similar	Similar
Energy	No Impact	Fewer	Similar	Fewer
Geology and Soils	Less than Significant with Mitigation	Fewer	Greater	Similar
Greenhouse Gas Emissions	Less than Significant	Fewer	Similar	Similar
Hazards and Hazardous Materials	Less than Significant with Mitigation	Fewer	Similar	Similar
Hydrology and Water Quality	Less than Significant	Fewer	Greater	Fewer
Land Use and Planning	Less than Significant	Similar	Similar	Similar
Mineral Resources	No Impact	Similar	Similar	Similar
Noise	Less than Significant with Mitigation	Fewer	Fewer	Fewer
Population and Housing	No Impact	Similar	Similar	Similar
Public Services	Less than Significant	Fewer	Similar	Similar
Recreation	Less than Significant	Fewer	Similar	Fewer
Transportation	Less than Significant	Fewer	Similar	Fewer
Tribal Cultural Resources	Less than Significant	Fewer	Similar	Similar
Utilities and Service Systems	Less than Significant	Fewer	Similar	Fewer
Wildfire	Less than Significant	Fewer	Similar	Similar
Attainment of Project Objectives	Meets all of the Project Objectives	Meets none of the Project Objectives	Meets some of the Project Objectives	Meets some of the Project Objectives

Source: Compiled by LSA (2021).

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