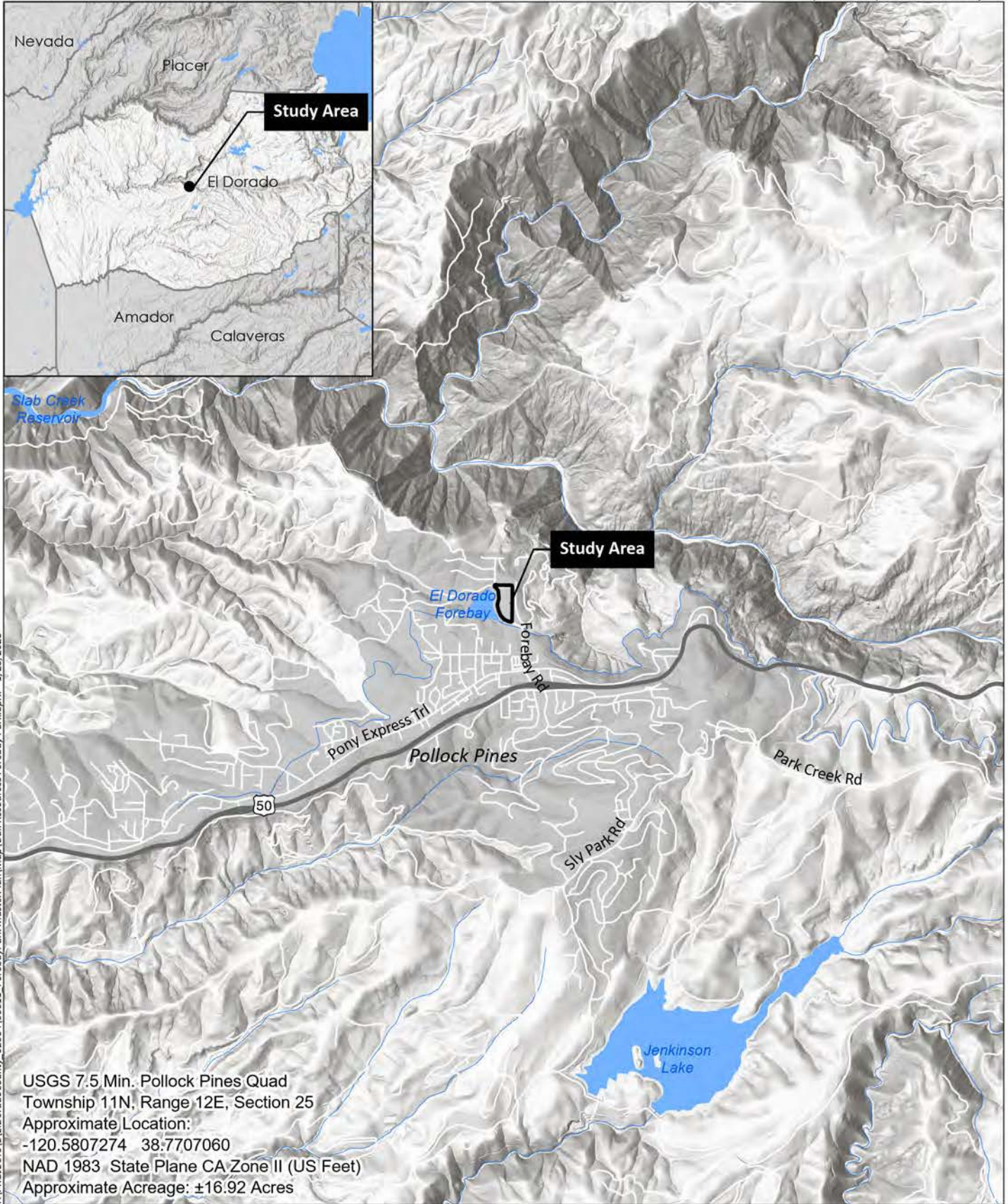
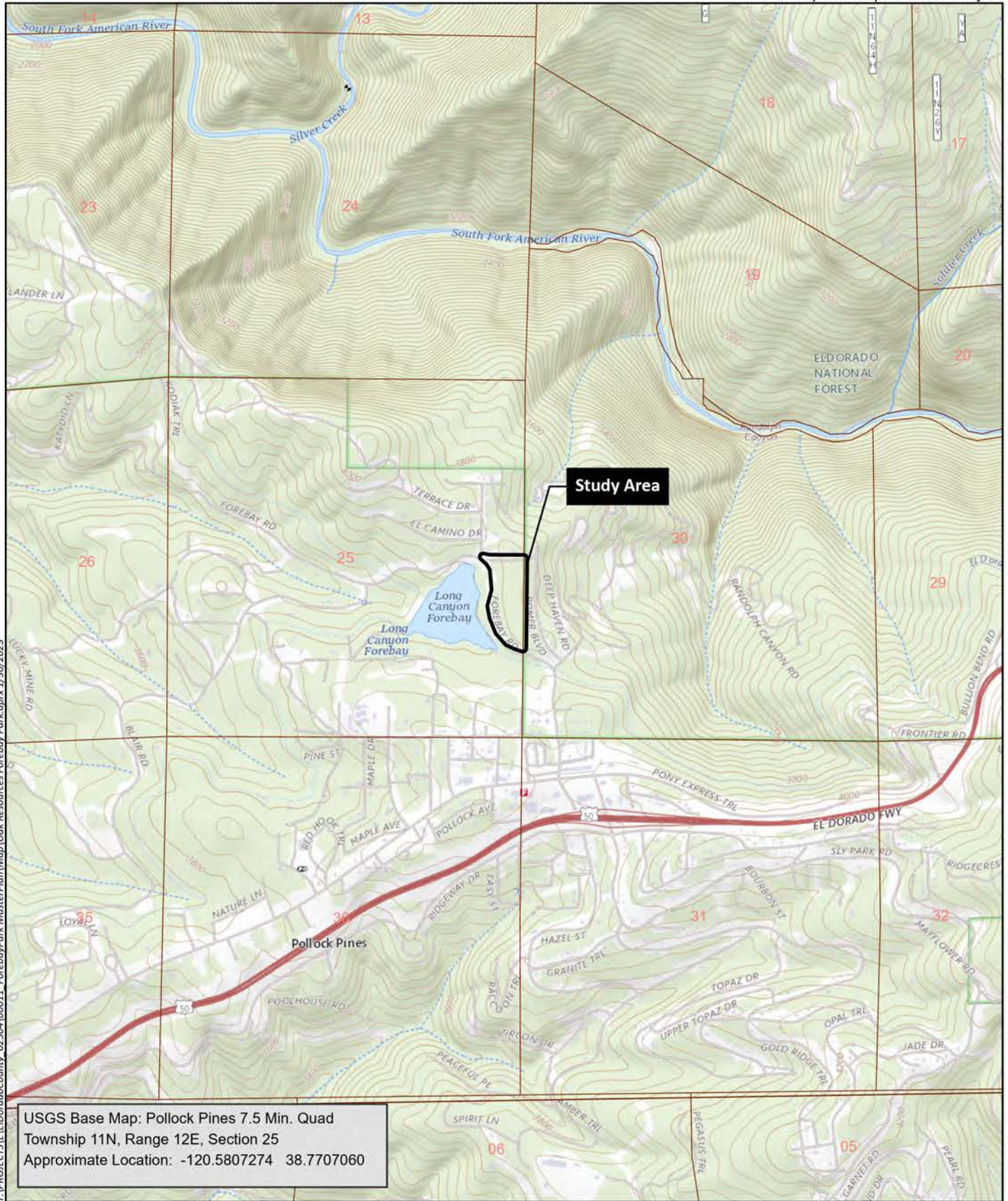


Appendix A

Figures



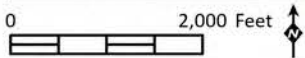
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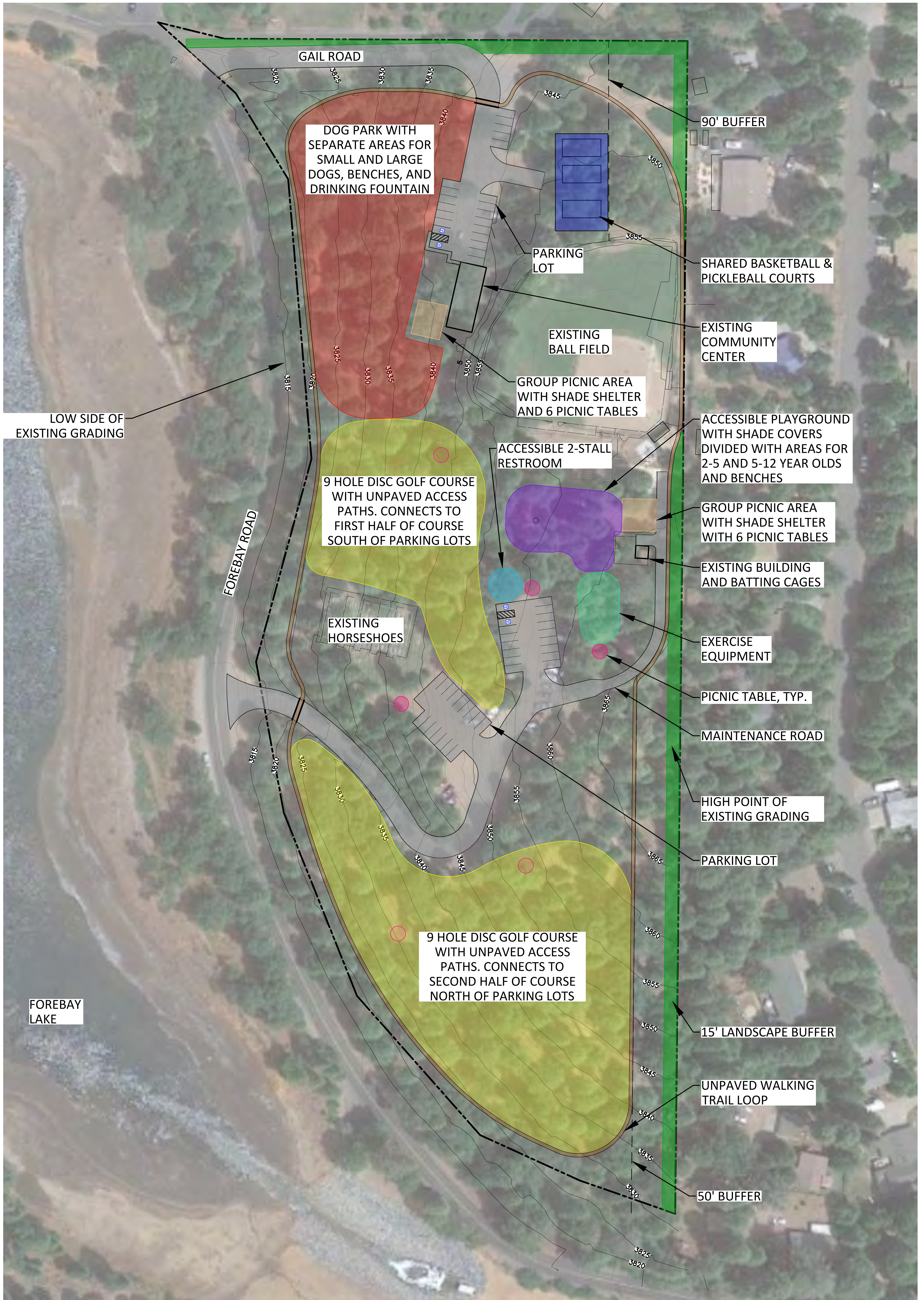
USGS Base Map: Pollock Pines 7.5 Min. Quad
 Township 11N, Range 12E, Section 25
 Approximate Location: -120.5807274 38.7707060

Source: USGS, The National Map, 2021



Appendix B

Conceptual Design Plan



PROJECT WILL INCLUDE SIGNAGE ALONG FOREBAY ROAD WARNING DRIVERS OF UPCOMING PARK AND PEDESTRIANS, PER EDC DOT RECOMMENDATIONS.

Appendix C

Biological Resources Assessment

Forebay Park Improvements Project

Biological Resources Assessment

September 2022 | 02504.00011.001

Prepared for:

County of El Dorado
Vickie Sanders, Park Manager
3000 Fair Lane Court, Suite 1
Placerville, CA 95667

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

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ACRONYMS AND ABBREVIATIONS

BRA	Biological Resources Assessment
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDP	census-designated place
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CSA	California Special Animals
CWA	Clean Water Act
DBH	diameter at breast height
FESA	Federal Endangered Species Act
HELIX	HELIX Environmental Planning, Inc.
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
MSL	mean sea level
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
OHWM	ordinary high water mark
ORMP	Oak Resources Management Plan
ORTR	Oak Resources Technical Report
RWQCB	Regional Water Quality Control Board
RPZ	root protection zone
SAA	Streambed Alteration Agreement
SSC	Species of Special Concern
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) Biologist Greg Davis conducted a Biological Resources Assessment (BRA) on January 25, 2022 for the Forebay Park Improvements Project (Project) [Assessor's Parcel Number (APN) 101-330-081]. The project site is located at 5581 Gail Drive in the unincorporated community of Pollock Pines in El Dorado County, California. The site is located within Township 11 North, Range 12 East, Section 25 of the USGS 7.5-minute series *Pollock Pines, CA* quadrangle. The approximate location of the Study Area is 38.770375° Latitude, -120.580746° Longitude.

The purpose of this BRA is to summarize the general biological resources on the site, to assess the suitability of the site to support special-status species and sensitive vegetation communities or habitats, and to provide recommendations for any regulatory permitting or further analysis that may be required prior to development activities occurring on the site.

The 16.90-acre Study Area includes an individual parcel associated with Forebay Park and a 50-foot buffer of the subject parcel. The Study Area is comprised of developed/disturbed land (9.06 acres), montane hardwood conifer (1.76 acres), and sierran mixed conifer habitat (6.05 acres). Surrounding land uses include low-density residential to the north/east/south and Forebay Reservoir to the west.

Known or potential biological constraints in the Study Area include:

- Potential upland habitat for California red-legged frog (*Rana draytonii*) and western pond turtle (*Emys marmorata*);
- Potential foraging and nesting habitat for migratory birds, raptors, and special-status birds, including northern goshawk (*Accipiter gentilis*) and bald eagle (*Haliaeetus leucocephalus*); and
- Protected oak trees and oak woodland that contains at least 10 percent oak canopy regulated by El Dorado County. Oak woodland that contains at least 10 percent oak canopy is represented by the montane hardwood conifer habitat within the Study Area.

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1.0 INTRODUCTION

This report summarizes the findings of a Biological Resources Assessment (BRA) completed by HELIX for the Forebay Park Improvements project (Project) located in the unincorporated community of Pollock Pines in El Dorado County, California. This document addresses the on-site physical features, plant communities present, and the common plant and wildlife species occurring or potentially occurring in the Study Area. Furthermore, the suitability of habitats to support special-status species and sensitive habitats are analyzed, and recommendations are provided for any regulatory permitting or further analysis required prior to development activities occurring on the site.

1.1 PROJECT DESCRIPTION

The proposed project includes improvements to the existing park in the Study Area. Detailed plans for the proposed project are not available as of the preparation of this report.

2.0 REGULATORY FRAMEWORK

Federal, State, and local environmental laws, regulations, and policies relevant to the California Environmental Quality Act (CEQA) review process are summarized below. Applicable CEQA significance criteria are also addressed in this section.

2.1 FEDERAL REGULATIONS

2.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) enforces the provisions stipulated within the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 et seq.). Species identified as federally threatened or endangered (50 CFR 17.11, and 17.12) are protected from take, defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present in the study area and determine whether the proposed project will jeopardize the continued existence of or result in the destruction or adverse modification of critical habitat of such species (16 USC 1536 (a)[3], [4]). Other federal agencies designate species of concern (species that have the potential to become listed), which are evaluated during environmental review under the National Environmental Protection Act (NEPA) or CEQA although they are not otherwise protected under FESA.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Section 16 U.S.C. 703–712 of the Act states “unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill” a migratory bird. A migratory bird is any species or family of birds that live, reproduce, or migrate within

or across international borders at some point during their annual life cycle. Currently, there are 836 migratory birds protected nationwide by the Migratory Bird Treaty Act, of which 58 are legal to hunt. The U.S. Court of Appeals for the 9th Circuit (with jurisdiction over California) has ruled that the MBTA does not prohibit incidental take (952 F 2d 297 – Court of Appeals, 9th Circuit 1991).

2.1.3 The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to *“take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.”* Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as *“to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”*

2.2 STATE JURISDICTION

2.2.1 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW), when preparing CEQA documents. The purpose is to ensure that the State lead agency actions do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species. It also directs CDFW to determine whether jeopardy would occur and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State’s prohibition against take of a listed species if the “take” of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code § 2081).

2.2.2 California Code of Regulations Title 14 and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW to include in the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as “fully protected animals.” These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species unless any such take authorization is issued in conjunction with the approval of a

Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

2.2.3 California Environmental Quality Act

Under the California Environmental Quality Act of 1970 (Public Resources Code Section 21000 et seq.), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These “special-status” species generally include those listed under FESA and CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed under CEQA regardless of whether they are afforded protection through any other statute or regulation. The California Native Plant Society (CNPS) inventories the native flora of California and ranks species according to rarity; plants ranked as 1A, 1B, 2A, 2B, and 3 are generally considered special-status species under CEQA.¹

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (i.e., candidate species) would occur.

2.2.4 Native Plant Protection Act

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants protected under the NPPA. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

2.3 JURISDICTIONAL WATERS

2.3.1 Federal Jurisdiction

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

¹ The California Rare Plant Rank system can be found at: <http://www.cnps.org/cnps/rareplants/ranking.php>

Waters of the U.S. generally consist of the following four categories of regulated waters:

- The territorial seas and traditional navigable waters;
- Tributaries to those waters;
- Certain lakes, ponds, and impoundments; and
- Wetlands adjacent to jurisdictional waters.

Features generally not considered waters of the U.S. include the following:

- Groundwater
- Diffuse stormwater run-off
- Manmade ditches constructed wholly in uplands
- Prior converted cropland (PCC)
- Artificially irrigated areas
- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

“those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

2.3.2 State Jurisdiction

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal CWA. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Quality Control Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Office of Administrative Law approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "*substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any*

river, stream, or lake designated by the department, or use any material from the streambeds...except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

2.4 CEQA SIGNIFICANCE

Section 15064.7 of the State CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study Checklist contained in Appendix G of the State CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;
- 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 CDFW or USFWS;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

An evaluation of whether or not an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, State, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. The reason for this is that although the impacts would result in an adverse alteration of existing conditions, they

would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

2.4.1 California Native Plant Society

The CNPS maintains a rank of plant species native to California that have low population numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California*. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The following identifies the definitions of the CNPS Rare Plant Ranking System:

- Rank 1A: Plants presumed Extinct in California and either rare or extinct elsewhere
- Rank 1B: Plants Rare, Threatened, or Endangered in California and elsewhere
- Rank 2A: Plants presumed extirpated in California but common elsewhere
- Rank 2B: Plants Rare, Threatened, or Endangered in California, but more common elsewhere
- Rank 3: Plants about which we need more information – A Review List
- Rank 4: Plants of limited distribution – A Watch List

All plants appearing on CNPS Rank 1 or 2 are considered to meet CEQA Guidelines Section 15380 criteria. While only some of the plants ranked 3 and 4 meet the definitions of threatened or endangered species, the CNPS recommends that all Rank 3 and Rank 4 plants be evaluated for consideration under CEQA. Furthermore, the CNPS Rare Plant Rankings include levels of threat for each species. These threat ranks include the following:

- 0.1 - Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat);
- 0.2 - Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat); and
- 0.3 - Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

Threat ranks do not designate a change of environmental protections, so that each species (i.e., CRPR 1B.1, CRPR 1B.2, CRPR 1B.3, etc.) be fully considered during preparation of environmental documents under CEQA.

2.4.2 California Department of Fish and Wildlife Species of Concern

Some additional invertebrate, fish, amphibian, reptile, bird, and mammal species may receive consideration by CDFW and lead agencies during the CEQA process, in addition to species that are formally listed under FESA and CESA or are fully protected. These species are included on the *Special Animals List*, which is maintained by CDFW. This list tracks species in California whose numbers, reproductive success, or habitat may be in decline. In addition to “Species of Special Concern” (SSC), the *Special Animals List* includes species that are tracked in the California Natural Diversity Database (CNDDDB) but warrant no legal protection. These species are identified as “California Special Animals” (CSA).

2.5 COUNTY OF EL DORADO POLICIES AND REGULATIONS

2.5.1 General Plan

In addition to federal and State regulations described above, the *El Dorado County Adopted General Plan* (General Plan) includes goals, objectives, and policies regarding biological resources within the County limits (El Dorado County 2018). Applicable sections of the General Plan are included in Appendix A.

2.5.2 Oak Resources Management Plan

The County of El Dorado (County) adopted the El Dorado County Oak Resources Management Plan (ORMP) on October 24, 2017 and it went into effect on November 23, 2017 (El Dorado County 2017). The ORMP designates three classes of protected oak resources: oak woodlands that have at least 10 percent oak canopy; Heritage trees, defined as native oaks with a total trunk DBH of 36 inches or greater; and individual oak trees, defined as native oak trees with a trunk DBH of 6 inches or greater that are not located in oak woodlands. An oak woodland removal permit is required prior to removal of oak trees that are part of an oak woodland and an oak tree removal permit is required prior to removal of Heritage trees and individual oak trees. Mitigation for impacts to oak woodlands is based on the total area impacted ranging from 1:1 mitigation for zero to 50 percent removal to 2:1 mitigation for more than 75 percent removal. Mitigation may be completed with a combination of the following options: acquisition of an off-site conservation easement, payment of in-lieu fees, or either on- or off-site replacement planting of up to 50 percent of the required mitigation area. Mitigation for removal of Heritage or individual oak trees requires on- or off-site replacement planting or payment of in-lieu fees at a 3:1 or 1:1 ratio, respectively, to the number of trunk inches removed. Any oak woodland preserved on-site and all mitigation planting areas must be protected in perpetuity through deed restrictions or a conservation easement.

3.0 METHODOLOGY

Biological studies consisted of a special-status species evaluation that included a desktop review and database searches to identify known biological resources in the Study Area and vicinity as well as biological field surveys.

3.1 SPECIAL-STATUS SPECIES EVALUATION

For the purposes of this report, special-status species are those that fall into one or more of the following categories, including those:

- Listed as endangered or threatened under the FESA (including candidates and species proposed for listing);
- Listed as endangered or threatened under the CESA (including candidates and species proposed for listing);
- Designated as rare, protected, or fully protected pursuant to California Fish and Game Code;
- Designated as an SSC by the CDFW;

- Considered by CDFW to be a Watch List species with potential to become an SSC;
- Defined as rare or endangered under Section 15380 of CEQA; or
- Having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, or 3.

In order to evaluate special-status species and/or their habitats with the potential to occur in the Study Area and/or be impacted by the proposed project, HELIX obtained lists of regionally occurring special-status species from the following information sources:

- California Department of Fish and Wildlife (CDFW). 2022. California Natural Diversity Data Base (CNDDDB); For: *Tunnel Hill, Devil Peak, Robbs Peak, Slate Mountain, Pollock Pines, Riverton, Camino, Sly Park, and Old Iron Mountain* U.S. Geological Survey (USGS) 7.5-minute series quadrangles. [Accessed on January 24, 2022];
- California Native Plant Society (CNPS). 2022. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39) For *Tunnel Hill, Devil Peak, Robbs Peak, Slate Mountain, Pollock Pines, Riverton, Camino, Sly Park, and Old Iron Mountain* U.S. Geological Survey (USGS) 7.5-minute series quadrangles. [Accessed on January 24, 2022]; and
- U.S. Fish and Wildlife Service (USFWS). 2022. *Information for Planning and Consultation (IPaC) Forebay Park Improvements Project, El Dorado County, California*. [Accessed on January 24, 2022].

Appendix B includes an evaluation of the potential for these species to occur in the Study Area. HELIX also reviewed the following sources for information on-site conditions pertinent to biological resources:

- U.S. Geological Survey (USGS). 2022. *Pollock Pines, California*. 7.5-minute series topographic quadrangle. United States Department of Interior; and
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 2022. *Web Soil Survey*. Available at: <http://websoilsurvey.sc.egov.usda.gov>. Accessed [January 24, 2022] (NRCS 2022).

3.2 BIOLOGICAL SURVEYS

Biological surveys at the site consisted of a biological reconnaissance survey by HELIX Biologist Greg Davis on January 25, 2022, an oak tree survey by HELIX International Society of Arboriculture (ISA) certified arborist Marisa Britts (#WE-13338A) on February 17, 2022, and a focused botanical survey by HELIX Biologist Greg Davis on June 15, 2022.

3.2.1 Biological Reconnaissance Survey

A biological reconnaissance survey was conducted by HELIX Biologist Greg Davis on January 25, 2022. The Study Area was systematically surveyed on foot to ensure total search coverage, with special attention given to portions of the Study Area with the potential to support special-status species and sensitive habitats. Binoculars were used to further extend site coverage and identify species observed. All plant and animal species observed on-site during the surveys were recorded (Appendix C), and all

biological communities occurring on-site were characterized. All resources of interest were mapped with Global Positioning System (GPS)-capable tablets equipped with GPS receivers running ESRI Collector for ArcGIS version 10.6.1 software. Following the field survey, the potential for each species identified in the database query to occur within the Study Area was determined based on the site survey, soils, habitats present within the Study Area, and species-specific information, as shown in Appendix B.

3.2.2 Oak Tree Survey

The oak tree survey was conducted by ISA certified arborist Marisa Brilts (WE-13338A) on February 21, 2022. The following data were collected for all oak trees with a DBH of six inches or greater on the site: species, trunk diameter at 4.5-feet above the ground (DBH), dripline radius, estimated height, and overall health and structure of the tree. Comments such as number of trunks, irregularities, scars or other growth characteristics or vigor indicators were recorded for each tree. The location of each tree was recorded using a Juniper Geode Global Navigation Satellite System receiver with sub-meter accuracy. Trees on the site were identified in the field with pre-printed numbered tags. The results of the tree survey are summarized in Section 5.1.1.

3.2.3 Focused Botanical Survey

A focused botanical survey was conducted on June 15, 2022 by HELIX Biologist Greg Davis for Pleasant Valley mariposa lily (*Calochortus clavatus* var. *avius*) and Stebbins' phacelia (*Phacelia stebbinsii*). The survey was conducted according to CNPS botanical survey guidelines (https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf) and CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018). The entire site was surveyed, and all plant species were identified to the taxonomic level necessary to determine whether they were special-status species.

4.0 RESULTS: ENVIRONMENTAL SETTING

4.1 SITE LOCATION AND DESCRIPTION

The ±16.90-acre Study Area is located in the in the unincorporated community of Pollock Pines in El Dorado County, California (Figure 1, *Vicinity Map*). The Study Area is bordered by Forebay Road/Forebay Reservoir to the west and rural residential development to the north/east/south. The Study Area is located within Township 11 North, Range 12 East, Section 25 of the USGS 7.5-minute series *Pollock Pines, California* quadrangle (Figure 2, *Topographic Map*). The approximate location of the Study Area is 38.770375° Latitude, and -120.580746° Longitude (Figure 1). An aerial of the Study Area is provided in Figure 3, *Aerial Map*.

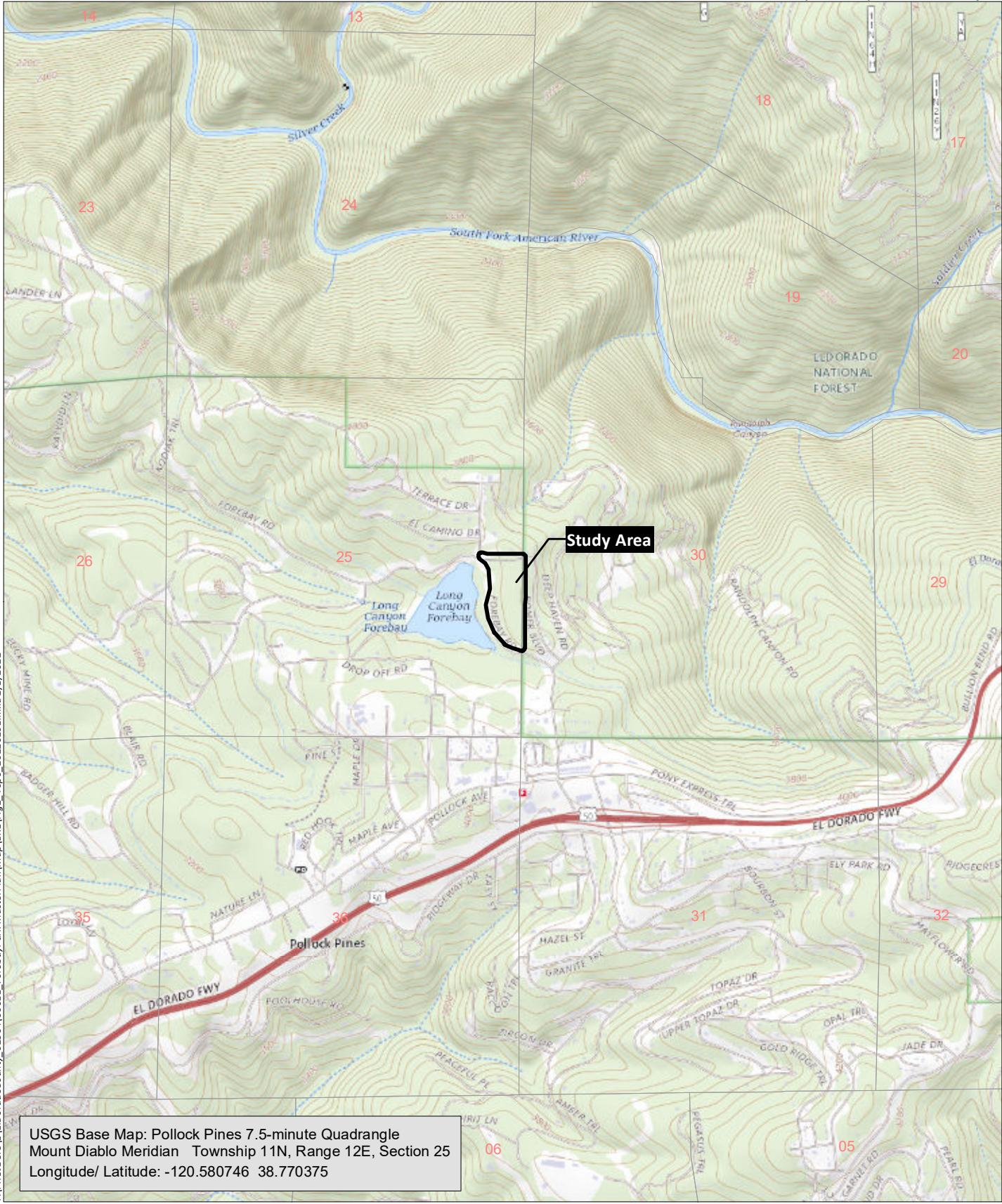
4.2 PHYSICAL FEATURES

4.2.1 Topography and Drainage

The general topography of the Study Area is mild, with elevations ranging from approximately 3,860 feet (1,177 meters) above mean sea level (MSL) in the northeastern corner to approximately 3,815 feet (1,162 meters) above MSL in the southwestern portion of the Study Area. The Study Area is located in the South Fork American River watershed, USGS Hydrologic Unit Code (HUC) 18020129. The Study Area



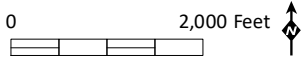
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USGS Base Map: Pollock Pines 7.5-minute Quadrangle
 Mount Diablo Meridian Township 11N, Range 12E, Section 25
 Longitude/ Latitude: -120.580746 38.770375

Source: USGS, The National Map, 2021

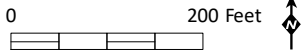


Legend

○ Study Area - 16.9 Acres



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Source: Aerial (DigitalGlobe, 1/30/2020)

is situated along a ridge/saddle and no aquatic resources were observed. Forebay Reservoir (Long Canyon Forebay) is located approximately 100 feet west of the Study Area, on El Dorado Irrigation District (EID) property. The hydrological regime on-site is direct seasonal precipitation, snowfall/melt, and stormwater run-off from the surrounding upland landscape.

4.2.2 Soils

The Natural Resources Conservation Service has mapped one soil unit within the Study Area (Figure 4, *Soils Map*): McCarthy cobbly loam, 9 to 50 percent slopes. The general characteristics and properties associated with this soil type are described below.

(MhE) McCarthy cobbly loam, 9 to 50 percent slopes: This soil type is found along ridges and hillslopes and is derived from andesitic volcanic residuum weathered from conglomerate parent material. A typical soil profile for this map unit is cobbly loam from 0 to 10 inches, very cobbly loam from 10 to 38 inches, and weathered bedrock from 38 to 42 inches. This site is well drained and falls in the Mesic Mountains >40 inches precipitation ecological interpretive group. Minor components of this soil map unit include the Iron Mountain and Cohasset soil series. This soil type occurs throughout the entire Study Area.

4.3 BIOLOGICAL COMMUNITIES

Two biological communities including, developed/disturbed and Sierran mixed conifer occur within the Study Area (Figure 5, *Habitat Map*). These communities are described in more detail below. A comprehensive list of all plant species observed within the Study Area is provided in Appendix C. Representative photographs are included in Appendix D.

4.3.1 Developed/Disturbed

A total of 9.06 acres of developed/disturbed habitat was observed within the majority of the Study Area (Figure 5). The developed/disturbed habitat consists of paved and dirt roads, parking areas, a baseball field, batting cages, sheds/buildings, and horseshoe pits associated with the existing park facility. At the time of the survey, this community had patches of snow on the ground within the Study Area and no dominant herbaceous vegetation was observed, however conifer and hardwood tree species were scattered throughout (see tree species specified below in Section 4.3.2).

4.3.2 Montane Hardwood Conifer

A total of 1.76 acres of montane hardwood conifer habitat was observed in the southern portion of the Study Area (Figure 5). Dominant overstory vegetation was composed of black oak (*Quercus kelloggii*), Douglas fir (*Pseudotsuga menziesii*), and ponderosa pine (*Pinus ponderosa*). This community represents dense groves of black oak that are composed of 10 percent, and greater, canopy cover.

4.3.3 Sierran Mixed Conifer

A total of 6.05 acres of Sierran mixed conifer habitat was observed primarily in the western and southern portions of the Study Area (Figure 5). Dominant overstory vegetation was composed of coniferous tree species and included incense cedar (*Calocedrus decurrens*), ponderosa pine, Douglas fir (*Pseudotsuga menziesii*), and white fir (*Abies concolor*). Non-dominant, hardwood tree species observed

within the Study Area included black oak, tanoak (*Notholithocarpus densiflorus*), and pacific madrone (*Arbutus menziesii*). The understory within this community was relatively sparse, but included species such as Sierran mountain misery (*Chamaebatia foliolosa*), Himalayan blackberry (*Rubus armeniacus*), and white leaf manzanita (*Arctostaphylos viscida* ssp. *viscida*).

5.0 DISCUSSION: EVALUATION OF BIOLOGICAL RESOURCES

5.1 SENSITIVE HABITATS

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under CEQA. Riparian areas are regulated under Section 1600 of the California Fish and Game Code, wetlands and other waters of the U.S. are regulated under Sections 401 and 404 of the Clean Water Act, however aquatic resources and riparian habitat were not observed within the Study Area. Oak trees and oak woodland habitat are protected under the specific policies outlined in the El Dorado County Oak Resources Management Plan.

5.1.1 Oak Trees and Oak Woodland



A total of 75 protected oak trees and 1.76 acres of montane hardwood conifer habitat, which has a canopy composed of at least 10 percent of oak species, were mapped within the Study Area (Appendix E; Figures 5 and 6). Since the project plan has not yet been finalized, impacts to oak resources will be assessed upon determination of a final design. As discussed in Section 2.5, if a project will result in impacts to individual oak trees or oak woodland habitat, then the County would require mitigation for impacts to oak resources or regulated oak trees under the ORMP.

5.1.2 Wildlife Migration Corridors

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by development creates isolated “islands” of wildlife habitat. Fragmentation can also occur when a portion of one or more habitats is converted into another habitat; for instance, when woodland or scrub habitat is altered or converted into grasslands after a disturbance such as fire, mudslide, or grading activities. Wildlife corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) on population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

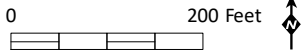
During the biological survey, a majority of the site was observed to lack perimeter fencing. Perimeter fencing was observed to the north and east of the Study Area along the existing residences. While the interior of the Study Area appears to be utilized by wildlife, the Study Area does not impede movement from the surrounding landscape. The proposed project development is not anticipated to create barriers that would hinder wildlife movement more than current fencing conditions. Therefore, the proposed project would not create any new barriers to wildlife movements.

Legend

-  Study Area - 16.9 Acres
-  MhE - McCarthy cobbly loam, 9-50% slopes



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Source: NRCS, 2022; Aerial (DigitalGlobe, 1/30/2020)

Legend

-  Study Area - 16.9 Acres
-  Montane Hardwood Conifer - 1.76 Acres
-  Sierran Mixed Conifer - 6.05 Acres
-  Developed/Disturbed - 9.06 Acres



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Source: Aerial (DigitalGlobe, 1/30/2020)



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Source: Aerial Imagery (DigitalGlobe, 1/31/2020)

Legend

- Approximate Dripline
- Approximate Oak Tree Location
- Study Area - 16.9 Acres



5.1.3 Important Biological Corridors

The *El Dorado County General Plan* identifies a number of Important Biological Corridors (IBC). The Study Area is not located within an IBC. The proposed project will not cause a significant reduction in the ecological functions or current ability to facilitate wildlife movement, as a result of minimal structures developed within a small portion of the Study Area.

5.2 SPECIAL-STATUS SPECIES

5.2.1 Special-Status Plants

According to the database query, a total of 16 special-status plants have the potential to occur in the project region. However, based on the literature review, published information, soil types present in the Study Area, and the habitats present in the Study Area, two special-status plant species including Pleasant Valley mariposa lily (*Calochortus clavatus* var. *avius*) and Stebbins' phacelia (*Phacelia stebbinsii*) were determined to have the potential to occur within the Study Area (see Appendix B). These special-status plant species were not observed during the June 15, 2022 focused botanical survey and are presumed to be absent from the site, however, both species are further described below.

5.2.1.1 Pleasant Valley Mariposa Lily

Pleasant Valley mariposa lily is ranked as a CNPS 1B species, which indicates that this species is rare, threatened, or endangered in California and elsewhere. This species is not a federal or state-listed plant species. It is a perennial, bulbiferous herb found on Josephine silt loam and volcanic soils in lower montane coniferous forest from 305 to 1,800 meters above MSL. The identification period for this species is from May through July.

There are volcanic soils mapped within the Study Area and much of the Study Area is composed of mixed coniferous tree species. Additionally, there are several documented occurrences of this species within two miles of the Study Area (CDFW 2022). This species was not observed during the June 15, 2022 focused botanical survey and is presumed to be absent from the site

5.2.1.2 Stebbins' Phacelia

Stebbins' phacelia is ranked as a CNPS 1B species but is not a federal or State-listed plant species. It is an annual herb found in cismontane woodland, lower montane coniferous forest, and meadow/seeps habitats from 610 to 2,010 meters above MSL. The identification period for this species is from May through July.

The Sierran mixed conifer community within the Study Area provides suitable habitat for this species. Additionally, there are two documented occurrences of this species within 2.5 miles of the Study Area, with the most recent being from 2015 (CDFW 2022). This species was not observed during the June 15, 2022 focused botanical survey and is presumed to be absent from the site

5.2.2 Listed and Special-Status Wildlife

According to the database queries, a total of 14 listed and/or special-status wildlife species have the potential to occur in the project region. Based on field observations, published information, and

literature review, California red-legged frog (*Rana dratonii*), western pond turtle (*Emys marmorata*), northern goshawk (*Accipiter gentilis*), and bald eagle (*Haliaeetus leucocephalus*), are special-status wildlife species that have the potential to occur within the Study Area. These species are discussed in more detail below. No other special-status wildlife species have the potential to occur in the Study Area. In addition to these special-status wildlife species, other migratory birds and raptors protected under federal and state laws/policies also have potential to occur within the Study Area. Species that were determined to have no potential to occur in the Study Area or be impacted by the proposed project (see Appendix B) are not discussed further in this document.

5.2.2.1 California Red-Legged Frog

Within its range, CRLF occupies a distinct habitat of both aquatic and terrestrial components that consist of aquatic breeding and non-breeding areas embedded within a matrix of habitats used for dispersal, or refugia. Breeding and non-breeding aquatic habitat consists of low-gradient freshwater bodies, including ponds, marshes, sag ponds, dune ponds, stock ponds, lagoons, seeps, springs, and backwaters within streams and creeks. This species does not inhabit water bodies that exceed 70 degrees Fahrenheit if there are no cool, deep portions (USFWS 2002). Important characteristics of aquatic breeding habitat include still or slow-moving fresh water (with salinities of less than 7.0 parts per thousand) deeper than 2.3 feet (0.7 meter) with dense, shrubby emergent or overhanging vegetation that provides egg deposition sites and cover for adult frogs (Jennings and Hayes 1994; USFWS 2002) and that persists for a minimum of 20 weeks following the breeding season to allow tadpoles to mature (USFWS 2010). The breeding season typically occurs from November through April (USFWS 2002) and is likely influenced by local precipitation and ambient temperature. Females typically lay eggs between December and early April. Tadpoles typically metamorphose in 11 to 20 weeks, from July to September, but may overwinter in some sites. The largest populations of CRLF are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) intermixed with cattails. Adults feed primarily on aquatic and terrestrial invertebrates, but may feed on tadpoles, smaller frogs, small mammals, and fish. Juvenile frogs are active diurnally and nocturnally, and adult frogs are largely nocturnal (USFWS 2002).

CRLF are generally found in or near water but may disperse into uplands during the wet season to migrate to breeding habitat or for foraging, or in response to receding water during the driest time of the year. Well-vegetated terrestrial areas within a riparian corridor may provide important sheltering habitat when temperatures are cold in the winter or when water is unavailable during dry periods. CRLF spend considerable time resting and foraging in riparian vegetation when it is present (USFWS 2002). The use of the adjacent riparian corridor during summer is most often associated with drying of creeks in mid- to late-summer (Rathbun in litt., 1994 in USFWS 1996). During dry periods, CRLF remain close to water and often disperse upstream or downstream from their breeding habitat to forage or seek aestivation sites if water is not available (USFWS 2002). This habitat may include shelter under boulders, rocks, logs, industrial debris, agricultural drains, water troughs, small mammal burrows, incised stream channels, or areas with moist leaf litter (Jennings and Hayes 1994; USFWS 2002). Most CRLF do not disperse farther than the nearest suitable cold-shelter or aestivation habitat. CRLF have been found up to 200 feet from water in adjacent dense riparian vegetation (USFWS 2010).

There is one CNDDDB record for this species within five miles of the Study Area (CDFW 2022). The Study Area does not provide suitable aquatic habitat; however, Forebay Reservoir, located approximately 100 feet west of the Study Area may provide marginal aquatic habitat for this species. This species was not observed within the Study Area during the biological survey. Forebay Reservoir was observed to generally lack riparian and/or emergent vegetation along its shoreline and is known to host rainbow

trout, a known predator of CRLF. Given this information, there is a low potential for this species to utilize the reservoir, however CRLF cannot be completely ruled out due to there being documented occurrences nearby and marginal aquatic habitat present. Since this species has the potential to occur in Forebay Reservoir, it could also utilize the Sierran mixed conifer community within the Study Area as upland habitat for foraging, dispersal, and aestivation.

5.2.2.2 Western Pond Turtle

Western pond turtle is classified as a California Species of Special Concern. This species is typically found along quiet streams and ponds with basking sites and muddy bottoms, feeding on aquatic plants, fishes, and invertebrates (Zeiner et al. 1988-1990; Rosenberg et al. 2009). They are generally associated with permanent or nearly permanent water sources (CDFW 2022) and prefer areas of deep water with low velocity and high temperatures (Reese and Hartwell 1997a). Upland habitats adjacent to creeks and ponds are used throughout the year for nesting and overwintering. Turtles may also overwinter within a pond by burrowing into the mud on the pond bottom (Rienschke et al. 2013). Although studies have shown that the typical terrestrial use area can extend up to 500 meters from the edge of the aquatic habitat, the weighted average of recorded terrestrial use is 94 meters, or approximately 300 feet. Western pond turtles prefer to overwinter in areas with moderate woody vegetation and leaf litter, and are unlikely to use annual grasslands (Reese and Hartwell 1997b; Davis 1998; Pilliod et al. 2013; Rathbun et al. 2002). Eggs are laid between May and August and hatch in approximately 80 days. Hatchlings often stay in or around the nest through the winter. Nests are generally found within 100 feet (30 meters) of water in areas with little vegetative cover and good sun exposure (Rathbun et al. 2002). Little is known about dispersal patterns of western pond turtles, but genetic analysis shows most movement is along drainages (Rienschke et al. 2013).

There is one documented CNDDDB record for this species within five miles of the Study Area (CDFW 2022). The Study Area does not provide suitable aquatic habitat; however, Forebay Reservoir, located approximately 100 feet west of the Study Area may provide potential aquatic habitat for this species. Therefore, if this species occurs in Forebay Reservoir, then the Sierran mixed conifer habitat provides suitable upland habitat for this species. This species was not observed within the Study Area during the biological survey. Due to the presence of suitable upland habitat, close proximity to Forebay Reservoir, but no documented occurrences within Forebay Reservoir, this species was determined to have a low potential to occur within the Study Area.

5.2.2.3 Northern Goshawk

Northern goshawk is classified as a California Species of Special Concern. This species nests and forages in mature and old-growth forest stands in a broad range of conifer and coniferous hardwood types, including Pacific Ponderosa, Jeffrey and lodgepole pine, mixed conifer, firs, and pinyon-juniper with relatively dense canopies. It may also forage in meadow edges and open sagebrush. The nesting and fledgling period is typically between March 1 and August 15 (Woodbridge and Hargis 2006).

The nearest CNDDDB record for this species is approximately eight miles northwest of the Study Area (CDFW 2022). The species was not observed on-site during the biological surveys. The trees within the Sierran mixed conifer community provide foraging and nesting habitat for this species within the Study Area. Therefore, this species has the potential to occur within the Study Area.

5.2.2.4 Bald Eagle

Bald eagles breed in the northern parts of the U.S. and into Canada and move south across the U.S. in the winter. Breeding habitat most commonly includes areas within 2.5 miles (4.0 kilometers) of coastal areas, bays, rivers, lakes, and reservoirs. Nests usually occur in tall trees (including pine, cottonwood, willow, sycamore, and oak) or on pinnacles or cliffs near water. In winter, bald eagles may associate with waterfowl concentrations or congregate in areas with abundant dead fish or other food resources. Wintering areas are commonly associated with open water though in some regions (e.g., Great Basin) some bald eagles use habitats with little or no open water (e.g., montane areas) if upland food resources (e.g., rabbit or deer carrion, livestock afterbirths) are readily available. Wintering eagles tend to avoid areas with high levels of nearby human activity (boat traffic, pedestrians) and development (buildings). Winter roost sites vary in their proximity to food resources (up to 33 km) and may be determined to some extent by a preference for a warmer microclimate at these sites. Communal night roosts often are in trees that are used in successive years (Nature Serve 2022).

The nearest CNDDDB record for this species is approximately 12 miles northeast of the Study Area (CDFW 2022). The species was not observed on-site during the biological surveys. The trees within the Sierran mixed conifer community provide potential nesting habitat and Forebay Reservoir immediately to the west of the Study Area provides potential foraging habitat for this species. Therefore, this species has the potential to occur within the Study Area.

5.2.2.5 Nesting Migratory Birds and Raptors

The Study Area and immediate vicinity provides nesting and foraging habitat for a variety of nesting migratory birds and common raptors such as spotted towhee (*Pipilo maculatus*), mountain chickadee (*Poecile gameli*), and acorn woodpecker (*Melanerpes formicivorus*). Active nests were not observed during surveys; however, a variety of birds have the potential to nest in and adjacent to the Study Area, in trees, shrubs and on the ground in vegetation.

Project activities such as clearing and grubbing that occur during the avian breeding season (February 1 through August 31) could result in injury or mortality of eggs and chicks directly through destruction or indirectly through forced nest abandonment due to noise and other disturbance.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The 16.90-acre Study Area is comprised of developed/disturbed land (9.06 acres) and Sierran mixed conifer habitat (6.05 acres). No special-status plants or special-status wildlife were observed within the Study Area during the biological survey; however, special-status plants and wildlife species may occur within the Study Area. Recommendations, including avoidance and minimization measures to limit or avoid impacts to special-status plants and wildlife species that may occur are included in Section 6.1.

Known or potential biological constraints in the Study Area include:

- Potential upland habitat for California red-legged frog and western pond turtle;
- Potential foraging and nesting habitat for special-status and migratory bird species, including northern goshawk and bald eagle; and

- Protected oak trees and oak woodland regulated by El Dorado County. Oak woodland that contains at least 10 percent oak canopy is represented by the montane hardwood conifer habitat within the Study Area.

6.1 RECOMMENDATIONS

6.1.1 California Red-Legged Frog and Western Pond Turtle

California red-legged frog and western pond turtle have the potential to occur within the Study Area given they are known to occur within the vicinity and the presence of suitable aquatic habitat nearby (i.e., Forebay Reservoir), and suitable upland habitat within the Sierran mixed conifer community. Therefore, it is recommended that a pre-construction survey for California red-legged frog and western pond turtle be conducted for any construction activity occurring within the Sierran mixed conifer community. Special attention will be given for potential CRLF aestivation sites which may include the use of digital scopes to inspect burrows for CRLF adults within the Sierran mixed conifer community. If no CRLF or western pond turtles are observed, then a letter report documenting the results of the survey should be provided to the project proponent for their records, and no additional measures are recommended. If construction does not commence within 14 days of the pre-construction survey, or halts for more than 14 days, a new survey is recommended.

If CRLF and/or western pond turtles are found and will be potentially impacted by project construction, coordination with the appropriate wildlife agencies will necessary. Presence of these species may require preparation of an agency approved avoidance/relocation plan prior to the initiation of construction. Additional avoidance measures may include erecting exclusion fencing around the work area to preclude these species from entering the construction footprint, having a qualified and agency-approved biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities for purposes of moving individuals out of the construction footprint into agency approved relocation areas, and performing a WEAP training for all construction workers.

6.1.2 Special-Status and Nesting Migratory Birds and Raptors

Special-status birds, migratory birds, and raptors, including northern goshawk, including northern goshawk and bald eagle, have the potential to forage and bald eagle, have the potential to forage and nest within the Study Area. No active avian nests were observed at the time of the field survey, but the Study Area has the potential to support nesting birds within various trees and shrubs, bare ground, and human-made structures. Active nests and nesting birds are protected by the CDFG Code Sections 3500, 3503.5, and 3513 and the MBTA. Ground-disturbing and other development activities including grading, vegetation clearing, or tree removal, could impact nesting birds if these activities occur during the nesting season (generally February 1 to August 31). To avoid impacts to nesting birds, all vegetation removal should be completed between September 1 and January 31, if feasible.

If development activities occur during the nesting season, a qualified biologist should conduct a nesting bird survey within the project footprint to determine the presence of any active nests that may be impacted by construction activities. Additionally, the surrounding 500 feet of the project footprint should be surveyed for active raptor nests, where accessible, and with binoculars, as necessary. The nesting bird survey should be conducted within 14 days prior to commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, a letter report should be prepared to document the survey and provided to the project proponent, and no

additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than seven days, an additional survey is required prior to starting or resuming work.

If active nests are found, the qualified biologist should establish species-specific buffer zones to prohibit development activities and minimize nest disturbance until the young have successfully fledged or the biologist determines that a nest is no longer active. Buffer distances may range from 50 feet for most songbirds up to 250 to 500 feet for most raptors. Nest monitoring may also be warranted during certain phases of development to ensure nesting birds are not adversely impacted by construction activities. If active nests are found within any trees slated for removal, an appropriate buffer should be established around the tree and all trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and is no longer active.

In addition, a qualified biologist should conduct an environmental awareness training for all construction personnel for the potential of nesting birds to occur on-site prior to the initiation of work. As applicable, the pre-construction survey and environmental training may be combined with other recommended surveys and trainings. Furthermore, if construction occurs outside of the nesting bird season (September 1 to January 31) a nesting bird survey and environmental training for nesting birds would not be required.

6.1.3 Oak Trees and Oak Woodland

To date, a site design plan has not yet been finalized for the proposed project; therefore, final impacts to oak woodland or individual oak trees and required mitigation, if any, will be assessed when a design plan has been completed. As discussed in Section 2.5, if a project will result in impacts to individual oak trees or oak woodland habitat, then the County would require mitigation for impacts to oak resources or regulated individual oak trees under the ORMP. Prior to removal of any trees, a tree removal permit would need to be obtained from the County.

For all protected oak trees to be preserved within 20 feet of the impact area, then the following protection measures are recommended in order minimize impacts to protected trees. Protection measures include:

- Install tree Protection Fencing, consisting of a minimum 4-foot tall high-visibility fence (orange plastic snow fence or similar), to be placed around the perimeter of the root protection zone (RPZ) (dripline radius + one foot) for all protected trees. The RPZ is the minimum distance for placing protective fencing, but tree protection fencing should be placed as far outside of the RPZ as possible. Signs shall be placed along the fence at approximately 50-foot intervals. Each sign shall be a minimum of two feet by two feet and shall include the following:

TREE PROTECTION ZONE
DO NOT MOVE OR RELOCATE FENCE
UNTIL PROJECT COMPLETION WITHOUT
PERMISSION OF PROJECT ARBORIST
OR COUNTY OF EL DORADO

- Whenever possible, fence multiple trees together in a single RPZ;

- If permanent site improvements (e.g., paving and sidewalks) encroach into the RPZ, install fence at limit of work. If temporary impacts (e.g., grading, utility installation) require encroachment into the RPZ, move fence to limit of work during active construction of item and return to edge of RPZ once work is completed;
- Tree protection fencing shall not be moved without prior authorization from the Project Arborist or as detailed on approved plans;
- Avoid paving within RPZ. If paving cannot be avoided, use porous materials where feasible;
- Parking, portable toilets, dumping or storage of any construction materials, including oil, gas, or other chemicals, or other infringement by workers or domesticated animals shall be prohibited in the RPZ;
- No signs, ropes, cables, metal stakes, or any other items shall be attached to a protected tree, unless recommended by the Project Arborist;
- Grading, excavation, or trenching within the RPZ should be avoided to the greatest extent feasible. Under no circumstances should fill soil be placed against the trunk of an existing tree;
- Any grading activities or ground disturbance within the RPZ shall be supervised by the Project Arborist and recommendations by the Project Arborist regarding root avoidance and other excavation measures shall be implemented to the extent feasible;
- Underground utilities should be avoided in the RPZ, but, if necessary, shall be bored or drilled. No trenching is allowed within the RPZ unless specifically approved by the Project Arborist;
- Drains shall be installed according to County specifications to avoid harm to existing oak trees due to excess watering;
- Pruning of living limbs or roots shall be done under the supervision of the Project Arborist. All pruning should be done by hand, air knife, or water jet, in accordance with ISA standards using tree maintenance best practices. Climbing spikes should not be used on living trees. Limbs should be removed with clean cuts just outside the crown collar;
- Cover exposed roots or cut root ends in trenches with damp burlap to prevent drying out;
- Minimize disturbance to the native ground surface (e.g., grass, leaf, litter, or mulch) under preserved trees to the greatest extent feasible;
- Native woody plant material (trees and shrubs to be removed) may be chipped or mulched on the site and placed in a 4- to 6-inch deep layer around existing trees to remain. Mulch shall not be placed in contact with the trunk of preserved trees;
- Deep water preserved trees that have had roots cut during project activities once a month throughout the summer as needed or as recommended by the Project Arborist;

- Appropriate fire prevention techniques shall be employed around all trees to be preserved. This includes cutting tall grass, removing flammable debris within the RPZ, and prohibiting the use of tools that may cause sparks, such as metal-bladed trimmers or mowers;
- No open flames shall be permitted within 15 feet of the tree canopy;
- Damage to any protected tree during construction shall be immediately reported to the Project Arborist and to El Dorado County Planning Services. Damage shall be corrected as required by the County representative; and
- Any landscaping within the RPZ should minimize ground disturbance and may include drought-tolerant plants, bark mulch, or natural vegetative cover. Rock mulches such as cobbles, boulders, or gravel shall not be used. All landscaping shall be kept at least four feet from trunk.

6.2 SUMMARY OF AVOIDANCE AND MINIMIZATION MEASURES

Implementation of the following measures is recommended to minimize impacts to biological resources within the Study Area prior to development:

- Conduct pre-construction surveys for California red-legged frog, western pond turtle, and nesting migratory birds and raptors (during the nesting season) 14 days prior to the initiation of construction or ground disturbing activities that occur during the nesting season. If construction or ground disturbing activities do not commence within 14 days, or halt for more than seven days, additional surveys are required prior to resuming or starting work;
- Conduct a worker environmental awareness training for all construction personnel prior to the initiation of work for special-status plants, California red-legged frog, western pond turtle, special-status and nesting migratory birds and raptors; and
- Determine final oak woodland and oak tree impacts and mitigation compensation based on arborist survey data and proposed tree removals, if any. Obtain a tree removal permit, as needed, and implement tree protection measures for all protected trees to be preserved on-site.

7.0 REFERENCES

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Appendix A

Applicable Sections of the El Dorado
County Adopted General Plan

CONSERVATION AND OPEN SPACE ELEMENT

CONSERVATION AND PROTECTION OF WATER RESOURCES

GOAL 7.3: WATER QUALITY AND QUANTITY

Conserve, enhance, and manage water resources and protect their quality from degradation.

OBJECTIVE 7.3.1: WATER RESOURCE PROTECTION

Preserve and protect the supply and quality of the County's water resources including the protection of critical watersheds, riparian zones, and aquifers.

Policy 7.3.1.1: Encourage the use of Best Management Practices, as identified by the Soil Conservation Service, in watershed lands as a means to prevent erosion, siltation, and flooding.

Policy 7.3.1.2: Establish water conservation programs that include both drought tolerant landscaping and efficient building design requirements as well as incentives for the conservation and wise use of water.

Policy 7.3.1.3: The County shall develop the criteria and draft an ordinance to allow and encourage the use of domestic gray water for landscape irrigation purposes. (See Title 22 of the State Water Code and the Graywater Regulations of the Uniform Plumbing Code.)

OBJECTIVE 7.3.2: WATER QUALITY

Maintenance of and, where possible, improvement of the quality of underground and surface water.

Policy 7.3.2.1: Stream and lake embankments shall be protected from erosion, and streams and lakes shall be protected from excessive turbidity.

Policy 7.3.2.2: Projects requiring a grading permit shall have an erosion control program approved, where necessary. El Dorado County General Plan Conservation and Open Space Element July 2004 (Amended October 2017) Page 145.

Policy 7.3.2.3: Where practical and when warranted by the size of the project, parking lot storm drainage shall include facilities to separate oils and salts from storm water in accordance with the recommendations of the Storm Water Quality Task Force's California Storm Water Best Management Practices Handbooks (1993).

Policy 7.3.2.4: The County should evaluate feasible alternatives to the use of salt for ice control on County roads.

Policy 7.3.2.5: As a means to improve the water quality affecting the County's recreational waters, enhanced, and increased detailed analytical water quality studies and monitoring should be implemented to identify and reduce point and non-point pollutants and contaminants. Where such studies or monitoring reports have identified sources of pollution, the County shall propose means to prevent, control, or treat identified pollutants and contaminants.

OBJECTIVE 7.3.3: WETLANDS

Protection of natural and man-made wetlands, vernal pools, wet meadows, and riparian areas from impacts related to development for their importance to wildlife habitat, water purification, scenic values, and unique and sensitive plant life.

Policy 7.3.3.1: For projects that would result in the discharge of material to or that may affect the function and value of river, stream, lake, pond, or wetland features, the application shall include a delineation of all such features. For wetlands, the delineation shall be conducted using the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual.

Policy 7.3.3.3: The County shall develop a database of important surface water features, including lake, river, stream, pond, and wetland resources.

Policy 7.3.3.4: The Zoning Ordinance shall be amended to provide buffers and special setbacks for the protection of riparian areas and wetlands. The County shall encourage the incorporation of protected areas into conservation easements or natural resource protection areas.

Exceptions to riparian and wetland buffer and setback requirements shall be provided to permit necessary road and bridge repair and construction, trail construction, and other recreational access structures such as docks and piers, or where such buffers deny reasonable use of the property, but only when appropriate mitigation measures and Best Management Practices are incorporated into the project. Exceptions shall also be provided for horticultural and grazing activities on agriculturally zoned Conservation and Open Space Element El Dorado County General Plan Page 146 (Amended October 2017) July 2004 lands that utilize “best management practices (BMPs)” as recommended by the County Agricultural Commission and adopted by the Board of Supervisors. Until standards for buffers and special setbacks are established in the Zoning Ordinance, the County shall apply a minimum setback of 100 feet from all perennial streams, rivers, lakes, and 50 feet from intermittent streams and wetlands. These interim standards may be modified in a particular instance if more detailed information relating to slope, soil stability, vegetation, habitat, or other site- or project-specific conditions supplied as part of the review for a specific project demonstrates that a different setback is necessary or would be sufficient to protect the particular riparian area at issue.

For projects where the County allows an exception to wetland and riparian buffers, development in or immediately adjacent to such features shall be planned so that impacts on the resources are minimized. If avoidance and minimization are not feasible, the County shall make findings, based on documentation provided by the project proponent, that avoidance and minimization are infeasible.

Policy 7.3.3.5: Rivers, streams, lakes and ponds, and wetlands shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site while disturbance to the resource is avoided or minimized and fragmentation is limited.

OBJECTIVE 7.3.4: DRAINAGE

Protection and utilization of natural drainage patterns.

Policy 7.3.4.1: Natural watercourses shall be integrated into new development in such a way that they enhance the aesthetic and natural character of the site without disturbance.

Policy 7.3.4.2: Modification of natural stream beds and flow shall be regulated to ensure that adequate mitigation measures are utilized.

CONSERVATION OF BIOLOGICAL RESOURCES

GOAL 7.4: WILDLIFE AND VEGETATION RESOURCES

Identify, conserve, and manage wildlife, wildlife habitat, fisheries, and vegetation resources of significant biological, ecological, and recreational value.

OBJECTIVE 7.4.2: IDENTIFY AND PROTECT RESOURCES

Identification and protection, where feasible, of critical fish and wildlife habitat including deer winter, summer, and fawning ranges; deer migration routes; stream and river riparian habitat; lake shore habitat; fish spawning areas; wetlands; wildlife corridors; and diverse wildlife habitat.

Policy 7.4.2.1: The County will coordinate wildlife and vegetation protection programs with appropriate Federal and State agencies.

Policy 7.4.2.2: The County shall continue to support the Noxious Weed Management Group in its efforts to reduce and eliminate noxious weed infestations to protect native habitats and to reduce fire hazards.

Policy 7.4.2.3: Consistent with Policy 9.1.3.1 of the Parks and Recreation Element, low impact uses such as trails and linear parks may be provided within river and stream buffers if all applicable mitigation measures are incorporated into the design.

Policy 7.4.2.4: Protect and preserve wildlife habitat corridors within public parks and natural resource protection areas to allow for wildlife use. Recreational uses within these areas shall be limited to those activities that do not require grading or vegetation removal.

Policy 7.4.2.5: Setbacks from all rivers, streams, and lakes shall be included in the Zoning Ordinance for all ministerial and discretionary development projects.

Policy 7.4.2.8: Conserve contiguous blocks of important habitat to offset the effects of increased habitat loss and fragmentation elsewhere in the County through a Biological Resource Mitigation Program (Program). The Program will result in the conservation of:

1. Habitats that support special status species;
2. Aquatic environments including streams, rivers, and lakes;
3. Wetland and riparian habitat;
4. Important habitat for migratory deer herds; and
5. Large expanses of native vegetation.

Appendix B

Potential for Special-status Species in
the Region to Occur in the
Study Area

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
Plants			
<i>Arctostaphylos nissenana</i> Nissesan manzanita	--/--/ 1B.2	A perennial, evergreen shrub found in rocky areas within closed-cone coniferous forest and chaparral from 450 to 1,100 meters in elevation. Blooms February – March (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Botrychium ascendens</i> Upswept moonwort	--/--/2B.3	A perennial, rhizomatous herb found in mesic areas within lower montane coniferous forest and meadows and seeps from 1,115 – 3,045 meters in elevation. Blooms (June) July – August (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Botrychium crenulatum</i> Scalloped moonwort	--/--/2B.2	A perennial, rhizomatous herb found within bogs and fens, lower montane coniferous forest, freshwater marshes and swamps, and upper montane coniferous forest from 1,268 – 3,280 meters in elevation. Blooms June – September (CNPS 2022).	Will not occur. The Study Area is located outside of the known elevation range for this species.
<i>Botrychium minganense</i> Mingan moonwort	--/--/2B.2	A perennial, rhizomatous herb found in mesic areas within bogs and fens, lower montane coniferous forest, edges of meadows and seeps, and upper montane coniferous forest from 1,455 – 2,1800 meters in elevation. Blooms July – September (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Calochortus clavatus</i> var. <i>avius</i> Pleasant Valley mariposa lily	--/--/1B.2	A perennial bulbiferous herb found on Josephine silt loam and volcanic soils in lower montane coniferous forest from 305 – 1,800 meters elevation. Blooms May – July (CNPS 2022).	Presumed absent. There are volcanic soils mapped within the Study Area and most of the site is composed of mixed conifers. Additionally, there are several documented occurrences of this species within 2 miles of the Study Area. This species was not observed during the June 15, 2022 focused botanical survey and is presumed to be absent from the site.

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
<i>Campylopodiella stenocarpa</i> Flagella-like atractylocarpus	--/--/2B.2	A moss found in cismontane woodland with all California populations existing on wet/moist roadsides from 285 – 430 meters elevation; currently known from 6 documented occurrences. No blooming period (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Carex cyrtostachya</i> Sierra arching sedge	--/--/1B.2	A perennial herb found in mesic microsites in lower montane coniferous forest, meadows, seeps, marshes, swamps, and riparian forest margins from 610 – 1,360 meters elevation. Blooms May – August (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Chlorogalum grandiflorum</i> Red Hills soaproot	--/--/1B.2	Perennial bulbiferous herb found on gabbro, serpentine, or other soils in chaparral, cismontane woodland, and lower montane coniferous forest from 245 to 1,690 meters in elevation. Blooms May – June (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Horkelia parryi</i> Parry's horkelia	--/--/1B.2	Perennial herb found in chaparral and cismontane woodland, especially known from lone formation soils, from 80 to 1,070 meters in elevation. Blooms April – September (CNPS 2022).	Will not occur. The Study Area is located outside of the known elevation range for this species.
<i>Jensia yosemitana</i> Yosemite tarplant	--/--/3.2	An annual herb found in meadows, seeps, and lower montane coniferous forest from 1,200 – 2,300 meters elevation. Blooms (April) May – July (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Juncus digitatus</i> Finger rush	--/--/1B.1	An annual herb found in openings in cismontane woodlands and lower montane coniferous forests, and in xeric vernal pools from 660 – 790 meters elevation. Blooms (April) May – June (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Lewisia kelloggii</i> ssp. <i>hutchinsonii</i> Hutchison's lewisia	--/--/3.2	A perennial herb found along ridgetops in upper montane coniferous forest, often on slate or rhyolite substrates, from 765 – 2,365 meters elevation. Blooms (April) May – August (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
<i>Lewisia serrata</i> Saw-toothed lewisia	--/--/1B.1	A perennial herb found on mesic, rocky slopes in broadleaf upland forest, lower montane coniferous forest, and riparian forests at 770 – 1,435 meters elevation. Blooms May – June (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.
<i>Phacelia stebbinsii</i> Stebbins' phacelia	--/--/1B.2	An annual herb found in cismontane woodland, lower montane coniferous forest, meadows, and seeps from 610 – 2,010 meters elevation. Blooms May – July (CNPS 2022).	Presumed absent. The Sierran mixed conifer community within the Study Area provides suitable habitat for this species. There are two documented occurrences of this species within 2.5 miles of the Study Area, with the most recent being from 2015 (CDFW 2022). This species was not observed during the June 15, 2022 focused botanical survey and is presumed to be absent from the site.
<i>Poa sierrae</i> Sierra blue grass	--/--/1B.3	A perennial rhizomatous herb found in openings in lower montane coniferous forest from 365 – 1,915 meters elevation. Micro habitat for this species is shady, moist, rocky slopes often occurring in canyons. Blooms April – July (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species. There are no documented occurrences for this species within 5 miles of the Study Area and all documented occurrences in El Dorado County are associated with Rubicon River valley (CDFW 2022).
<i>Rhynchospora capitellata</i> Brownish beaked-rush	--/--/2B.2	A perennial herb found in mesic microsites in lower- and upper montane coniferous forest, meadows, seeps, marshes, and swamps from 45 – 2,000 meters elevation. Blooms July – August (CNPS 2022).	Will not occur. The Study Area does not contain suitable habitat to support this species.

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
Wildlife			
Insects			
<p><i>Danaus plexippus</i> Monarch butterfly</p>	<p>FC/--/--</p>	<p>The federal listing on December 17, 2020 was for overwintering populations of Monarch butterflies that roost in wind protected tree groves, especially with <i>Eucalyptus</i> sp., and species of pine or cypress with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California. As caterpillars, monarchs feed exclusively on the leaves of milkweed (<i>Asclepias</i> sp.) (Nial et al. 2019; USFWS 2020). Monarch butterfly migration routes pass east over the Sierra Nevada in the fall and back to the California coast in the spring (USFWS 2020). The overwintering population is located along the Coast while summer breeding areas occur in interior California and North America with spring breeding areas located further east (USFWS 2020).</p>	<p>Not expected. The Study Area is in the summer breeding range of the Monarch butterfly and not in the coastal overwintering range (USFWS 2020). There are no CNNDDB records for this species within a 5-mile radius of the Study Area and most records are located along the coast (CDFW 2022). Monarch butterfly could fly through the Study Area during the migration season but would not be expected to inhabit the Study Area due to a lack of overwintering habitat in the Study Area.</p>
Fish			
<p><i>Hypomesus transpacificus</i> Delta smelt</p>	<p>FT/SE/--</p>	<p>Delta smelt are tolerant of a wide salinity range. They have been collected from estuarine waters up to 14 ppt (parts per thousand) salinity. For a large part of their one-year life span, delta smelt live along the freshwater edge of the mixing zone (saltwater-freshwater interface), where the salinity is approximately 2 ppt. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with the mixing zone and disperse into river channels and tidally-influenced backwater sloughs. They spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally-influenced backwater sloughs and channel edge-waters.</p>	<p>Will not occur. There is no suitable aquatic habitat on the property.</p>

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
		Although spawning has not been observed in the wild, the eggs are thought to attach to substrates such as cattails, bulrush, tree roots and submerged branches. Delta smelt are found only from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties (USFWS 1995).	
Amphibians			
<i>Ambystoma macrodactylum sigillatum</i> Southern long-toed salamander	--/--/SSC	Inhabits alpine meadows, high mountain ponds and lakes. Adults spend much of their lives underground, often utilizing the tunnels of burrowing mammals such as moles and ground squirrels (Stebbins and McGinnis 2012).	Will not occur. The Study Area is located outside of the known range of this species.
<i>Rana boylei</i> Foothill yellow-legged frog	--/ST/SSC	The foothill yellow-legged frog occurs along the coast ranges from Oregon to Los Angeles and along the western side of the Sierra Nevada. This species uses perennial rocky streams in a wide variety of habitats up to 6,400 feet above msl. This species rarely ventures far from water, is usually found basking in the water, or under surface debris or underground within 165 feet of water. Eggs are laid in clusters attached to gravel or rocks along stream margins in flowing water. Tadpoles typically require up to four months to complete aquatic development. Breeding typically follows winter rainfall and snowmelt, which varies based upon location (Jennings and Hayes 1994).	Will not occur. The Study Area does not contain suitable habitat to support this species.

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
<p><i>Rana draytonii</i> California red-legged frog</p>	<p>FT/--/SSC</p>	<p>The California red-legged frog (CRLF) occupies a fairly distinct habitat, combining both specific aquatic and riparian components. The adults require dense, shrubby, or emergent riparian vegetation closely associated with deep (greater than 2 1/3-foot deep) still or slow-moving water. The largest densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (<i>Salix</i> spp.) and an intermixed fringe of cattails (<i>Typha latifolia</i>). Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering habitat during winter. California red-legged frogs aestivate (enter a dormant state during summer or dry weather) in small mammal burrows and moist leaf litter. They have been found up to 100 feet from water in adjacent dense riparian vegetation. Studies have indicated that this species cannot inhabit water bodies that exceed 70° F, especially if there are no cool, deep portions (USFWS 2002).</p>	<p>May occur. There is marginal aquatic habitat for this species adjacent to the Study Area in Forebay Reservoir (see text for further discussion). Additionally, there is a CNDDB documented occurrence of this species from 2019 in the quadrangle immediately to the south of the Study Area (observed location not specified).</p> <p>Given that CRLF is known to occur in the vicinity and there is marginal aquatic habitat nearby, the Study Area could provide upland foraging, dispersal, and aestivating habitat for this species.</p>
<p><i>Rana sierrae</i> Sierra Nevada yellow-legged frog</p>	<p>FE/ST/WL</p>	<p>A high elevation frog that requires permanent water bodies that do not freeze solid over winter, which may include lakes, streams, tarns, perennial plunge pools in intermittent streams. Aquatic habitat for overwintering must be a minimum of 5.6 feet, but 8.2 feet or deeper or other habitat structures is preferred to avoid freezing conditions (USFWS 2016). Tadpoles require two years to develop, so water bodies that do not freeze solid or dry up during normal years are essential (USFWS 2016). This species has a maximum known upland movement of 82 feet from streams and up to 984 feet between water bodies around lakes (USFWS 2016).</p>	<p>Will not occur. The Study Area is located outside of the known range of this species.</p>

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
Reptiles			
<i>Actinemys (=Emys) marmorata</i> western pond turtle	--/--/SSC	Inhabits slow-moving water with dense submerged vegetation, abundant basking sites, gently sloping banks, and dry clay or silt soils in nearby uplands. Turtles will lay eggs up to 0.25-mile from water, but typically go no more than 600 feet (Jennings and Hayes 1994).	May occur. The Study Area provides suitable upland habitat for this species and suitable aquatic habitat is adjacent to the site across Forebay Road at the Forebay Reservoir. There is one documented occurrence within 5 miles of the Study Area.
Birds			
<i>Accipiter gentilis</i> Northern goshawk	--/--/SSC	Nests and forages in mature and old-growth forest stands in a broad range of conifer and coniferous hardwood types, including Pacific Ponderosa, Jeffrey and lodgepole pine, mixed conifer, firs, and pinyon-juniper with relatively dense canopies. May also forage in meadow edges and open sagebrush. Nesting and fledgling period: March 1 – August 15 (Woodbridge and Hargis 2006).	May occur. There is suitable nesting habitat throughout the Study Area.
<i>Haliaeetus leucocephalus</i> Bald eagle	DL/SE/FP	Requires large bodies of water with an abundant fish population. Feeds on fish, carrion, small mammals, and water-fowl. Nests are usually located within a 1-mile radius of water. Nests are most often situated in large trees with a commanding view of the area (Zeiner et al. 1990).	May occur. There is suitable nesting habitat throughout the Study Area and Forebay Reservoir provides suitable foraging habitat.
<i>Riparia riparia</i> Bank swallow	--/ST/--	Found primarily in riparian and lowland habitat in California. Nests in colonies along cliffs or steep riverbanks in holes. In California, a majority of the population is situated along the Sacramento River and the Feather River. Other smaller populations persist near Monterey and north of Shasta counties (Zeiner et al. 1990).	Will not occur. There is no suitable bank habitat for nesting colonies.

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
Mammals			
<i>Aplodontia fufa californica</i> Sierra Nevada mountain beaver	--/--/SSC	Sierra Nevada mountain beaver has a limited range in the Sierra Nevada, California, and Nevada. This subspecies is patchily distributed in cool, moist habitats from 1,675 to 3,050 meters elevation. Typically maintains burrow systems through the narrow willow fringes along streams. Meadows areas with deep soils for burrowing adjacent to streams are preferred (Beier 1989).	Will not occur. The Study Area does not provide suitable habitat for this species.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	--/--/SSC	Widely distributed throughout California except alpine and subalpine habitats. This species eats moths, beetle, and other insects which it catches on the wing or by gleaning from vegetation. Typically found near water since it is poor at concentrating its urine. This species uses caves, mines, tunnels, buildings, and human made structures for roosting. Maternity roosts are typically in warm sites. Hibernation sites are typically cold, but not freezing. This species is very sensitive to disturbance and may abandon its roost after one visit (Zeiner et al. 1988-1990).	Will not occur. The Study Area does not provide suitable roosting habitat for this species. The species may utilize the area for foraging.
<i>Pekania pennanti</i> Fisher	--/--/SSC	Occupy late-successional conifer and mixed conifer-hardwood forests with an abundance of downed wood, snags, large trees, and a dense canopy (Zielinski 2014). Typically found at elevations from 1,070 – 2,135 m amsl, where persistent snow does not accumulate and impede movement (Zielinski 2014). Riparian forests and habitat close to open water such as streams are important. Cavities and branches in trees, snags, stumps, rock piles, and downed timber are used as resting sites, and large diameter live, or dead trees are selected for natal and maternal dens (Zielinski 2014). There is a significant gap in the range of fisher	Not Expected. The Study Area does not provide suitable habitat for this species. The Study Area is routinely managed for fuel reduction and generally lacks suitable den sites such as snags, stumps, downed timber, etc. This species may pass through the Study Area, but it is not expected to remain for extended periods of time.

Species Name/ Common Name ¹	Status ²	Habitat, Ecology and Life History	Potential to Occur
		between the southern Sierra Nevada population and the northern Sierra Nevada/southern Cascade population that stretches approximately 400 km wide (Zielinski 2014).	
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	--/ST/--	In Sierra Nevada, prefers open forests or alpine fell-fields. Openings are used as foraging habitat and forested, densely vegetated, or rocky areas are used for cover and den sites. Den sites can include rock outcrops, hollow logs and stumps, and burrows in deep, loose soil (Zeiner et al. 1988-1990).	Will not occur. The Study Area does not provide suitable habitat for this species.

¹ Sensitive species reported in CNDDDB or CNPS on the “Tunnel Hill, Devil Peak, Robbs Peak, Slate Mountain, Pollock Pines, Riverton, Camino, Sly Park, and Old Iron Mountain” USGS quad, or in the USFWS list for the study area.

² Status is as follows: Federal (ESA) listing/State (CESA) listing/other CDFW status or CRPR. F = Federal; S = State of California; E = Endangered; T = Threatened; C = Candidate; FP=Fully Protected; SSC=Species of Special Concern; WL=Watch List; CSA=California Special Animal; SSHCP=South Sacramento Habitat Conservation Plan Covered Species.

³ Status in the Study area is assessed as follows. **Will Not Occur:** Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur in the study area; **Not Expected:** Species moves freely and might disperse through or across the study area, but suitable habitat for residence or breeding does not occur in the study area, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs in the study area; however, focused surveys conducted for the current project were negative; **May Occur:** Species was not observed on the site and breeding habitat is not present but the species has the potential to utilize the site for dispersal, **High:** Habitat suitable for residence and breeding occurs in the study area and the species has been recorded recently in or near the study area, but was not observed during surveys for the current project; **Present:** The species was observed during biological surveys for the current project and is assumed to occupy the study area or utilize the study area during some portion of its life cycle.

CRPR = California Rare Plant Rank: 1B – rare, threatened, or endangered in California and elsewhere; 2B – rare, threatened, or endangered in California but more common elsewhere. Extension codes: .1 – seriously endangered; .2 – moderately endangered.

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Appendix C

Plant and Wildlife Species Observed
in the Study Area

Table C-1. Plant Species

Family	Species Name	Common Name	Status ¹
Native			
Agavaceae	<i>Chlorogalum pomeridianum</i>	Common soaproot	-
Aristolochiaceae	<i>Asarum hartwegii</i>	Hartweg's wild ginger	-
Asteraceae	<i>Adenocaulon bicolor</i>	American trailplant	-
	<i>Anisocarpus madioides</i>	Woodland tarweed	-
	<i>Artemisia douglasiana</i>	California mugwort	-
	<i>Psilocarphus tenellus</i>	Slender woolly-marbles	-
	<i>Senecio aronicoides</i>	California butterweed	-
Betulaceae	<i>Corylus cornuta ssp. californica</i>	Beaked hazelnut	-
Boraginaceae	<i>Draperia systyla</i>	Draperia	-
Caprifoliaceae	<i>Lonicera conjugialis</i>	Purpleflower honeysuckle	-
	<i>Symphoricarpos albus</i>	Common snowberry	-
	<i>Symphoricarpos mollis</i>	Creeping snowberry	-
Cornaceae	<i>Cornus nuttallii</i>	Mountain dogwood	-
	<i>Cornus sericea ssp. occidentalis</i>	Western dogwood	-
Cupressaceae	<i>Calocedrus decurrens</i>	Incense cedar	-
Ericaceae	<i>Arbutus menziesii</i>	Pacific madrone	-
	<i>Arctostaphylos viscida ssp. viscida</i>	White leaf manzanita	-
	<i>Gaultheria ovatifolia</i>	Slender wintergreen	-
Fagaceae	<i>Notholithocarpus densiflorus</i>	Tanoak	-
	<i>Quercus kelloggii</i>	Black oak	-
	<i>Quercus wislizeni</i>	Interior live oak	-
Grossulariaceae	<i>Ribes roezlii var. roezlii</i>	Sierra gooseberry	-
Iridaceae	<i>Iris hartwegii</i>	Hartweg's iris	-
Juncaceae	<i>Luzula comosa var. laxa</i>	Hairy wood rush	-
Liliaceae	<i>Fritillaria affinis</i>	Checker lily	-
	<i>Prosartes hookeri</i>	Drops of gold	-
Montiaceae	<i>Claytonia rubra subsp. rubra</i>	Red stemmed miner's lettuce	-
Onagraceae	<i>Clarkia rhomboidea</i>	Tongue clarkia	-
	<i>Clarkia unguiculata</i>	Woodland clarkia	-
Phrymaceae	<i>Diplacus torreyi</i>	Torrey's monkeyflower	-
Pinaceae	<i>Abies concolor</i>	White fir	-
	<i>Pinus ponderosa</i>	Ponderosa pine	-
	<i>Pseudotsuga menziesii</i>	Douglas fir	-
Plantaginaceae	<i>Penstemon azureus var. angustissimus</i>	Azure penstemon	-
Poaceae	<i>Bromus sitchensis var. marginatus</i>	Mountain brome	-
	<i>Elymus glaucus</i>	Blue wildrye	-
Polemoniaceae	<i>Collomia grandiflora</i>	Grand collomia	-
	<i>Collomia heterophylla</i>	Varied leaved collomia	-
	<i>Leptosiphon ciliatus</i>	Whiskerbrush	-
Ranunculaceae	<i>Aquilegia formosa</i>	Columbine	-
	<i>Delphinium gracilentum</i>	Slender larkspur	-
	<i>Delphinium patens subsp. patens</i>	Spreading larkspur	-
Rhamnaceae	<i>Ceanothus sp.</i>	Ceanothus	-
	<i>Ceanothus velutinus</i>	Tobacco brush	-

Family	Species Name	Common Name	Status ¹
Rosaceae	<i>Amelanchier alnifolia</i>	Service berry	-
	<i>Chamaebatia foliolosa</i>	Sierran mountain misery	-
	<i>Drymocallis glandulosa var. reflexa</i>	Sticky cinquefoil	-
	<i>Rosa californica</i>	California wild rose	-
	<i>Rubus leucodermis</i>	White bark raspberry	-
Rubiaceae	<i>Galium aparine</i>	Cleavers	-
	<i>Galium porrigens</i>	Climbing bedstraw	-
	<i>Kelloggia galioides</i>	Milk kelloggia	-
Ruscaceae	<i>Maianthemum racemosum</i>	Feathery false lily of the valley	-
Sapindaceae	<i>Acer macrophyllum</i>	Big leaf maple	-
Viscaceae	<i>Phorodendron leucocarpum</i>	American mistletoe	-
Non-native			
Apiaceae	<i>Torilis arvensis</i>	Field hedge parsley	Moderate
Asteraceae	<i>Leucanthemum vulgare</i>	Oxe eye daisy	Moderate
	<i>Tragopogon dubius</i>	Yellow salsify	-
Caryophyllaceae	<i>Lychnis coronaria</i>	Rose campion	-
Brassicaceae	<i>Brassica nigra</i>	Black mustard	Moderate
	<i>Lunaria annua</i>	Annual honesty	-
Fabaceae	<i>Lathyrus latifolius</i>	Sweet pea	-
	<i>Vicia sativa</i>	Spring vetch	-
Hypericaceae	<i>Hypericum perforatum</i>	Common St. Johnswort	Moderate
Poaceae	<i>Bromus diandrus</i>	Ripgut brome	Moderate
	<i>Cynosurus echinatus</i>	Dogtail grass	Moderate
	<i>Dactylis glomerata</i>	Orchardgrass	Limited
	<i>Hordeum murinum</i>	Foxtail barley	Moderate
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	Limited
Rosaceae	<i>Rubus armeniacus</i>	Himalayan blackberry	High
	<i>Rubus laciniatus</i>	Cut leaved blackberry	-

¹ Status of native species is federal listing/state listing/California Rare Plant Rank; Status for non-native species is California Invasive Species Council invasiveness rating.

Table C-2. Wildlife Species

Order/Family	Species Name	Common Name	Status ¹
Birds			
Accipitriformes			
Cathartidae	<i>Carthartes aura</i>	turkey vulture	--
Anseriformes			
Anatidae	<i>Branta canadensis</i>	Canada goose	--
	<i>Bucephala albeola</i>	bufflehead	--
	<i>Oxyura jamaicensis</i>	ruddy duck	--
Gruiformes			
Rallidae	<i>Fulica americana</i>	American coot	--
Passeriformes			
Corvidae	<i>Corvus brachyrhynchus</i>	American crow	--
Emberizidae	<i>Pipilo maculatus</i>	spotted towhee	--
Paridae	<i>Poecile gameli</i>	mountain chickadee	--
Passeridae	<i>Passer domesticus</i>	house sparrow	--
Passerelidae	<i>Melospiza melodia</i>	song sparrow	--
Sittidae	<i>Sitta carolinensis</i>	white-breasted nuthatch	--
Sylviidae	<i>Chamaea fasciata</i>	wrentit	--
Piciformes			
Picidae	<i>Melanerpes formicivorus</i>	acorn woodpecker	--

¹ Status for animal species is ESA/CESA listing or other sensitivity.

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Appendix D

Representative Photographs



Photo 1. View of existing batting cages in the developed/disturbed community with residences in the background. Photo date 1/25/2022.



Photo 2. Representative view of the baseball field in the developed/disturbed community. Photo date 1/25/2022.

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Photo 3. Representative view of the horseshoe pits within the developed/disturbed community. Photo date 1/25/2022.



Photo 4. Representative view of the parking area off Gail Drive within the developed/disturbed community. Photo date 1/25/2022.

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Photo 5. Representative view of Gail Drive in the northern portion of the Study Area within the Developed/Disturbed community. Photo date 1/25/2022.



Photo 6. Representative view of the montane hardwood conifer community in the southern portion of the Study Area. Photo date 1/25/2022.

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Photo 7. Representative view of the Sierran Mixed Conifer community in the southern portion of the Study Area. Photo date 1/25/2022.



Photo 8. Representative view of Forebay Reservoir with Forebay Road visible in the foreground. Photo date 1/25/2022.

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Appendix E

Oak Tree Survey Data

Appendix E
Oak Tree Survey Data

Tree #	Species	# of Trunks	DBH	DLR	Height	Health	Structure	Recommended for Removal	Notes
1	Black Oak	1	10.5	16.00	25.00	Fair-Good	Fair-Good	No	no tag
178	Black Oak	1	8	14.00	25.00	Fair-Good	Fair-Good	No	
179	Black Oak	2	13, 7	25.00	40.00	Fair-Good	Fair	No	L, CD
180	Black Oak	1	9.5	12.00	20.00	Fair-Good	Fair-Good	No	L
181	Black Oak	1	10	14.00	22.00	Fair-Good	Fair-Good	No	L, AC
182	Black Oak	1	6	10.00	18.00	Fair-Good	Fair-Good	No	
183	Black Oak	1	27.5	55.00	75.00	Fair	Poor-Fair	No	LD, CD, IB, L, RR
184	Black Oak	1	13	22.00	45.00	Fair-Good	Fair-Good	No	Pruning cuts
185	Black Oak	1	10	18.00	20.00	Fair-Good	Fair	No	AC, L, OUL
188	Black Oak	1	6.5	15.00	18.00	Fair-Good	Fair-Good	No	L
190	Black Oak	1	9	8.00	0.00	Poor	Poor	Yes	rot, dying, RR
191	Black Oak	1	9	15.00	18.00	Fair-Good	Fair	Yes	L, target house,RR
192	Black Oak	2	35, 34	50.00	85.00	Fair-Good	Poor-Fair	No	IB, CD, MT
193	Black Oak	1	32	35.00	80.00	Fair-Good	Fair-Good	No	
194	Black Oak	1	15.5	18.00	40.00	Fair	Poor-Fair	No	L, LD
640	Black Oak	1	40	31.00	50.00	Good	Fair-Good	No	PW
641	Black Oak	2	6, 4	12.00	22.00	Fair-Good	Poor-Fair	Yes	L, CD, target road, RR
642	Tanoak	1	6	10.00	20.00	Fair-Good	Fair	Yes	L, target road, RR
643	Tanoak	1	13.5	15.00	22.00	Fair	Poor-Fair	Yes	L, target road, RR
644	Black Oak	1	9.5	10.00	15.00	Fair	Poor-Fair	Yes	L, CD, RR
646	Black Oak	1	8.5	20.00	20.00	Fair-Good	Poor-Fair	No	L, CD, AC
647	Black Oak	1	7	20.00	22.00	Fair-Good	Fair-Good	No	L, pruning cuts
648	Black Oak	1	10.5	20.00	22.00	Fair-Good	Fair	No	L, CD, AC
649	Black Oak	1	16	18.00	25.00	Poor-Fair	Poor	Yes	L, CD, LD, DB,RR
650	Black Oak	1	7	10.00	20.00	Poor	Poor	Yes	L, TW, dying oak, RR
651	Black Oak	3	19, 18, 17	25.00	25.00	Fair-Good	Fair	No	L, CD, IB
652	Black Oak	1	43.5	30.00	50.00	Fair-Good	Fair-Good	No	L, CD, IB, LW
653	Black Oak	1	46.5	35.00	55.00	Fair-Good	Fair	No	IB
654	Black Oak	1	46.5	45.00	55.00	Fair-Good	Fair	No	AC, LD
655	Black Oak	1	31	30.00	45.00	Poor	Poor	Yes	L, large TW see pic, AC, RR, top heavy
656	Black Oak	1	34.5	30.00	55.00	Fair	Fair	No	TW, LD, growing into dead pine

Appendix E
Oak Tree Survey Data

Tree #	Species	# of Trunks	DBH	DLR	Height	Health	Structure	Recommended for Removal	Notes
657	Black Oak	1	28.5	35.00	55.00	Poor-Fair	Poor-Fair	Yes	L, LD, RR, growing into cedar
658	Black Oak	1	37.5	30.00	55.00	Fair	Fair	No	L, suggested limb trim over road
659	Black Oak	1	42.5	50.00	65.00	Fair	Poor-Fair	No	LW, LD, TW
660	Black Oak	1	40	35.00	65.00	Fair-Good	Fair	No	LD, CD
661	Black Oak	1	30.5	35.00	55.00	Poor	Poor-Fair	Yes	L, TD, RR
662	Black Oak	1	41	35.00	60.00	Poor-Fair	Poor-Fair	No	tree heath in question due to adjacent burn. pics
663	Black Oak	2	28, 22	30.00	60.00	Fair-Good	Fair	No	L, CD, IB
664	Black Oak	1	15	15.00	0.00	Poor-Fair	Poor-Fair	No	AC, TW
665	Black Oak	1	16	8.00	0.00	Poor	Fair	Yes	dead canopy, RR
666	Black Oak	1	26	30.00	60.00	Fair	Fair	No	boot shape trunk, see pic, LD, L
667	Black Oak	1	19	25.00	45.00	Fair-Good	Fair-Good	No	L
668	Black Oak	1	14.5	18.00	38.00	Fair-Good	Fair	No	L
669	Black Oak	1	25	25.00	45.00	Fair	Fair	No	L, LD
670	Black Oak	1	15	15.00	30.00	Fair-Good	Fair-Good	No	L
671	Black Oak	1	21.5	16.00	40.00	Fair-Good	Fair-Good	No	L, CD
672	Black Oak	1	18	0.00	45.00	Poor-Fair	Poor-Fair	Yes	F, TD, L, RR
673	Black Oak	1	42	40.00	75.00	Poor	Fair	Yes	TD, RR
674	Black Oak	1	37	50.00	70.00	Poor	Poor-Fair	Yes	TD, LD, RR
675	Black Oak	1	37	20.00	45.00	Poor-Fair	Poor-Fair	Yes	L, TD, RR
676	Black Oak	1	20	25.00	45.00	Fair	Poor-Fair	Yes	L, AC, RR
677	Black Oak	1	7	7.00	20.00	Fair-Good	Fair-Good	No	TW
678	Black Oak	1	32	40.00	80.00	Fair-Good	Fair	No	L
679	Black Oak	1	40.5	35.00	75.00	Fair-Good	Fair-Good	No	
680	Black Oak	1	21	25.00	50.00	Fair-Good	Fair	No	L
681	Black Oak	1	18	16.00	40.00	Fair-Good	Fair-Good	No	L
682	Black Oak	1	20.5	20.00	35.00	Fair-Good	Fair-Good	No	L
683	Black Oak	1	20.5	15.00	35.00	Fair-Good	Fair-Good	No	CD, LD
684	Black Oak	1	45.5	40.00	85.00	Fair-Good	Fair-Good	No	CD
685	Black Oak	1	38	35.00	75.00	Fair	Fair-Good	No	LD
686	Black Oak	1	33	40.00	80.00	Fair	Poor-Fair	No	L, TD, LD

**Appendix E
Oak Tree Survey Data**

Tree #	Species	# of Trunks	DBH	DLR	Height	Health	Structure	Recommended for Removal	Notes
687	Black Oak	1	21.5	15.00	40.00	Fair-Good	Fair-Good	No	
688	Black Oak	1	7	6.00	18.00	Fair-Good	Fair-Good	No	
689	Black Oak	1	6.5	12.00	22.00	Fair-Good	Fair-Good	No	
691	Black Oak	2	6, 5	11.00	22.00	Fair-Good	Fair	No	CD
692	Black Oak	1	9	15.00	25.00	Fair-Good	Fair-Good	No	
693	Black Oak	1	6.5	14.00	20.00	Fair-Good	Fair-Good	No	L
694	Black Oak	1	7	12.00	18.00	Fair-Good	Fair-Good	No	
695	Black Oak	3	7, 6, 5	14.00	25.00	Fair-Good	Fair	No	CD, IB
695	Black Oak	1	7	14.00	25.00	Fair-Good	Fair-Good	No	
697	Black Oak	1	16	22.00	40.00	Fair-Good	Poor-Fair	Yes	L over road, RR
698	Black Oak	2	10, 8	15.00	24.00	Fair-Good	Fair	No	LD, CD
698	Black Oak	1	6	9.00	18.00	Fair-Good	Poor-Fair	No	under cedar canopy, AC
699	Black Oak	1	22.5	15.00	55.00	Fair-Good	Fair	No	L, LD
700	Black Oak	1	31	42.00	80.00	Fair-Good	Fair-Good	No	LD, L

Table 1
Health/Structure Comment Legend

Abbreviation	Meaning
ABS	Altered Branch Structure
AC	Asymmetrical Canopy
BC	Basal Cavity
BD	Bark Damage
BW	Basal Wound
CD	Codominant
DB	Dieback
DW	Deadwood
ER	Exposed Roots
F	Fungus
FD	Fire Damage
IB	Included Bark
L	Lean
LD	Limb Decay
LF	Limb Failures
LR	Limb Rot
LW	Limb Wound
MT	Mistletoe
MTA	Multiple Trunk Attachments
NC	Narrow Crotch
OK	No Obvious Defects
OG	Overgrown
OUL	Overhead Utility Lines
PW	Pruning Wounds
SC/SF	Sparse Canopy/Foliage
SG	Sprout Growth
SGE	Suppressed Growing Environ.
TC	Topping Cuts
TD	Trunk Decay
TF	Trunk Failure
TR	Trunk Rot
TW	Trunk Wound
+	Above Average
++	Extreme/Severe
-	Below Average

Appendix D

Oak Resources Technical Report

HELIX Environmental Planning, Inc.
1180 Iron Point Road, Suite 130
Folsom, CA 95630
916.435.1205 tel
619.462.0552 fax
www.helixepi.com



February 8, 2023

02504.00011.001

Vickie Sanders
County of El Dorado Parks Division
3000 Fair Lane Court, Suite 1
Placerville, CA 95667

Subject: Forebay Park Oak Resources Technical Report

Dear Ms. Sanders:

This report presents the results of a survey of oak resources on the Forebay Park site (Project Site), assesses impacts to oak resources, identifies potential mitigation costs, and provides recommendations for tree protection measures for trees to be preserved onsite. This report is based on tree inventory data collected in February 2022 and included in the Biological Resources Assessment dated September 2022, prepared by HELIX Environmental Planning.

BACKGROUND

Oak Resources Management Plan

The County of El Dorado (County) adopted the *El Dorado County Oak Resources Management Plan* (ORMP) on October 24, 2017, and the ORMP went into effect on November 24, 2017. The ORMP designates three classes of protected oak resources: oak woodlands that have at least 10 percent oak canopy; Heritage Trees, defined as native oaks with a total trunk diameter at breast height (DBH) of 36 inches or greater; and individual oak trees, defined as native oak trees with a trunk diameter at breast height of 6 inches or greater that are not located in oak woodlands. An oak woodland removal permit is required prior to the removal of oak trees that are part of an oak woodland and an oak tree removal permit is required prior to the removal of Heritage Trees and individual oak trees. Mitigation for impacts to oak woodlands is based on the total area impacted ranging from 1:1 mitigation for zero to 50 percent removal to 2:1 mitigation for more than 75 percent removal. Mitigation may be completed with a combination of the following options: acquisition of an off-site conservation easement, payment of in-lieu fees, or either on- or off-site replacement planting of up to 50 percent of the required mitigation area. Mitigation for removal of Heritage or individual oak trees requires on- or off-site replacement planting or payment of in-lieu fees at a 3:1 or 1:1 ratio, respectively, to the number of trunk inches removed. Any oak woodland preserved on site and all mitigation planting areas must be protected in perpetuity through deed restrictions or a conservation easement.

PROPOSED PROJECT DESCRIPTION

The approximately 17-acre Project Site is located north and east of Forebay Road in the unincorporated community of Pollock Pines in El Dorado County, California. Existing park improvements on the Project Site include a parking lot, baseball diamond, community center, restroom, and horseshoes complex. The proposed project would add recreation amenities to approximately 8.3 acres of the Project Site including a dog park, disc golf course, play area, workout area, new restroom building, perimeter walking trail, and pickleball courts. To support the new amenities the existing central parking lot and entry roads will be improved. The project intends to preserve as many trees as possible, particularly within the dog park and disc golf course areas. Design techniques that may be used include avoidance or minimization of ground disturbance within the root zone, using boring instead of trenching where feasible, and use of root bridging methods to preserve structural roots under paths. The project may be constructed in phases depending on funding availability and community priorities.

METHODOLOGY

Oak resources on the Project Site were surveyed by ISA-Certified Arborist Marisa Brilts (WE-13338A) on February 21, 2022. All oak trees on the Project Site were assessed and trees with DBH of at least six inches were inventoried. A diameter tape or calipers were used to verify each trunk diameter at breast height, defined as 4.5 feet above grade. The measurement from the trunk to the end of the longest lateral limb was used as the drip line radius (DLR). Tree height was visually estimated. Each tree was tagged with a pre-printed aluminum tag, which corresponds to the numbering in Attachment A and on Figure 1. The location of each inventoried tree was recorded using a Juniper Geode Global Navigation Satellite System receiver with sub-meter accuracy. Oak woodland boundaries were mapped in ArcMap using a combination of aerial photo interpretation and field observations.

The health and structural condition of all inventoried trees were rated according to Table 1. The health rating considers factors such as the size, color, and density of the foliage; the amount of deadwood within the canopy; bud viability; evidence of wound closure; and the presence or evidence of stress, disease, nutrient deficiency, and/or insect infestation. The structural rating reflects the trunk and branch configuration; canopy balance; the presence of included bark and other structural defects such as decay; and the potential for structural failure. In cases where conditions fall between the Good, Fair, and Poor ratings, intermediate ratings Fair-Good and Poor-Fair were used.

Table 1
TREE RATING GUIDELINES

Rating	Tree Health
Good	There is an average or below-average amount of deadwood/dieback with respect to the tree's size and growing environment; leaf size, color, and density are typical for the species; buds are normal size, viable, abundant, and uniform throughout the canopy; current and past growth increments are generally average or better; any callusing is vigorous. This health rating indicates that there is very little, if any, evidence of stress, disease, nutrient deficiency, and/or insect infestation.
Fair	There is an above-average amount of deadwood/dieback with respect to the tree's size and growing environment; leaf size, color, and density may be below what is typically expected for the species; buds are normal size and viable, but slightly sparse throughout the canopy; current and past growth increments may be below average; the tree may be slow to callus around old wounds. This health rating indicates that there is moderate evidence of stress, disease, nutrient deficiency, and/or insect infestation.
Poor	There is an extreme amount of deadwood/dieback with respect to the tree's size and growing environment; leaf size, color, and density are clearly compromised; very few viable buds are present throughout the canopy; current and past growth increments are meager; no evidence of callusing around old wounds. This health rating indicates that there is widespread evidence of stress, disease, nutrient deficiency, and/or insect infestation.
Tree Structure and Form	
Good	No wounds, cavities, decay, or indication of hollowness are evident in the root crown, trunk, or primary and secondary limbs; no anchor roots are exposed; no codominant branching or multiple trunk attachments are present; very little included bark at branch attachments exists; no dead primary or secondary limbs are present in canopy; there have been no major limb failures; limbs are not overburdened; branching structure is appropriate for species; any decay is limited to small dead branches/stubs. This structure rating represents a low potential for failure.
Fair	With respect to the size of the tree, small to moderate wounds, cavities, decay, and an indication of hollowness may be evident in the root crown, trunk, and/or primary and secondary limbs; some anchor roots may be exposed; codominant branching or multiple trunk attachments may be present, but included bark does not exist or is not well developed; minor to moderate amounts of included bark at branch attachments may exist; there may be small to moderate amounts of large dead limbs in canopy, but there is no evidence of large limb failures; limbs may be slightly overburdened; branching structure and/or canopy balance may be moderately altered by the tree's growing environment. This structure rating represents a moderate potential for failure.
Poor	With respect to the size of the tree, significant wounds, cavities, decay, and/or indication of hollowness may be evident in the root crown, trunk, and/or primary and secondary limbs; anchor roots may be exposed and/or the tree may have lost anchorage; codominant branching or multiple trunk attachments may be present; significant amounts of included bark may exist in trunk and branch attachments; there may be significant amounts of large dead limbs in the canopy; there may be evidence of trunk or large limb failures; limbs may be severely overburdened; branching structure and/or canopy balance may be drastically altered by the tree's growing environment. This structure rating represents a high potential for failure.

EXISTING CONDITIONS

In total, 1.76 acres of montane hardwood conifer habitat was mapped in the southern portion of the Project Site (Figure 1). Dominant overstory vegetation was composed of black oak (*Quercus kelloggii*), Douglas fir (*Pseudotsuga menziesii*), and ponderosa pine (*Pinus ponderosa*). Oak trees have an average density of approximately 18 trees per acre in the montane hardwood conifer habitat. The majority of the undeveloped portions of the site are Sierran mixed conifer forest dominated by incense cedar (*Calocedrus decurrens*), ponderosa pine, Douglas fir (*Pseudotsuga menziesii*), and white fir (*Abies concolor*) with scattered hardwoods including black oak, tanoak (*Notholithocarpus densiflorus*), and Pacific madrone (*Arbutus menziesii*).

A total of 50 protected black oak trees are present on the Project Site. Seventeen inventoried trees are Heritage Trees, 14 of which are located within the montane hardwood conifer habitat. Thirty-six individual oak trees, including three Heritage Trees, were inventoried in the mixed conifer forest. Additionally, six trees with a DBH between 24 and 36 inches are located within the montane hardwood conifer; these trees are not addressed further in this report. A total of eleven trees, including three Heritage Trees, are recommended for removal due to disease such as trunk decay or fungus, or asymmetrical structure and lean with an identified target, such as a house or road, that offer the potential to injure people and damage property. Tree data are shown in Attachment A and oak resource locations are shown on Figure 1.

IMPACT ASSESSMENT

Potential impacts to protected oak resources were assessed based on the Conceptual Design dated August 25, 2022, and the proposed project description above. One tree, #648, is expected to be removed to allow improvement of the existing entry road. Since the dog park and disc golf course both allow for flexibility in grading design and layout, it is assumed that the nine individual trees and fourteen heritage trees within or overhanging these areas, will be preserved but may be impacted. However, it is assumed that the 0.77 acre (44%) of montane hardwood conifer habitat within the disc golf area will be impacted by clearing and removal of vegetation for sight and play lines, access, and fire safety. The other project features will potentially impact an additional eight individual trees in the northeast corner of the site (Figure 2). Final impacts to oak resources should be re-evaluated once the detailed design of each project element is complete to determine if project impacts to protected trees are significant and require mitigation.

OAK RESOURCE PRESERVATION RECOMMENDATIONS

The following protection measures should be integrated into the project construction documents as applicable to preserved trees:

- Tree Protection Fencing, consisting of four-foot-tall, high-visibility plastic fencing, shall be placed around the perimeter of the tree protection zone (TPZ) (dripline radius + 1 foot). The TPZ is the minimum distance for placing protective fencing. Tree protection fencing should be placed as far outside of the TPZ as possible. Two-foot square signs shall be placed along the fence denoting this as a Tree Protection Zone that shall not be moved until construction is complete. In cases where the proposed work infringes on TPZ, the fence shall be placed at the edge of the work;

- Whenever possible, fence multiple trees together in a single TPZ;
- Tree protection fencing shall not be moved without prior authorization from the County of El Dorado;
- No parking, portable toilets, dumping or storage of any construction materials, grading, excavation, trenching, or other infringement by workers or domesticated animals is allowed in the TPZ;
- No signs, ropes, cables, or any other item shall be attached to a protected tree unless recommended by an ISA-Certified Arborist;
- Underground utilities should be avoided in the TPZ, but, if necessary, shall be bored or drilled. If boring is impossible, all trenching will be done by hand under the supervision of an ISA-Certified Arborist;
- No cut or fill within the dripline of protected trees is permitted. If cut or fill within the dripline is unavoidable, any mitigation requirements shall be determined by the County of El Dorado;
- Pruning of living limbs or roots over two inches in diameter shall be done under the supervision of an ISA-Certified Arborist;
- All wood plant material less than six inches in diameter shall be mulched on site. The resulting mulch shall be spread in a layer four to six inches deep in the TPZ of preserved trees. Mulch shall not be placed touching the trunk of preserved trees;
- At the discretion of the Project Proponent and Project Arborist indirectly impacted trees should be deep watered once per month in July, August, September, and October to a soil saturation depth of 16-18 inches; and
- Appropriate fire prevention techniques shall be employed around all protected trees to be preserved. This includes cutting tall grass, removing flammable debris within the TPZ, and prohibiting the use of tools that may cause sparks, such as metal-bladed trimmers or mowers.

MITIGATION

As previously discussed, mitigation may be implemented through payment of in-lieu fees, on- or off-site planting, or acquisition of an off-site conservation easement. El Dorado County is responsible for all oak resource mitigation. It is assumed that all montane hardwood conifer habitat within the disc golf and dog park areas will be impacted but that all individual and heritage trees will be preserved. Table 2 summarizes required mitigation planting or in-lieu fee options based on this assumption. Final impacts to protected oak trees should be assessed as improvements are designed and any necessary additional mitigation should be calculated using the current oak resource regulations. The Oak Resources Technical Report Checklist and Oak Resource Compliance Certificate should also be completed at that time.

Due to the extent of the existing canopy cover on-site, it is assumed that mitigation will be completed through in-lieu fee payment. If it is desired to use mitigation planting or a conservation easement for

mitigation in place of or in addition to the in-lieu fee payment, then a planting, maintenance, and monitoring plan and conservation easement or deed restriction should be prepared in accordance with the ORMP.

Table 2
MITIGATION OPTIONS

Oak Resource	Impact	Mitigation Ratio	Planting ¹ (15-gallon)	Fee (per acre or trunk inch)	Total Fee
Oak Woodland	0.77 acre	1:1	14	\$8,285	\$6,379.45
Individual Oak Tree	11 inches	1:1	11	\$153	\$1,683
Heritage Tree	None currently – re-evaluate once detailed design is complete	3:1	1,614	\$459	--
TOTAL			2,078	--	\$8,062.45

¹ If smaller container replacement trees are used, additional mitigation trees will be required based on the ratios provided in Table 4 of the ORMP.

If you have any questions, please do not hesitate to contact me at (916) 435-1205 or email MeredithB@helixepi.com regarding this report.

Sincerely,



Meredith Branstad
ISA Certified Arborist #WE-6727A

Attachments:

- Figure 1: Approximate Locations of Oak Resources
- Figure 2: Potential Impacts to Oak Resources
- Attachment A: Oak Tree Survey Data

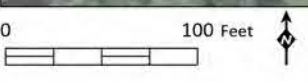


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Source: Aerial Imagery (DigitalGlobe, 1/31/2020)



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Source: Aerial Imagery (DigitalGlobe, 1/31/2020)

Attachment A

Oak Tree Survey Data

Tree #	Species	# of Trunks	DBH (Inches)	DLR (Feet)	Height (Feet)	Health	Structure	Recommended for Removal	Project Impact	Notes
1	Black Oak	1	10.5	16	25	Fair-Good	Fair-Good	No	Impacted	no tag
178	Black Oak	1	8	14	25	Fair-Good	Fair-Good	No	Impacted	
179	Black Oak	2	13, 7	25	40	Fair-Good	Fair	No	Impacted	Lean, Codominant
180	Black Oak	1	9.5	12	20	Fair-Good	Fair-Good	No	None	Lean
181	Black Oak	1	10	14	22	Fair-Good	Fair-Good	No	None	Lean, Asymmetrical canopy
182	Black Oak	1	6	10	18	Fair-Good	Fair-Good	No	None	
183	Black Oak	1	27.5	55	75	Fair	Poor-Fair	No	Impacted	Limb Decay, Codominant, Included Bark, Lean, Root rot
184	Black Oak	1	13	22	45	Fair-Good	Fair-Good	No	None	Pruning cuts
185	Black Oak	1	10	18	20	Fair-Good	Fair	No	Impacted	Asymmetrical canopy, Lean, Overhead utility lines
188	Black Oak	1	6.5	15	18	Fair-Good	Fair-Good	No	Impacted	Lean
190	Black Oak	1	9	8	10	Poor	Poor	Yes	Impacted	rot, dying, Root rot
191	Black Oak	1	9	15	18	Fair-Good	Fair	Yes	Impacted	Lean, target house, Root rot
192	Black Oak	2	35, 34	50	85	Fair-Good	Poor-Fair	No	Impacted	Included Bark, Codominant, Mistletoe, Heritage Tree
193	Black Oak	1	32	35	80	Fair-Good	Fair-Good	No	Impacted	
194	Black Oak	1	15.5	18	40	Fair	Poor-Fair	No	Impacted	Lean, Limb Decay
640	Black Oak	1	40	31	50	Good	Fair-Good	No	Impacted	Pruning Wounds, Heritage Tree
641	Black Oak	2	6, 4	12	22	Fair-Good	Poor-Fair	Yes	None	Lean, Codominant, target road, Root rot
644	Black Oak	1	9.5	10	15	Fair	Poor-Fair	Yes	None	Lean, Codominant, Root rot
646	Black Oak	1	8.5	20	20	Fair-Good	Poor-Fair	No	None	Lean, Codominant, Asymmetrical canopy
647	Black Oak	1	7	20	22	Fair-Good	Fair-Good	No	None	Lean, pruning cuts
648	Black Oak	1	10.5	20	22	Fair-Good	Fair	No	Removed	Lean, Codominant, Asymmetrical canopy
649	Black Oak	1	16	18	25	Poor-Fair	Poor	Yes	Impacted	Lean, Codominant, Limb decay, Dieback, Root rot
651	Black Oak	3	19, 18, 17	25	25	Fair-Good	Fair	No	None	Lean, Codominant, Included Bark, Limb wound, Heritage Tree

Tree #	Species	# of Trunks	DBH (Inches)	DLR (Feet)	Height (Feet)	Health	Structure	Recommended for Removal	Project Impact	Notes
652	Black Oak	1	43.5	30	50	Fair-Good	Fair-Good	No	Impacted	Lean, Codominant, Included Bark, Limb wound, Heritage Tree
653	Black Oak	1	46.5	35	55	Fair-Good	Fair	No	Impacted	Included Bark, Heritage Tree
654	Black Oak	1	46.5	45	55	Fair-Good	Fair	No	Impacted	Asymmetrical canopy, Limb Decay, Heritage Tree
655*	Black Oak	1	31	30	45	Poor	Poor	Yes	N/A	Lean, Large Trunk wound, Root rot, top heavy
656*	Black Oak	1	34.5	30	55	Fair	Fair	No	N/A	Trunk wound, Limb decay
657*	Black Oak	1	28.5	35	55	Poor-Fair	Poor-Fair	Yes	N/A	Lean, Limb decay, Root rot
658	Black Oak	1	37.5	30	55	Fair	Fair	No	Impacted	Lean, suggested limb trim over road, Heritage Tree
659	Black Oak	1	42.5	50	65	Fair	Poor-Fair	No	Impacted	Limb wound, Limb Decay, Trunk wound, Heritage Tree
660	Black Oak	1	40	35	65	Fair-Good	Fair	No	Impacted	Limb Decay, Codominant, Heritage Tree
661	Black Oak	1	30.5	35	55	Poor	Poor-Fair	Yes	Impacted	Lean, Trunk decay, Root rot
662	Black Oak	1	41	35	60	Poor-Fair	Poor-Fair	No	Impacted	tree health in question due to adjacent burn, Heritage Tree
663	Black Oak	2	28, 22	30	60	Fair-Good	Fair	No	Impacted	Lean, Codominant, Included Bark, Heritage Tree
666*	Black Oak	1	26	30	60	Fair	Fair	No	N/A	Limb decay, Lean
668	Black Oak	1	14.5	18	38	Fair-Good	Fair	No	Impacted	Lean
669*	Black Oak	1	25	25	45	Fair	Fair	No	N/A	Lean, Limb decay
672	Black Oak	1	18	15	45	Poor-Fair	Poor-Fair	Yes	Impacted	Fungus, Trunk decay, Lean, Root rot
673	Black Oak	1	42	40	75	Poor	Fair	Yes	Impacted	Trunk decay, Root rot, Heritage Tree
674	Black Oak	1	37	50	70	Poor	Poor-Fair	Yes	Impacted	Trunk decay, Limb Decay, Root rot, Heritage Tree
675	Black Oak	1	37	20	45	Poor-Fair	Poor-Fair	Yes	None	Lean, Trunk decay, Root rot, Heritage Tree
678	Black Oak	1	32	40	80	Fair-Good	Fair	No	Impacted	Lean
679	Black Oak	1	40.5	35	75	Fair-Good	Fair-Good	No	Impacted	Heritage Tree

Tree #	Species	# of Trunks	DBH (Inches)	DLR (Feet)	Height (Feet)	Health	Structure	Recommended for Removal	Project Impact	Notes
680	Black Oak	1	21	25	50	Fair-Good	Fair	No	Impacted	Lean
681	Black Oak	1	18	16	40	Fair-Good	Fair-Good	No	Impacted	Lean
682	Black Oak	1	20.5	20	35	Fair-Good	Fair-Good	No	Impacted	Lean
684	Black Oak	1	45.5	40	85	Fair-Good	Fair-Good	No	None	Codominant, Heritage Tree
685	Black Oak	1	38	35	75	Fair	Fair-Good	No	Impacted	Limb Decay, Heritage Tree
686*	Black Oak	1	33	40	80	Fair	Poor-Fair	No	N/A	Lean, Trunk decay, Limb decay
687	Black Oak	1	21.5	15	40	Fair-Good	Fair-Good	No	None	
692	Black Oak	1	9	15	25	Fair-Good	Fair-Good	No	None	
697	Black Oak	1	16	22	40	Fair-Good	Poor-Fair	Yes	Impacted	Lean over road, Root rot
698	Black Oak	1	6	9	18	Fair-Good	Poor-Fair	No	Impacted	Asymmetrical canopy, Suppressed growing environment
699	Black Oak	1	22.5	15	55	Fair-Good	Fair	No	Impacted	Lean, Limb Decay
700	Black Oak	1	31	42	80	Fair-Good	Fair-Good	No	Impacted	Limb Decay, Lean

* Tree with DBH between 24" and 36" located in oak woodland.

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Appendix E

Special-Status Plant Surveys

June 22, 2022

Project 02504.00011.001

County of El Dorado
Vickie Sanders, Park Manager
3000 Fair Lane Court, Suite 1
Placerville, CA 95667

Subject: Focused Special-Status Plant Surveys for the Forebay Park Improvements Project Located in the Unincorporated Community of Pollock Pines, El Dorado County, California

Dear Ms. Sanders:

On behalf of the County of El Dorado (Client), HELIX Environmental Planning, Inc. (HELIX) conducted special-status plant surveys for Pleasant Valley mariposa lily (*Calochortus clavatus* var. *avius*) and Stebbins' phacelia (*Phacelia stebbinsii*) for the Forebay Park Improvements Project (Project) located in the unincorporated community of Pollock Pines, El Dorado County, California (Figure 1). This report describes the methods implemented for the surveys and summarizes the results of the surveys.

INTRODUCTION

On June 15, 2022, HELIX Biologist Greg Davis surveyed suitable habitat within the Study Area (Figure 2) for Pleasant Valley mariposa lily and Stebbins' phacelia. The intent of the survey was to identify special-status plant species within the Study Area that may act as constraints to future development of the site. The survey was conducted in accordance with the guidelines provided by the California Department of Fish and Wildlife (CDFW) and the California Native Plant Society (CNPS). To effectively cover the blooming period of the species stated above, one survey was conducted in June 2022.

STUDY AREA AND EXISTING CONDITIONS

The ±16.90-acre Study Area is located in the unincorporated community of Pollock Pines in El Dorado County, California. The Study Area is bordered by Forebay Road/Forebay Reservoir to the west and rural residential development to the north/east/south. The Study Area is located within Township 11 North, Range 12 East, Section 25 of the USGS 7.5-minute series *Pollock Pines, California* quadrangle. The approximate location of the Study Area is 38.770375° Latitude, and -120.580746° Longitude.

As it relates to botanical resources, the Study Area is located within the Northern High Sierra Nevada District (n SNH) of the High Sierra Nevada Subregion (SNH), within the Sierra Nevada Region (SN), and has an elevation ranging from 1,162 to 1,177 meters (3,815 to 3,860 feet) above mean sea level (msl)

(Jepson eFlora 2022). The Study Area is located approximately 7.75 miles northeast of the SNH and Sierra Nevada Foothills Subregion (SNF) boundary. Biological communities within the Study Area include Sierran mixed conifer and developed/disturbed habitats. Soils within the site are comprised of the McCarthy soil consociation, which are soils derived from andesitic volcanic residuum.

PROPOSED PROJECT

The proposed project includes improvements to the existing park in the Study Area. Detailed plans for the proposed project are not available as of the preparation of this report.

SPECIAL-STATUS PLANT SPECIES

The *Forebay Park Improvements Project Biological Resources Assessment*, prepared by HELIX, identified two special-status plant species that have potential to occur within the Study Area based on-site characteristics and biological communities on-site, which includes Pleasant Valley mariposa lily and Stebbins' phacelia (HELIX 2022). These species are discussed in further detail below.

Pleasant Valley Mariposa Lily

Pleasant Valley mariposa lily is a perennial bulbiferous herb in the lily family (Liliaceae) that is classified with a California Rare Plant Rank (CRPR) of 1B by the CNPS, which are plants considered to be rare, threatened, or endangered in California and elsewhere. This species is found within lower montane coniferous forest from 305 to 1,800 meters above msl (CNPS 2022). Other ecological preferences of this species include growing in Josephine silt loam and volcanically derived soils, often in rocky areas (CDFW 2022). The blooming period for this species is from May to July (CNPS 2022).

Stebbins' Phacelia

Stebbins' phacelia is an annual herb in the waterleaf family (Hydrophyllaceae) that is classified with a CRPR of 1B by the CNPS. This species is found in cismontane woodland, lower montane coniferous forest, and meadows/seeps from 610 – 2,320 meters above msl (CDFW 2022; CNPS 2022). Other ecological preferences of this species include growing amongst rocks and rubble on metamorphic rock benches (CDFW 2022). The blooming period for this species is from May to July (CNPS 2022).

METHODOLOGY

HELIX Biologist Greg Davis conducted a botanical survey within the Study Area on June 15, 2022. A review and analysis of technical materials and relevant databases was undertaken prior to conducting the botanical survey. The entire Study Area was surveyed on foot following the procedures described in the California Department of Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018). The botanical survey was floristic in nature: all plant species observed during the survey were identified to the taxonomic level necessary to determine rarity and listing status.

In addition to the database review, a reference population of Stebbins' phacelia near the vicinity of the Study Area was visited on June 15, 2022. This population was observed to have several individuals present and was in various growth stages including plants both in bloom and in fruit.

In accordance with the CDFW Protocols, Greg Davis possesses the following botanical field surveyor qualifications: knowledge of plant taxonomy and plant community ecology; familiarity with the plants of the region, including special-status and locally significant plants; experience with the CNDDDB, BIOS, and Survey of California Vegetation Classification and Mapping Standards; experience conducting floristic botanical field surveys as described in the CDFW Protocols; familiarity with the state and federal statuses and regulations related to plants and plant collecting; and experience analyzing impacts of project activities on native plant species and sensitive plant communities.

CONCLUSION AND RECOMMENDATIONS

No special-status plant species were observed within the Study Area during the June 15, 2022, botanical survey. All plant species observed during the survey are documented in Attachment A and are classified utilizing the taxonomical nomenclature from the Jepson Manual (Baldwin et al. 2012).

Please do not hesitate to call me at (916) 435-1202 or email gregd@helixepi.com if you have any questions.

Sincerely,



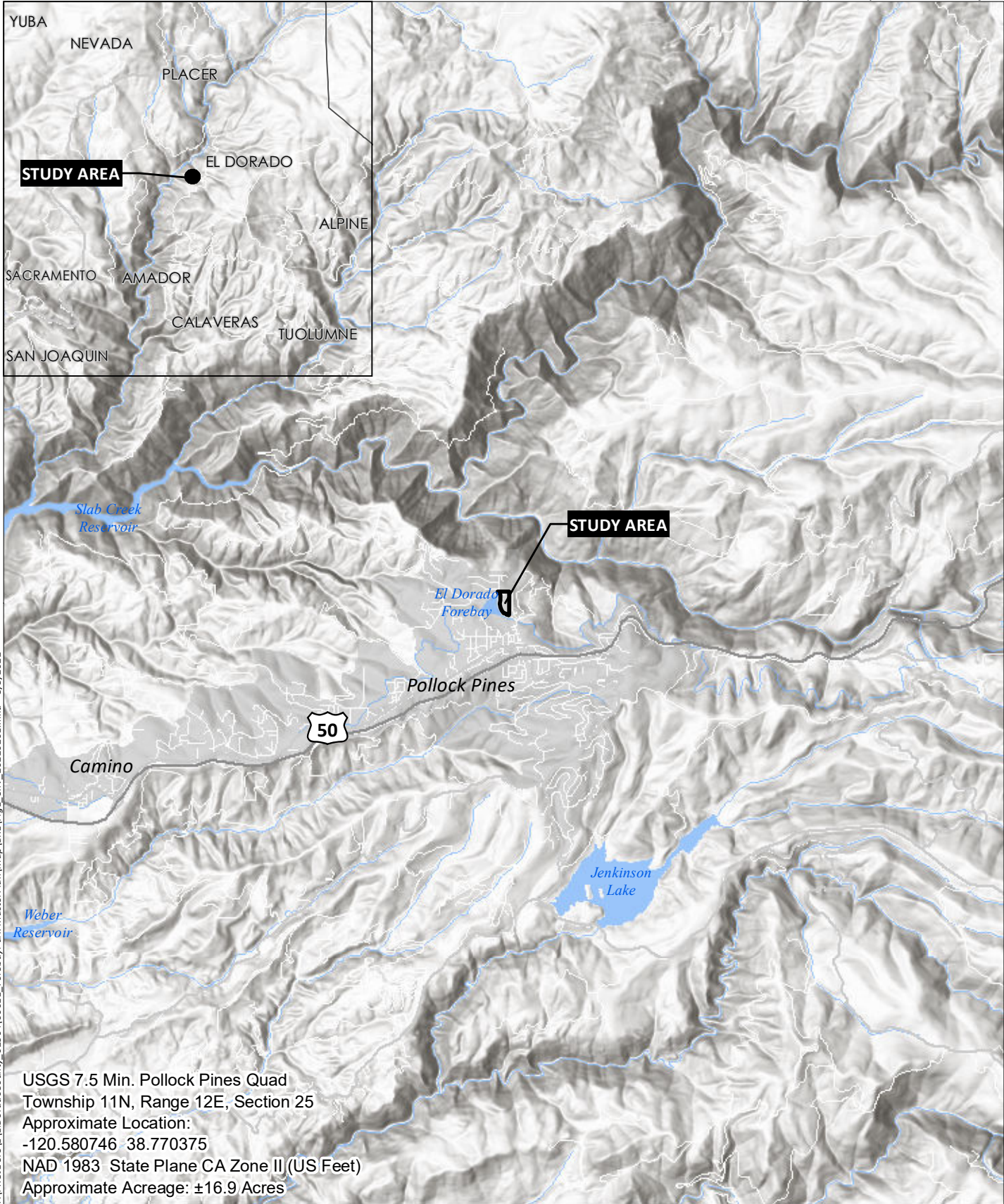
Greg Davis
Biologist

Attachments:

- Figure 1: Vicinity Map
- Figure 2: Habitat Map
- Attachment A: Plant Species Observed in the Study Area

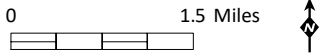
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Source: Base Map Layers (Esri, USGS, NGA, NASA)

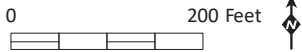


Legend

-  Study Area - 16.9Acres
-  Sierran Mixed Conifer - 7.86 Acres
-  Developed/Disturbed - 9.06 Acres



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Source: Aerial (DigitalGlobe, 1/30/2020)

Attachment A

Plant Species Observed in the
Study Area

Family	Scientific Name	Common Name	Indicator Status ¹
Native			
Agavaceae	<i>Chlorogalum pomeridianum</i>	Common soaproot	-
Aristolochiaceae	<i>Asarum hartwegii</i>	Hartweg's wild ginger	-
Asteraceae	<i>Adenocaulon bicolor</i>	American trailplant	-
	<i>Anisocarpus madioides</i>	Woodland tarweed	-
	<i>Artemisia douglasiana</i>	California mugwort	-
	<i>Psilocarphus tenellus</i>	Slender woolly-marbles	-
	<i>Senecio aronicoides</i>	California butterweed	-
Betulaceae	<i>Corylus cornuta</i> ssp. <i>californica</i>	Beaked hazelnut	-
Boraginaceae	<i>Draperia systyla</i>	Draperia	-
Caprifoliaceae	<i>Lonicera conjugialis</i>	Purpleflower honeysuckle	-
	<i>Symphoricarpos albus</i>	Common snowberry	-
	<i>Symphoricarpos mollis</i>	Creeping snowberry	-
Cornaceae	<i>Cornus nuttallii</i>	Mountain dogwood	-
	<i>Cornus sericea</i> ssp. <i>occidentalis</i>	Western dogwood	-
Cupressaceae	<i>Calocedrus decurrens</i>	Incense cedar	-
Ericaceae	<i>Arbutus menziesii</i>	Pacific madrone	-
	<i>Arctostaphylos viscida</i> ssp. <i>viscida</i>	White leaf manzanita	-
	<i>Gaultheria ovatifolia</i>	Slender wintergreen	-
Fagaceae	<i>Notholithocarpus densiflorus</i>	Tanoak	-
	<i>Quercus kelloggii</i>	Black oak	-
	<i>Quercus wislizeni</i>	Interior live oak	-
Grossulariaceae	<i>Ribes roezlii</i> var. <i>roezlii</i>	Sierra gooseberry	-
Iridaceae	<i>Iris hartwegii</i>	Hartweg's iris	-
Juncaceae	<i>Luzula comosa</i> var. <i>laxa</i>	Hairy wood rush	-
Liliaceae	<i>Fritillaria affinis</i>	Checker lily	-
	<i>Prosartes hookeri</i>	Drops of gold	-
Montiaceae	<i>Claytonia rubra</i> subsp. <i>rubra</i>	Red stemmed miner's lettuce	-
Onagraceae	<i>Clarkia rhomboidea</i>	Tongue clarkia	-
	<i>Clarkia unguiculata</i>	Woodland clarkia	-
Phrymaceae	<i>Diplacus torreyi</i>	Torrey's monkeyflower	-
Pinaceae	<i>Abies concolor</i>	White fir	-
	<i>Pinus ponderosa</i>	Ponderosa pine	-
	<i>Pseudotsuga menziesii</i>	Douglas fir	-
Plantaginaceae	<i>Penstemon azureus</i> var. <i>angustissimus</i>	Azure penstemon	-
Poaceae	<i>Bromus sitchensis</i> var. <i>marginatus</i>	Mountain brome	-
	<i>Elymus glaucus</i>	Blue wildrye	-
Polemoniaceae	<i>Collomia grandiflora</i>	Grand collomia	-
	<i>Collomia heterophylla</i>	Varied leaved collomia	-
	<i>Leptosiphon ciliatus</i>	Whiskerbrush	-
Ranunculaceae	<i>Aquilegia formosa</i>	Columbine	-
	<i>Delphinium gracilentum</i>	Slender larkspur	-
	<i>Delphinium patens</i> subsp. <i>patens</i>	Spreading larkspur	-
Rhamnaceae	<i>Ceanothus</i> sp.	Ceanothus	-
	<i>Ceanothus velutinus</i>	Tobacco brush	-

Family	Scientific Name	Common Name	Indicator Status ¹
Rosaceae	<i>Amelanchier alnifolia</i>	Service berry	-
	<i>Chamaebatia foliolosa</i>	Sierran mountain misery	-
	<i>Drymocallis glandulosa</i> var. <i>reflexa</i>	Sticky cinquefoil	-
	<i>Rosa californica</i>	California wild rose	-
	<i>Rubus leucodermis</i>	White bark raspberry	-
Rubiaceae	<i>Galium aparine</i>	Cleavers	-
	<i>Galium porrigens</i>	Climbing bedstraw	-
	<i>Kelloggia galioides</i>	Milk kelloggia	-
Ruscaceae	<i>Maianthemum racemosum</i>	Feathery false lily of the valley	-
Sapindaceae	<i>Acer macrophyllum</i>	Big leaf maple	-
Viscaceae	<i>Phorodendron leucocarpum</i>	American mistletoe	-
Non-native			
Apiaceae	<i>Torilis arvensis</i>	Field hedge parsley	Moderate
Asteraceae	<i>Leucanthemum vulgare</i>	Oxe eye daisy	Moderate
	<i>Tragopogon dubius</i>	Yellow salsify	-
Caryophyllaceae	<i>Lychnis coronaria</i>	Rose campion	-
Brassicaceae	<i>Brassica nigra</i>	Black mustard	Moderate
	<i>Lunaria annua</i>	Annual honesty	-
Fabaceae	<i>Lathyrus latifolius</i>	Sweet pea	-
	<i>Vicia sativa</i>	Spring vetch	-
Hypericaceae	<i>Hypericum perforatum</i>	Common St. Johnswort	Moderate
Poaceae	<i>Bromus diandrus</i>	Ripgut brome	Moderate
	<i>Cynosurus echinatus</i>	Dogtail grass	Moderate
	<i>Dactylis glomerata</i>	Orchardgrass	Limited
	<i>Hordeum murinum</i>	Foxtail barley	Moderate
Plantaginaceae	<i>Plantago lanceolata</i>	English plantain	Limited
Rosaceae	<i>Rubus armeniacus</i>	Himalayan blackberry	High
	<i>Rubus laciniatus</i>	Cut leaved blackberry	-

¹ Cal-IPC Rating = Limited; Moderate; High

Appendix F

Mitigation Monitoring and Reporting Program

MITIGATION MONITORING AND REPORTING PROGRAM FOREBAY PARK IMPROVEMENT PROJECT

Purpose of Mitigation Monitoring and Reporting Program: The California Environmental Quality Act (CEQA), Public Resources Code Section 21081.6, requires that a Mitigation Monitoring and Reporting Program (MMRP) be established upon completing findings. CEQA stipulates that “the public agency shall adopt a reporting or monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.”

This MMRP has been prepared in compliance with Section 21081.6 of CEQA to ensure that all required mitigation measures are implemented and completed according to schedule and maintained in a satisfactory manner during the construction and operation of the project, as required. A table (attached) has been prepared to assist the responsible parties in implementing the MMRP. The table identifies individual mitigation measures, monitoring/mitigation timing, the responsible person/agency for implementing the measure, and space to confirm implementation of the mitigation measures. The numbering of mitigation measures follows the numbering sequence found in the Initial Study and Mitigated Negative Declaration.

The County of El Dorado (County) is the lead agency for the project under CEQA and shall administer and implement the MMRP. The County is responsible for reviewing all monitoring reports, enforcement actions, and document disposition. The County shall rely on information provided by the project site observers/monitors (e.g., construction manager, project manager, biologist, archaeologist, etc.) as accurate and up-to-date and shall provide personnel to field check mitigation measure status, as required.

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**MITIGATION MONITORING AND REPORTING PROGRAM
FOREBAY PARK IMPROVEMENT PROJECT**

Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
			Initials	Date
BIOLOGICAL RESOURCES				
<p>BIO-1: Conduct Pre-construction Surveys Conduct pre-construction surveys for California red-legged frog, western pond turtle, northern goshawk, bald eagle, and nesting migratory birds and raptors (during the nesting season [February 1 through August 31]) 14 days prior to the initiation of construction or ground disturbing activities. If construction or ground disturbing activities do not commence within 14 days, or halt for more than seven days, additional surveys are required prior to resuming or starting work, as detailed below:</p> <ul style="list-style-type: none"> • If no California red-legged frog or western pond turtles are observed, then a letter report shall be prepared to document the results of the survey and provided to the project proponent, and no additional measures are recommended for California red-legged frog or western pond turtle. If construction does not commence within 14 days of the pre-construction survey, or halts for more than seven days, an additional survey is required prior to resuming or starting work. <p>If California red-legged frog or western pond turtles are present in the project site, then agency consultation with the appropriate wildlife agencies shall be required to determine appropriate buffers and additional measures to reduce impacts to these species. Additional avoidance measures may include, but are not limited to, having a qualified biologist conduct a second pre-construction survey within 24 hours prior to commencement of construction activities or having a qualified biologist present on-site during initial ground-clearing and grading activities for the purpose of relocating any California red-legged frogs or western pond turtle found out of the construction footprint and into agency-approved relocation areas.</p>	<p>No more than 14 days prior to initiation of construction/ground disturbing activities.</p>	<p>Qualified Biologist; Construction Personnel.</p>		

**MITIGATION MONITORING AND REPORTING PROGRAM
FOREBAY PARK IMPROVEMENT PROJECT**

Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
			Initials	Date
<ul style="list-style-type: none"> If development activities occur during the nesting season, a qualified biologist should conduct a nesting bird survey within the project footprint to determine the presence of any active nests that may be impacted by construction activities. Additionally, the surrounding 500 feet of the project footprint should be surveyed for active raptor nests, where accessible, and with binoculars, as necessary. The nesting bird survey should be conducted within 14 days prior to commencement of ground-disturbing or other development activities. If the nesting bird survey shows that there is no evidence of active nests, a letter report should be prepared to document the survey and provided to the project proponent, and no additional measures are recommended. If development does not commence within 14 days of the nesting bird survey, or halts for more than seven days, an additional survey is required prior to starting or resuming work. If active nests are found, the qualified biologist should establish species-specific buffer zones to prohibit development activities and minimize nest disturbance until the young have successfully fledged or the biologist determines that a nest is no longer active. Buffer distances may range from 50 feet for most songbirds up to 250 to 500 feet for most raptors. Nest monitoring may also be warranted during certain phases of development to ensure nesting birds are not adversely impacted by construction activities. If active nests are found within any trees slated for removal, an appropriate buffer should be established around the tree and all trees within the buffer should not be removed until a qualified biologist determines that the nest has successfully fledged and is no longer active. 				

**MITIGATION MONITORING AND REPORTING PROGRAM
FOREBAY PARK IMPROVEMENT PROJECT**

Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
			Initials	Date
<p>BIO-2: Environmental Awareness Training A qualified biologist shall conduct environmental awareness training for all construction personnel prior to the initiation of work. The training shall include identification of California red-legged frog, western pond turtles, special status birds, and nesting birds; required practices to be implemented prior to and during construction; general measures that are being implemented to conserve the species as they relate to the project; penalties for non-compliance, boundaries of the non-disturbance buffer zones; and what to do/whom to contact should any sensitive wildlife or plant species, or nesting birds be observed on-site during construction. Upon completion of the training, all construction personnel shall sign a form stating that they have attended the training and understand all the measures. Proof of this instruction shall be kept on file with the project proponent.</p>	Prior to initiation of work.	Qualified Biologist; Construction Personnel		
<p>BIO-3: Oak Woodland Removal Permit The project proponent will obtain an oak woodland removal permit. Required mitigation will be implemented on-site and integrated into the landscape plan. If on-site mitigation is not feasible, then mitigation will be completed through off-site mitigation or payment of in-lieu fees in accordance with the ORMP.</p> <p>Oak Tree Protection Measures. For all protected trees to be preserved within 20 feet of the impact area, protection measures shall be implemented in order minimize impacts to protected trees. Protection measures include:</p>	Prior to construction and/or tree removal activities.	El Dorado County; Project Proponent.		

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FOREBAY PARK IMPROVEMENT PROJECT**

Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
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<ul style="list-style-type: none"> • Install tree protection fencing, consisting of a minimum four-foot tall high-visibility fence (orange plastic snow fence or similar) on steel posts placed a maximum of eight-feet on center, shall be placed at the edge of the woodland habitat and around the perimeter of the root protection zone (RPZ; dripline radius x 1.3) for the trees to remain, whichever is greater. The RPZ is the minimum distance for placing protective fencing, but tree protection fencing should be placed as far outside of the RPZ as possible. • Tree and vegetation removal will be limited to the extent needed to facilitate project construction and access to the site. • If permanent site improvements (e.g., paving, buildings, and structures) encroach into the protected area, install fence at limit of work. If temporary impacts (e.g., grading, utility installation) require encroachment into the protected area, move fence to limit of work during active construction of item and return to edge of protected area once work is completed. • Protection fencing shall not be moved without prior authorization from the Project Arborist or County of El Dorado or as detailed on approved plans. • Avoid paving within protected area. If paving cannot be avoided, porous materials will be used. • No parking, portable toilets, dumping or storage of any construction materials, including oil, gas, or other chemicals, or other infringement by workers or domesticated animals is allowed in the protected area. • No signs, ropes, cables, metal stakes, or any other items shall be attached to a protected tree, unless recommended by an ISA-Certified Arborist. 				

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Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
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<ul style="list-style-type: none"> • Grading, excavation, or trenching within RPZ of existing native oaks should be avoided to the greatest extent possible. Under no circumstances shall fill soil be placed against the trunk of an existing tree. • Underground utilities should be avoided in the RPZ, but, if necessary, shall be bored or drilled. • No trenching is allowed within the RPZ unless specifically approved by the Project Arborist. • Pruning of living limbs or roots shall be done under the supervision of an ISA-Certified Arborist or as approved by the County. • All pruning shall be done by hand, air knife, or water jet, in accordance with ISA standards using tree maintenance best practices. Climbing spikes shall not be used on living trees. Limbs shall be removed with clean cuts just outside the crown collar. • Cover exposed roots or cut root ends in trenches with damp burlap to prevent drying out. • Minimize disturbance to the native ground surface (grass, leaf, litter, or mulch) under preserved trees to the greatest extent feasible. • Native woody plant material (trees and shrubs to be removed) may be chipped or mulched on the project site and placed in a four- to six-inch-deep layer around existing trees to remain. Do not place mulch in contact with the trunk of preserved trees. 				

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Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
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<ul style="list-style-type: none"> • If a tree to remain has had roots cut during construction, the tree shall be deep-watered once a month during summer/fall months until construction is complete. • Appropriate fire prevention techniques shall be employed around all trees to be preserved. This includes cutting tall grass, removing flammable debris within the RPZ, and prohibiting the use of tools that may cause sparks, such as metal-bladed trimmers or mowers. • No open flames shall be permitted within 15 feet of the tree canopy. • Damage to any protected tree during construction shall be immediately reported to the County of El Dorado Planning Services. Damage shall be corrected as required by the County representative. 				

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FOREBAY PARK IMPROVEMENT PROJECT**

Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
			Initials	Date
CULTURAL RESOURCES				
<p>CUL-1: Worker Awareness Training Program All construction personnel involved in ground disturbing activities shall be trained in the recognition of possible cultural resources and protection of such resources. The training will inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Construction personnel will be instructed that cultural resources must be avoided and that all travel and construction activity must be confined to designated roads and areas. The training will include a review of the local, state, and federal laws and regulations related to cultural resources, as well as instructions on the procedures to be implemented should unanticipated resources be encountered during construction, including stopping work in the vicinity of the find and contacting the appropriate environmental compliance specialist.</p>	Prior to construction.	Qualified Archaeologist; Construction Personnel.		
<p>CUL-2: Accidental Discovery of Cultural Resources If cultural resources are exposed during ground-disturbing activities, construction activities should be halted within 100 feet of the discovery. Cultural resources could consist of but are not limited to stone, bone, wood, or shell artifacts, or features including hearths, structural remains, or historic dumpsites. If the resources cannot be avoided during the remainder of construction, an archaeologist who meets the Secretary of the Interior’s Professional Qualifications Standards should then be retained, in coordination with the County to assess the resource and provide appropriate management recommendations. If the discovery proves to be CRHR- or NRHP-eligible, additional work, such as data recovery excavation, may be warranted and should be discussed in consultation with the County.</p>	Immediately upon discovery.	El Dorado County; County Coroner.		

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Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
			Initials	Date
<p>CUL-3: Accidental Discovery of Human Remains Although considered highly unlikely, there is always the possibility that ground disturbing activities during construction may uncover previously unknown human remains. In the event of an accidental discovery or recognition of any human remains, PRC Section 5097.98 must be followed. Once project-related earthmoving begins and if there is a discovery or recognition of human remains, the following steps shall be taken:</p> <ol style="list-style-type: none"> 1. There shall be no further excavation or disturbance of the specific location, or any nearby area reasonably suspected to overlie adjacent human remains, until the El Dorado County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98, or 2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance: <ol style="list-style-type: none"> a. The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission; 	<p>Immediately upon discovery.</p>	<p>El Dorado County; County Coroner.</p>		

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Mitigation Measure	Monitoring / Mitigation Timing	Reporting / Responsible Party	Verification of Compliance	
			Initials	Date
b. The descendent identified fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.				
HAZARDS AND HAZARDOUS MATERIALS				
HAZ-1: Prevent Wildland Fires during Construction. During construction, the County and construction coordinator shall ensure all areas in which work shall be completed using spark-producing equipment are cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the construction coordinator shall keep these areas clear of combustible materials to maintain a fire break.	During construction.	El Dorado County; Construction Personnel.		