Biological Resources Assessment

Ebbetts Pass
Reach 1 Water Transmission Pipeline Capital Improvement Project

Calaveras County, California

Prepared for:

Calaveras County Water District

June 4, 2018

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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LIST OF ACRONYMS AND ABBREVIATIONS

AWWA	American Water Works Association
BA	Biological assessment
BO	Biological opinion
BRA	Biological resources assessment
CCWD	Calaveras County Water District
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EFH	Essential Fish Habitat
ESA	Endangered Species Act
HCP	Habitat conservation plan
HUC	Hydrologic Unit Code
MBTA	Migratory Bird Treaty Act
MSL	Mean sea level
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NSF	National Science Foundation
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
Project	Ebbetts Pass Reach 1 Water Transmission Pipeline Project
PRV	Pressure Reducing Valves
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WTP	Water Treatment Plant
WBWG	Western Bat Working Group

1.0 INTRODUCTION

On behalf of the Calaveras County Water District (CCWD), ECORP Consulting, Inc. has conducted a biological resources assessment (BRA) for the proposed Ebbetts Pass Reach 1 Water Transmission Pipeline Capital Improvement Project (Project) located in Calaveras County, California. The purpose of the assessment was to collect information on the biological resources present within the Project area and to determine any potential biological constraints to Project activities.

1.1 Project Location

The ±25.2-acre Project alignment begins north of Hunter Dam Road to the west of the Hunter Dam Water Treatment Plant, continues southwesterly along State Route 4 (SR-4) through Hathaway Pines, Red Apple Ranch and Forest Meadows, terminating approximately 6,700 feet southwest of Forest Meadows Drive. The Project alignment corresponds to portions of Sections 24-27, Township 4 North, Range 14 East, and Sections 18-19, Township 4 North, Range 15 East (MDBM) of the "Murphys, California" and "Stanislaus, California" 7.5-minute quadrangles (USGS 1948a and 1948b, respectively) (Figure 1. Project Location and Vicinity). The approximate center of the Project alignment is located at latitude 38.179446° and longitude -120.388656° within the Upper Calaveras (Hydrologic Unit Code [HUC] #18040111) and Upper Stanislaus (HUC #18040010) Watersheds (NRCS, USGS, and EPA 2016).

1.2 Project Description

The Proposed Project is for the replacement of an existing water transmission pipeline and associated facilities (pressure reducing valve stations, air relief valves, blow-off valves, main line valves, and fire hydrants).

The existing 8-inch diameter Ebbetts Pass Reach 1 pipeline is owned and operated by the CCWD. The existing pipeline was constructed in 1965 and delivers water treated from the District's Hunter Dam Water Treatment Plant (WTP) to CCWD customers located along the SR-4 corridor from Avery, south and west, to services located approximately 4,000 feet west of Forest Meadows Drive.

1.2.1 Pipeline

The existing pipeline requires replacement due to age, poor condition and frequent repairs. Approximately 24,500 lineal feet of new 10- or 12-inch diameter ductile iron pipe will be used to replace the existing pipeline. The Project construction will be sequenced such that existing CCWD customers will not be subjected to unusual or prolonged service outages with the placement of the Proposed Project.

Project Boundary - 25.2 acres

Calaveras County, California
§24, 25, 26, and 27, T.04N, R.14E, and
§18 and 19, T.04N, R.15E MDBM
Latitude (NAD83): 38.179446°
Longitude (NAD83): -120.388656°
Watershed: Upper Calaveras California (18040011)
and Upper Stanislaus (18040010)

Scale in Feet
0 2,000

Murphys (2001, NAD27) and
Stanislaus (2001, NAD27)
CA 7.5-minute Topographic Quadrangles
US Geological Survey.

Map Date: 3/22/2018

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Location: N:\2017\2017-108 CCWD Ebbetts Pass\MAPS\Location Vicinity\CCWDEP_LnV_20180507.mxd (MRG) JSwagel 5/8/2018

Figure 1. Project Location and Vicinity

2017-108 CCWD Ebbetts Pass

The pipeline is typically installed in approximately a 30-inch wide trench with 36 to 48-inches of cover over the top of the pipe. The trench is 5 to 6 feet deep on average but the depth varies and can be as much as 7-10 feet deep in some locations. The new pipeline may be located near the top of slope, near the toe of slope or near the existing SR-4 road shoulder. Between Commercial Way and Darby Russell Road there is also located, parallel to the existing pipeline, underground PG&E power improvements. Ideally, the new pipeline will be placed between the existing pipeline and the existing underground power trench. Where this is not possible, the new pipeline will be placed between the existing pipeline and SR-4 shoulder. If it cannot be avoided, the worst case is that existing pipeline will have to be excavated and removed within some sections of the project so the new pipeline can be installed in exactly the same location.

Where existing pipelines that cross SR 4 need to be replaced, they will be replaced with bore and case construction requiring no open cut construction across SR 4. In a few cases, there are existing service connections within the Project area that are provided without PRVs and are typically located in the upper elevations of the Project.

All construction of the new pipeline will be performed in conformance with the most current industry standards including National Science Foundation (NSF) 60/61, American Water Works Association (AWWA) and State of California Waterworks standards assuring the public health and safety. The pipeline will be used for the transmission of potable water for domestic use as well as supply fire flow for communities along SR-4. The new pipeline will be fully disinfected and pass bacteriological tests before sections of new piping are placed into service.

1.2.2 Pressure Reducing Valve Stations

The existing and proposed pipeline will operate at pressures up to 250 pounds per square inch gauge (psig)[1]. Per the District's Standards, pressures delivered to CCWD customers should not exceed a maximum of 120 psig and ideally should be around 50-70 psi for household use. To reduce water pressures delivered to their customers, CCWD has installed 12 Pressure Reducing Valve Stations (PRVs) within the Proposed Project area. PRV's consist of a large buried concrete vault approximately 7-x-9-foot plan dimensions by 6 feet deep and the various pressure control valves, surge relief valves and isolation valves located inside this vault. The existing PRV Station located near the intersection with Tahoe Drive has recently been constructed and will not be replaced with the Proposed Project improvements. The PRV's serving Red Apple Ranch subdivision at Rome Court and Red Apple Drive are recent additions and are to be reused, as well. The remaining PRVs located within the Proposed Project reach will likely be replaced or relocated as part of the scope of improvements.

1.2.3 Fire Hydrants and Pipeline Valves

Existing fire hydrants along SR-4 now served directly by the existing pipeline will be removed and new hydrants will be installed and connected to the replacement pipeline. Additional hydrants may also be placed with the new pipeline.

[1]PSI and PSIG are both units of measurement for describing the amount pressure a gas or fluid is exerting. However, PSIG specifies what the measurement is relative to, whereas PSI does not. In both units, the letters "psi" is an abbreviation for "pounds per square inch. PSIG stands for "pounds per square inch gauge," or gage. PSIG units are relative to atmospheric pressure (Reference 2017).

Air relief valves will be place at all high spots in the elevation of the pipeline where any air accumulating in the pipeline may collect and be vented. These valves also vent air during filling and draining of the pipeline, such as during construction or subsequent draining for maintenance or repair of the pipeline. Most of the air relieve valve assembly is buried underground with only vent pipe and small insulating cover typically extending approximately 18-inches above ground.

There are currently blow-off valves at isolated low points along the existing pipeline route. The blow-off valves are placed at low points along the pipeline alignment for long term maintenance to be able to drain the line in the case of an emergency repair. These will be removed and replaced with current CCWD blow-off standard valves and reconnected to the new pipeline.

Existing main line valves located along the pipeline will also be replaced with the new pipeline improvements. Additional main line valves will be placed with the Reach 1 improvements to provide for better maintenance and isolation and the valves will be utilized in the event of a future water leak/repair. The valves are typically resilient seat gate valves in accordance with applicable AWWA industry standards for water systems.

1.2.3.1 Temporary Staging / Laydown Areas

The Proposed Project includes up to four staging / laydown areas along the pipeline route. These areas may temporarily stage equipment and materials in the designated work zones as necessary to perform daily work. Also, up to two of the staging areas would be used for the construction trailer, parking equipment and vehicles, storing materials, storage containers, etc. that is outside the SR-4 right-of-way on a larger property. As of the date of this document the staging areas are proposed as follows:

- CCWD owned parcel near Forest Meadows Sewer Lift Station
- Ebbetts Pass Ministries, Parking Area and Mini Storage Lot
- USFS Parking Lot
- Utica Power Authority Parking Area, Storage Area; Southwest of Hunter Dam WTP (east end of project)

1.2.3.2 Operations and Maintenance

Periodic flushing of hydrants on the proposed pipeline alignment and exercising valves will be required to maintain the system. Daily operation of the pipeline will have little or no demonstrable effects on the surrounding environment.

1.2.3.3 Construction Duration and Phasing

The Project would be constructed in one phase. It is anticipated that the Proposed Project would be constructed over a two-year period starting in 2018. Construction will be suspended for the winter in mid-October. The project will then resume in May 2019 and is anticipated to be completed in 2019. The actual construction period will occur over eight months.

1.2.3.4 Construction Access

The Project would be accessed from and constructed within the public right-of-way of SR-4. The water lines would be installed either within existing roadway rights-of-way, within the existing shoulder, or within existing utility easements as the conditions warrant for avoidance of resources.

1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species or their habitat, and sensitive habitats such as wetlands within the Project area. This assessment does not include determinate field surveys conducted according to agency-promulgated protocols. The conclusions and recommendations presented in this report are based upon a review of the available literature and Project reconnaissance.

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the California Environmental Quality Act (CEQA) Guidelines;
- Are identified as a species of special concern by the California Department of Fish and Wildlife (CDFW);
- Are birds identified as birds of conservation concern by the U.S. Fish and Wildlife Service (USFWS);
- Are plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" (California Rare Plant Rank [CRPR] 1 and 2);
- Plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- Are plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code, § 1900 et seq.); or
- Are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above listed groups were considered for this assessment.

2.0 REGULATORY SETTING

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of ESA prohibits the taking of listed wildlife, where take is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect,

or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on nonfederal land in knowing violation of state law (16 U.S. Code [USC] 1538). Under Section 7 of ESA, federal agencies are required to consult with USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its Critical Habitat. Through consultation and the issuance of a biological opinion (BO), the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan (HCP) is developed.

2.1.1.1 Section 7

Section 7 of ESA mandates that all federal agencies consult with USFWS and/or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. If direct and/or indirect effects will occur to critical habitat that appreciably diminish the value of critical habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the applicant must conduct a biological assessment (BA) for the purpose of analyzing the potential effects of the project on listed species and critical habitat to establish and justify an "effect determination." The federal agency reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a BO. The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat.

2.1.1.2 Section 10

When no discretionary action is being taken by a federal agency but a project may result in the take of listed species, an incidental take permit under Section 10 of ESA is necessary. The purpose of the incidental take permit is to authorize the take of federally listed species that may result from an otherwise lawful activity, not to authorize the activities themselves. In order to obtain an incidental take permit under section 10, an application must be submitted that includes an HCP. In some instances, applicants, USFWS, and/or NMFS may determine that an HCP is necessary or prudent, even if a discretionary federal action will occur. The purpose of the HCP planning process associated with the permit application is to ensure that adequate minimization and mitigation for impacts to listed species and/or their habitat will occur.

2.1.1.3 Critical Habitat and Essential Habitat

Critical Habitat is defined in Section 3 of ESA as (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known

and using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

- Space for individual and population growth and for normal behavior
- Food, water, air, light, minerals, or other nutritional or physiological requirements
- Cover or shelter
- Areas for breeding, reproduction, or rearing (or development) of offspring
- Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species

Excluded Essential Habitat is defined as areas that were found to be essential habitat for the survival of a species and assumed to contain at least one of the primary constituent elements for the species but were excluded from the Critical Habitat designation. The USFWS has stated that any action within the excluded Essential Habitat that triggers a federal nexus will be required to undergo the Section 7(a)(1) process, and the species covered under the specific Critical Habitat designation would be afforded protection under Section 7(a)(2) of ESA.

2.1.1.4 Essential Fish Habitat

In accordance with the Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), federal agencies are required to consult with NMFS for activities that may affect Essential Fish Habitat (EFH). EFH are the waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity, and include several important components: adequate substrate; water quality; water quantity, depth, and velocity; channel gradient and stability; food; cover and habitat complexity; space; access and passage; and habitat connectivity (Pacific Fishery Management Council 2000).

2.1.2 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Federal Clean Water Act

The federal Clean Water Act's (CWA) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the United States (U.S.) without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "*that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions*" (33 CFR 328.3 7b). The USEPA also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

The alteration of a USACE federally authorized civil works project requires a permit pursuant to Section 408 (33 USC 408, Section 14 of the Rivers and Harbors Act of 1899). Projects with minimal impacts require approval by the USACE Sacramento District Construction Operations Group; however projects with more substantial impacts may require USACE Headquarters review. Coordination with the Central Valley Flood Protection Board, who serve as the nonfederal sponsor, is required as a part of the process of obtaining a Section 408 permit.

2.2 State or Local Regulations

2.2.1 California Fish and Game Code

2.2.1.1 California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) generally parallels the main provisions of ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called "candidates" by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the Fish and Game Code as "hunt*, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill*." the California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened or candidate species or result in destruction or adverse modification of essential habitat.

2.2.1.2 Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully

Protected Species Statute (California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.1.3 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 was created with the intent to "*preserve, protect and enhance rare and endangered plants in this State*." The NPPA is administered by CDFW and provided in 1900-1913. The Fish and Wildlife Commission has the authority to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code §§ 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

2.2.1.4 Birds of Prey

Sections 3800, 3513, and 3503 of the California Fish and Game Code specifically protect birds of prey. Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the commission or a mitigation plan approved by CDFW for mining operations. Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Additionally, § 3503.5 prohibits the take, possession, or destruction of any birds and their nests in the orders Strigiformes (owls) or Falconiformes (hawks and eagles). These provisions, along with the federal MBTA, serve to protect nesting raptors.

2.2.1.5 Section 1600

Through Sections 1600 to 1616 of the California Fish and Game Code, CDFW regulates projects that propose to (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake designated by the department in which there is at any time an existing fish or wildlife resource or from which these resources derive benefit, (2) use material from the streambeds designated by the department, or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake designated by the department. If an existing fish or wildlife resource may be substantially adversely affected by that construction, CDFW shall notify the governmental agency or public utility of the existence of the fish or wildlife resource together with a description thereof and shall propose reasonable modifications in the proposed construction that will allow for the protection and continuance of the fish or wildlife resource, including procedures to review the operation of those protective measures. CDFW jurisdiction includes the definable bed, bank, or channel, areas that support periodic or intermittent flows, perennial flows, subsurface flows, support fish or other aquatic life and areas that support riparian or hydrophytic vegetation in association with a streambed. Projects that affect the CDFW jurisdictional areas must submit a Notification of Lake or Streambed Alteration to their local office of the CDFW for processing.

2.2.2 Species of Special Concern

Species of Special Concern (SSC) are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs, or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role;
- The species is listed as federally (but not state) threatened or endangered, or meets the state definition of threatened or endangered but has not formally been listed;
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status;
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.
- SSC are typically associated with habitats that are threatened. Project-related impacts to SSC, state-threatened or endangered species are considered "significant" under CEQA.

2.2.3 California Rare Plant Ranks

The CNPS maintains the *Inventory of Rare and Endangered Plants of California* (CNPS 2017), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, and/or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, nongovernmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 1 through 3, with 1 being the most threatened and 3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (over 80 percent of occurrences threatened / high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20 to 80 percent occurrences threatened / moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (<20 percent of occurrences threatened / low degree and immediacy of threat or no current threats known)

Factors such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; differences in Threat Ranks do not constitute additional or different protection (CNPS 2017). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

2.2.4 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of stormwater runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "*discharging waste, or proposing to discharge waste, with any region that could affect the water of the state"* (Water Code 13260(a)). Waters of the State are defined as "*any surface water or groundwater, including saline waters, within the boundaries of the state*" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities.

2.2.5 California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species not protected on a federal or state list may be considered rare or endangered if the species meets certain specified criteria. These criteria follow the definitions in federal and/or California ESAs, and §§ 1900-1913 of the California Fish and Game Code, which deal with rare or endangered plants or animals. Section 15380 was included in the CEQA Guidelines primarily to deal with situations where a project under review may have a significant effect on a species that has not yet been listed by either USFWS or CDFW.

2.2.5.1 CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant and are particularly relevant to SSC. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant and require lead agencies to prepare an Environmental Impact Report to thoroughly analyze and evaluate the impacts. Assessment of "impact significance" to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Specifically, § 15064.7 of the 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 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 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 CDFW or USFWS;
- have a substantial adverse effect on federally protected Waters of the U.S. including wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) 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; or
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, 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.

2.2.6 Local Plans and Ordinances

2.2.6.1 Calaveras County General Plan

The Calaveras County General Plan (Calaveras County 2016) is currently being updated. The Conservation and Open Space Element of the current draft of the County General Plan contains several goals related to the protection and conservation of biological resources as listed below.

- Goal V-1: Preserve and enhance the County's significant wildlife and botanical habitats.
- Goal V-2: Protect streams, rivers and lakes from excessive sedimentation due to development and grading.

- Goal V-3: Protect and preserve riparian habitat along streams and rivers in the County.

2.2.6.2 Avery-Hathaway Pines Community Plan

The Avery-Hathaway Pines Community Plan (Calaveras County 1998) was developed as part of the Calaveras County General Plan in 1998. The Open Space Element of the Community Plan contains several goals and policies related to the protection and conservation of biological resources as listed below.

- Goal 9: Preserve open space and the quality of the scenic forested environment within the community plan area. Policy 9B: Protect wetland and riparian habitat.
- Goal 10: Provide for a system of wildlife corridors within the community plan area.

2.2.6.3 Calaveras County Voluntary Oak Woodland Management Plan

The Calaveras County Voluntary Oak Woodland Management Plan (Calaveras County 2007) provides a set of voluntary oak protection guidelines for oak woodlands throughout the County. It contains two goals related to the protection and conservation of oak woodlands as listed below.

- Support and encourage voluntary, long-term private stewardship and conservation of Calaveras' oak woodlands.
- Encourage local land use planning that is consistent with the preservation of oak woodlands, particularly special oak woodlands habitat.

3.0 METHODS

3.1 Literature Review

The following resources were reviewed to determine the special-status species that had been documented within or in the vicinity of the Project area or that otherwise had the potential to occur within the Project. The results of the species searches listed below are included as attachment A.

- CDFW CNDDB data for the "Murphys, California" and "Stanislaus, California" 7.5-minute quadrangles, as well as the 10 surrounding USGS quadrangles (CDFW 2017);
- USFWS Information, Planning, and Consultation System Resource Report List for the Project Area (USFWS 2017);; and
- CNPS' electronic Inventory of Rare and Endangered Plants of California query for the "Murphys, California" and "Stanislaus, California" 7.5-minute quadrangles and the 10 surrounding USGS quadrangles (CNPS 2017).

3.2 Project Reconnaissance

ECORP Biologists Keith Kwan and Clay DeLong conducted the Project reconnaissance visits on May 24 and 25, June 15 and 16, and July 12 and 13, 2017. The Project area was systematically surveyed on foot using a Trimble Global Positioning System unit with sub-meter accuracy, topographic maps, and aerial imagery to ensure total Project coverage. Special attention was given to identifying those

portions of the Project area with the potential to support special-status species and sensitive habitats. During the field survey, biological communities occurring within the Project were characterized and the following biological resource information was collected:

- Potential wetlands and other Waters of the U.S.
- Animal species directly observed
- Active raptor nest locations
- Burrows and any other special habitat features
- Habitat and vegetation types
- Representative Project photographs, provided as Attachment B

3.3 Additional Surveys Conducted

In addition to the reconnaissance surveys conducted for the Project area, the following additional surveys were conducted for the Project area.

3.3.1 Delineation of Waters of the U.S.

ECORP biologists conducted a delineation of Waters of the U.S. for the Project area on June 15 and 16, and July 12 and 13, 2017; however, the boundaries of the potential wetlands and other Waters of the U.S. have not been verified by USACE. Preliminary results of the delineation of Waters of the U.S. are discussed in Section 4.3.

3.3.2 Special-Status Plant Surveys

Guideline-level special-status plant surveys (early and late season) for the Project area were conducted by ECORP biologist Clay DeLong in accordance with guidelines promulgated by USFWS (USFWS 2000), CDFW (CDFG 2009), and CNPS (CNPS 2017) on May 24 and 25, and July 12 and 13, 2017. The surveys included visits to local reference populations for target species, if available, to confirm appropriate phenological conditions for identification. The results of the guideline-level special-status plant surveys are discussed in Section 4.7.

3.4 Special-Status Species Considered for the Project

Based on species occurrence information from the literature review and observations in the field, a list of special-status plant and animal species that have the potential to occur within the Project area was generated (Table 2). Each of these species potential to occur within the Project area was assessed based on the following criteria:

- **Present** - Species was observed during the site visit or is known to occur within the Project area based on documented occurrences within the CNDDB or other literature
- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Project area

- **Low Potential to Occur** - Marginal or limited amounts of habitat occurs and/or the species is not known to occur within the vicinity of the Project area based on CNDDB records and other available documentation
- **Absent** - No suitable habitat (including soils and elevation requirements) and/or the species is not known to occur within the vicinity of the Project area based on CNDDB records and other documentation

4.0 RESULTS

4.1 Project Characteristics and Land Use

The Project area is located within mountainous terrain situated at an elevational range of approximately 2,900 to 3,400 feet above mean sea level in the High Sierra Nevada Subregion of the Sierra Nevada floristic region of California (Baldwin et. al. 2012). Between 1981 and 2010, the average daily mean temperatures ranged from 36°F (December) to 67.1°F (July). Average annual precipitation is 57 inches at Calaveras Big Trees State Park, which is approximately six miles northeast of the Project (NOAA 2017).

The Project area is primarily composed of portions of a two-lane roadway (SR-4) and roadside habitat. The roadsides are a mixture of ruderal, undeveloped and developed land. Vegetation communities found within the ruderal and undeveloped portions of the Project area include annual forb meadow, annual grassland, ponderosa pine forest, and California black oak forest.

Annual forb meadows are located in the central portion of the Project alignment northeast of Forest Meadows Drive, and at the northeastern end of the Project alignment. The dominant plants found in the annual forb meadows include Ramm's madia (*Jensia rammii*), white-tip clover (*Trifolium variegatum*), white meadowfoam (*Limnanthes alba* ssp. *alba*), American bird's foot trefoil (*Acmispon americanus*), soft brome (*Bromus hordeaceus*), and medusahead grass (*Elymus caput-medusae*).

Annual grasslands are located in small patches throughout the Project alignment, primarily at disturbed locations. This plant community is dominated by non-native grasses and forbs, including medusahead grass, soft brome, ripgut brome (*Bromus diandrus*), hairy vetch (*Vicia hirsuta*), yellow star-thistle (*Centaurea solstitialis*), and white sweetclover (*Melilotus albus*).

Ponderosa pine forest is the dominant vegetation community within the Project area. Ponderosa pine forest within the Project area is characterized by an open to dense canopy dominated by ponderosa pine (*Pinus ponderosa*), incense cedar (*Calocedrus decurrens*), sugar pine (*Pinus lambertiana*), and black oak (*Quercus kelloggii*), with an understory dominated by mountain misery (*Chamaebatia foliolosa*) and whiteleaf manzanita (*Arctostaphylos viscida*). Pine forest is intermixed in some locations with California black oak forest. California black oak forest within the Project area is made up of an open canopy of black oak and Oregon oak (*Quercus garryana*), with an understory of birch leaf mountain mahogany (*Cercocarpus betuloides*), pink honeysuckle (*Lonicera hispidula*), and buck brush (*Ceanothus cuneatus*).

4.2 Potential Waters of the U.S.

A total of 0.184 acre of potential Waters of the U.S. were mapped within the Project area. Potential Waters of the U.S. mapped within the Project area include wetlands and other waters (Table 1. *Potential Waters of the U.S.*, Figure 2. *Wetland Delineation*). Wetlands consist of seeps and a seasonal wetland swale. Other waters include intermittent drainages, ephemeral drainages, and ditches.

Table 1. Potential Waters of the U.S.

Type	Acreage[1]
Wetlands	
Seasonal wetland swale	0.045
Seep	0.060
Other Waters	
Intermittent drainage	0.013
Ephemeral drainage	0.021
Ditch	0.045
Total	0.185

[1]Acreages represent a calculated estimation and are subject to modification following the USACE verification process.

4.2.1 Seasonal Wetland Swale

Seasonal wetland swales are generally linear wetland features that convey precipitation runoff and support a predominance of hydrophytic vegetation, but do not exhibit an ordinary high-water mark (OHWM). These are typically inundated for short periods during and immediately after rain events, but usually maintain soil saturation for longer periods during the wet season. One seasonal wetland swale occurs in the central portion of the Project area east of Red Apple Drive. This seasonal wetland swale is a roadside drainage feature dominated by Baltic rush (*Juncus balticus*), clustered field sedge (*Carex praegracilis*), arroyo willow (*Salix lasiolepis*), and Himalayan blackberry (*Rubus armeniacus*).

4.2.2 Seep

Seeps are typically found on sloped terrain where subsurface water reaches the surface. They may form small pools where the topography is relatively flat, but are more commonly characterized by saturated soil, either seasonally or perennially. Two seeps occur in the central portion of the Project area east of Forest Meadows Drive within the annual forb meadow. These features are dominated by Himalayan blackberry, Baltic rush, common large monkey-flower (*Mimulus guttatus*), and white meadowfoam.

4.2.3 Ditch

Ditches are linear features constructed to convey stormwater along roadsides. Ditches occur scattered throughout the Project area. The ditches are primarily unvegetated due to the scouring of fast-moving water during precipitation events.

4.2.4 Ephemeral Drainage

Ephemeral drainages are linear features that exhibit a bed and bank and an OHWM. These features typically convey runoff for short periods of time, during and immediately following rain events, and are not influenced by groundwater sources at any time during the year. Ephemeral drainages within the Project area are sparsely vegetated.

4.2.5 Intermittent Drainage

Intermittent drainages are linear features that exhibit a bed and bank, OHWM, and flow for longer duration than ephemeral drainages, typically for weeks or months following rainfall events. The intermittent drainages mapped within the Project area tend to be sparsely vegetated due to the absence of soil, presence of bedrock and/or cobble, and the scouring effects of flowing water. Vegetated portions of intermittent drainages within the Project area are dominated by common large monkey-flower, clustered field sedge, and Baltic rush.

4.3 Soils

According to the Web Soil Survey (NRCS 2017a), six soil units, or types, have been mapped within the Project area (Figure 3. *Natural Resources Conservation Service Soil Types*). These are:

- 152 – Josephine family, deep, 35 to 50 percent slopes
- 153 – Josephine family, deep-moderately deep complex, 5 to 35 percent slopes
- 155 – Josephine-Sites families association, deep, 5 to 35 percent slopes
- 175 – Lithic Xerumbrepts-Rock outcrop-McCarthy family, moderately deep complex, 5 to 60 percent slopes
- Jp-Mh-CE – Josephine-Mariposa association, 5 to 30 percent slopes
- Ms-Ir-CE – McCarthy-Iron Mountain association, 5 to 30 percent slopes

None of these soils are considered hydric soils (NRCS 2017b).

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Figure 2.
Aquatic Resources Delineation [1]
(Sheet 1 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

- Seasonal Wetland Swale (0.045 acres)
- Seep (0.060 acres)

Other Waters Total (0.079 acres)

- Intermittent Drainage (0.013 acres)
- Ephemeral Drainage (0.021 acres)
- Ditch (0.045 acres)

[1] Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Sacramento District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.

** The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*

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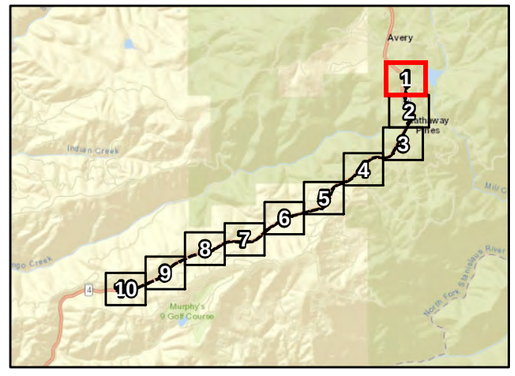

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

Figure 2.
Aquatic Resources Delineation [1]
(Sheet 2 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

- Seasonal Wetland Swale (0.045 acres)
- Seep (0.060 acres)

Other Waters Total (0.079 acres)

- Intermittent Drainage (0.013 acres)
- Ephemeral Drainage (0.021 acres)
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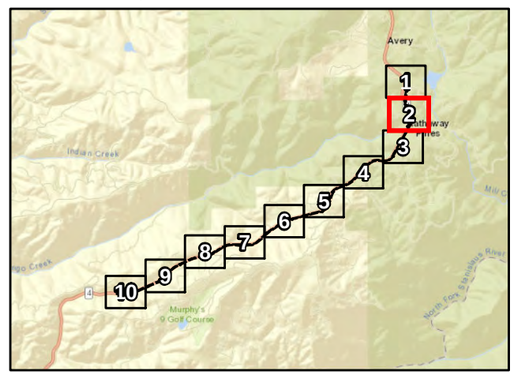

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Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

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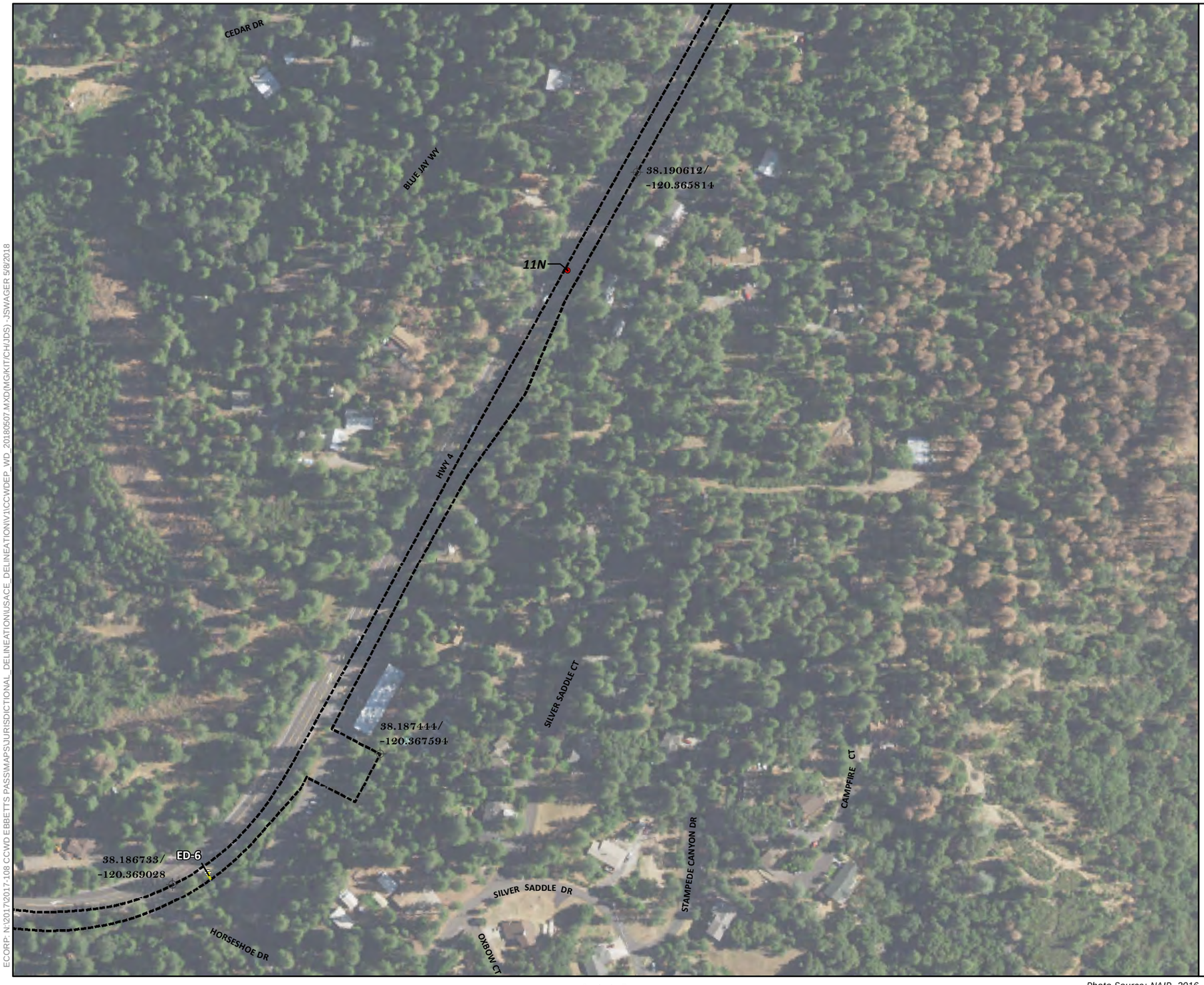
Figure 2.
Aquatic Resources Delineation [1]
(Sheet 3 of 10)



Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

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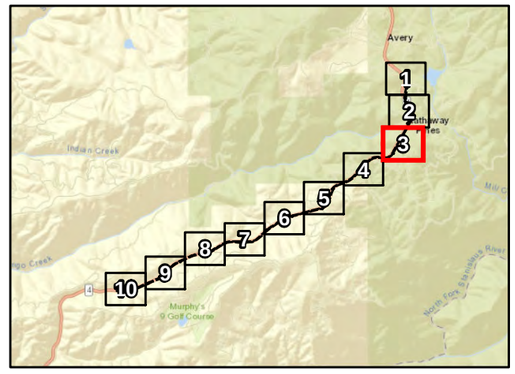

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Scale in Feet
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Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

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Figure 2.
Aquatic Resources Delineation [1]
(Sheet 4 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

- Seasonal Wetland Swale (0.045 acres)
- Seep (0.060 acres)

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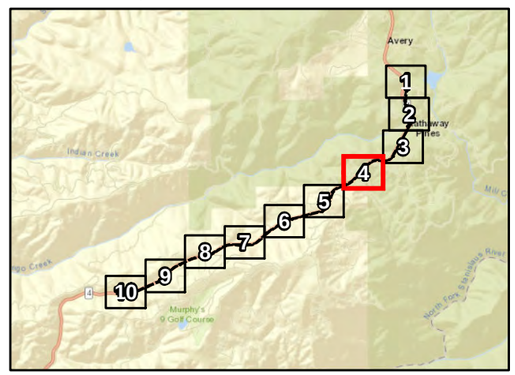

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Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

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Figure 2.
Aquatic Resources Delineation [1]
(Sheet 5 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

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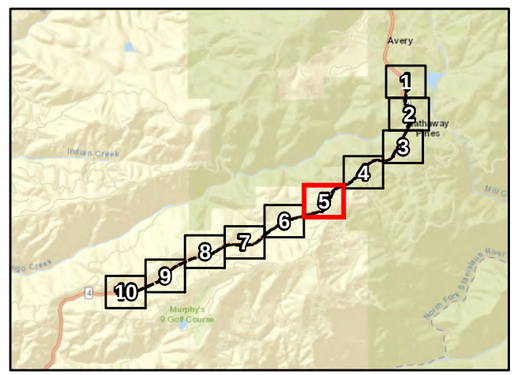

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

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Figure 2.
Aquatic Resources Delineation [1]
(Sheet 6 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

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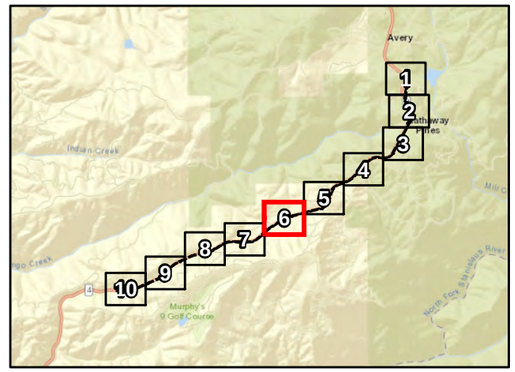

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\JURISDICTIONAL_DELINEATION\USACE_DELINEATION\V1\CCWDEP_WD_20180507.MXD(MGK/TJC/HJDS) JSWAGER 5/8/2018

Figure 2.
Aquatic Resources Delineation [1]
(Sheet 7 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

- Seasonal Wetland Swale (0.045 acres)
- Seep (0.060 acres)

Other Waters Total (0.079 acres)

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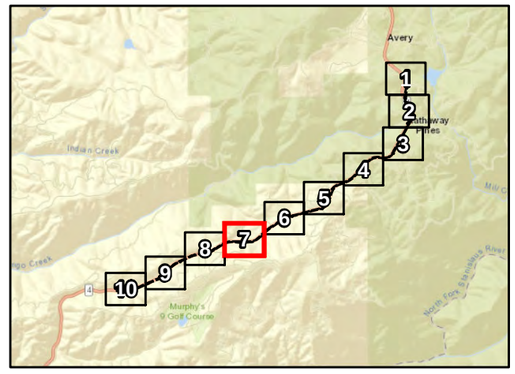

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\JURISDICTIONAL_DELINEATION\USACE_DELINEATION\V1\CCWDEP_WD_20180507.MXD(MC/KIT/CH/JDS) JSWAGER 5/8/2018

Figure 2.
Aquatic Resources Delineation [1]
(Sheet 8 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

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- Seep (0.060 acres)

Other Waters Total (0.079 acres)

- Intermittent Drainage (0.013 acres)
- Ephemeral Drainage (0.021 acres)
- Ditch (0.045 acres)

[1] Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0, as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Sacramento District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.

** The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*

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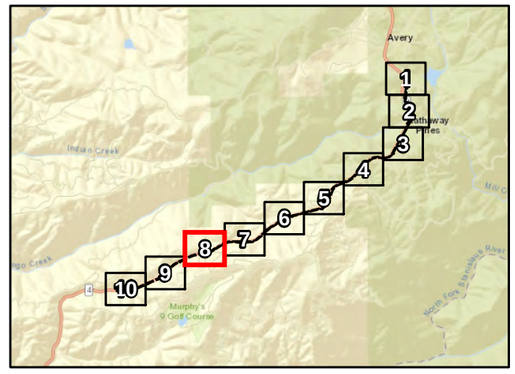

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ENVIRONMENTAL CONSULTANTS

2017-108 CCWD Ebbetts Pass

Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\JURISDICTIONAL_DELINEATION\USACE_DELINEATION\V1\CCWDEP_WD_20180507.MXD(MC/KIT/CH/JDS) JSWAGER 5/8/2018

Figure 2.
Aquatic Resources Delineation [1]
(Sheet 9 of 10)

Map Features

- Project Boundary - 25.2 acres
- Reference Coordinate (NAD83)
- Existing Culvert

Three Criteria Sample Points

- Upland Point
- Waters Point

Waters of the U.S. Total (0.185 acres) [1] *

Wetlands Total (0.105 acres)

- Seasonal Wetland Swale (0.045 acres)
- Seep (0.060 acres)

Other Waters Total (0.079 acres)

- Intermittent Drainage (0.013 acres)
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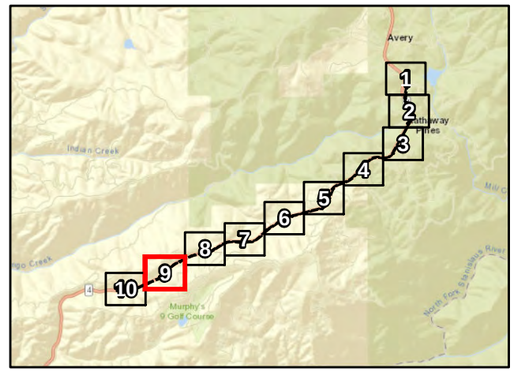

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\JURISDICTIONAL_DELINEATION\USACE_DELINEATION\V1\CCWDEP_WD_20180507.MXD(MC/KIT/CH/JDS) JSWAGER 5/8/2018

Figure 2.
Aquatic Resources Delineation [1]
(Sheet 10 of 10)

Map Features

- Project Boundary - 25.2 acres
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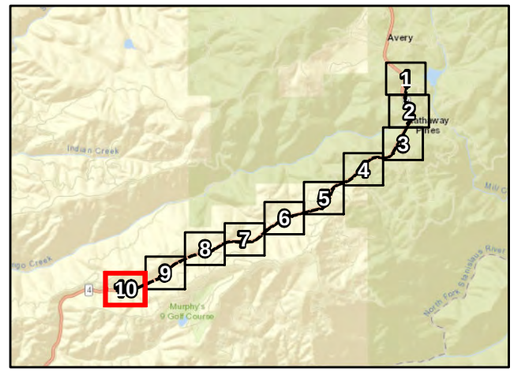

ECORP Consulting, Inc.
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2017-108 CCWD Ebbetts Pass

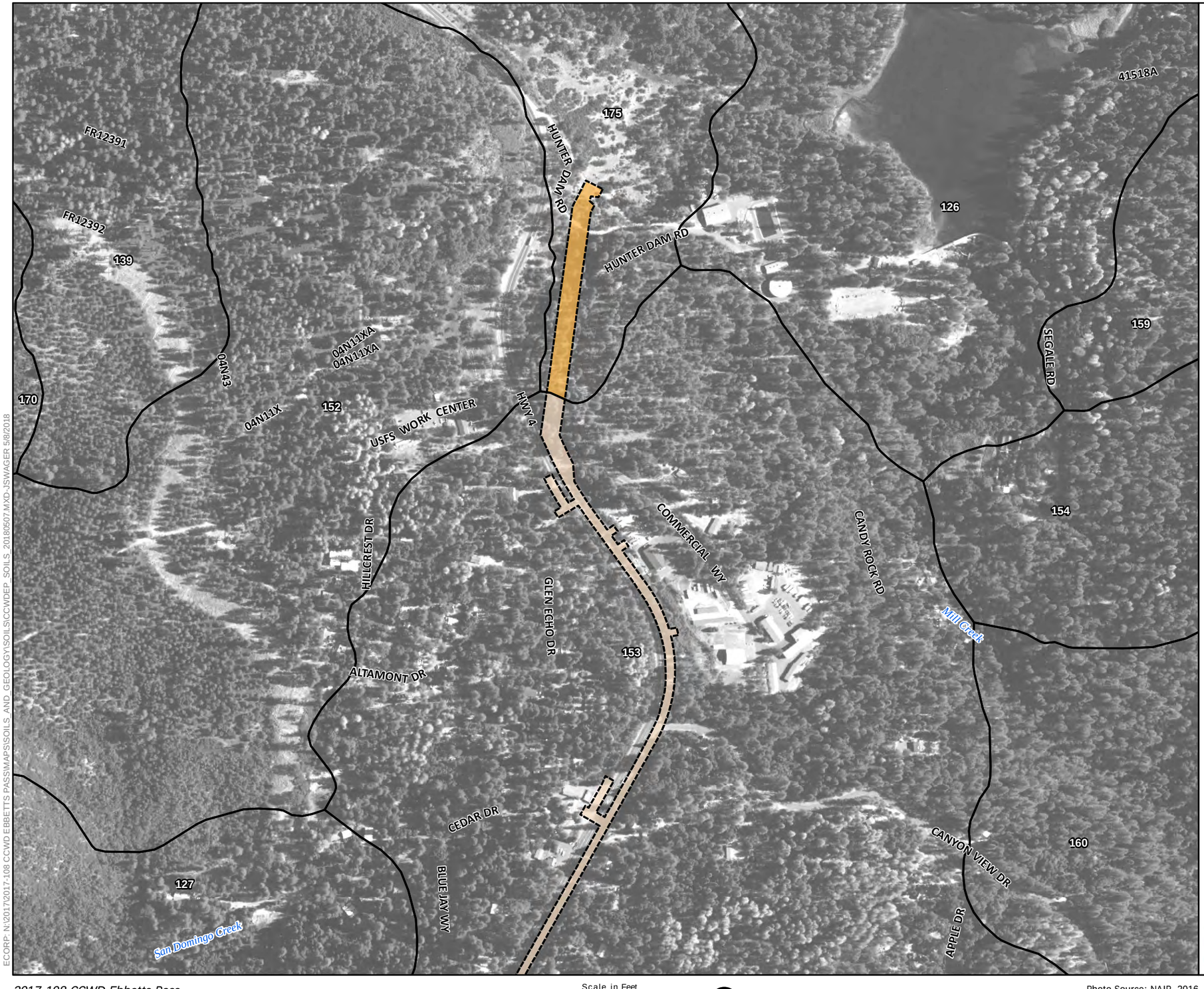
Scale in Feet
0 200

Photo Source: NAIP, 2016
Boundary Source: KASL
Delineator(s): K. Kwan
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 3/27/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\JURISDICTIONAL_DELINEATION\USACE_DELINEATION\V1\CCWDEP_WD_20180507.MXD(MGKIT/CH/JDS) JSWAGER 5/8/2018

Figure 3.
Natural Resources Conservation Service Soil Types
(Page 1 of 5)



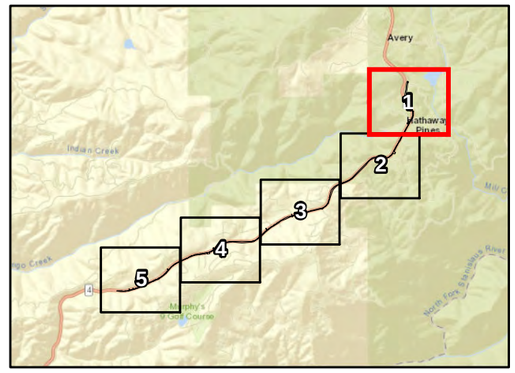
Map Features

- Project Boundary - 25.2 acres

Series Number - Series Name

- 152 - Josephine family, deep, 35 to 50 percent slopes
- 153 - Josephine family, deep-Moderately deep complex, 5 to 35 slopes
- 155 - Josephine-Sites families association, deep, 5 to 35 per cent slopes
- 175 - Lithic Xerumbrepts-Rock outcrop-McCarthy family, modera tely deep complex, 5 to 60 percent slopes
- Jp-Mh-CE - Josephine-Mariposa association, 5 to 30 percent slopes
- Ms-Ir-CE - McCarthy-Iron Mountain association, 5 to 30 percent slopes

Natural Resources Conservation Service (NRCS)
Soil Survey Geographic (SSURGO) Database for
Stanislaus National Forest, CA, 2014
and
General Soil Map for Calaveras County, June 1966



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ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\SOILS_AND_GEOLOGY\SOILS\CCWDEP_SOILS_20180507.MXD-JSWAGER 5/8/2018

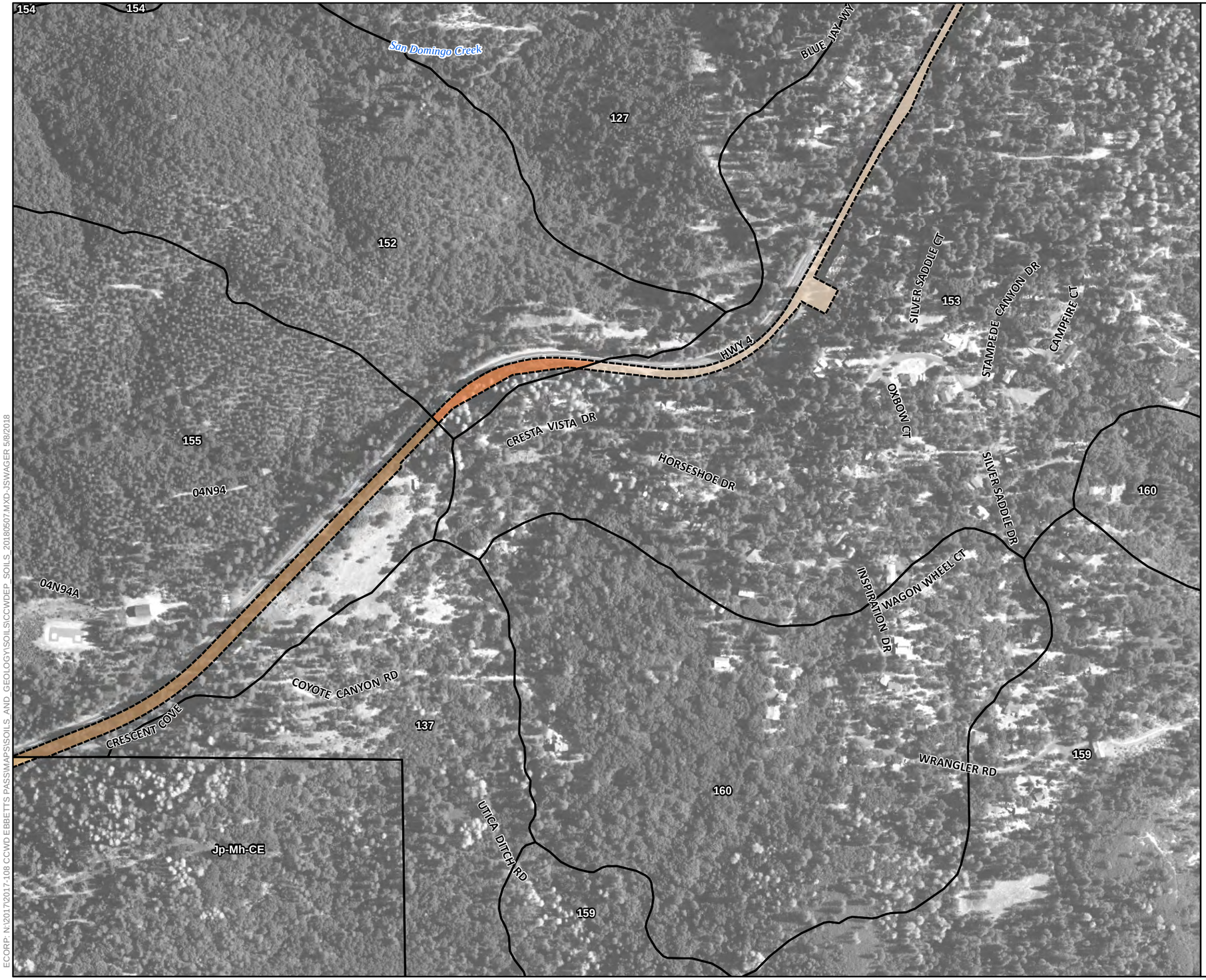
2017-108 CCWD Ebbetts Pass

Scale in Feet
0 400

Photo Source: NAIP, 2016
Boundary Source: KASL
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 5/8/2018

Figure 3.
Natural Resources Conservation Service Soil Types
(Page 2 of 5)



Map Features

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Series Number - Series Name

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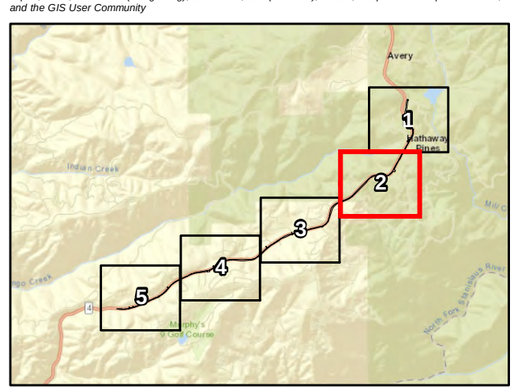

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 400

Photo Source: NAIP, 2016
Boundary Source: KASL
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 5/8/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\SOILS_AND_GEOLOGY\SOILS\CCWDEP_SOILS_20180507.MXD-JSWAGER 5/8/2018

Figure 3.
Natural Resources Conservation Service Soil Types
(Page 3 of 5)

Map Features

- Project Boundary - 25.2 acres

Series Number - Series Name

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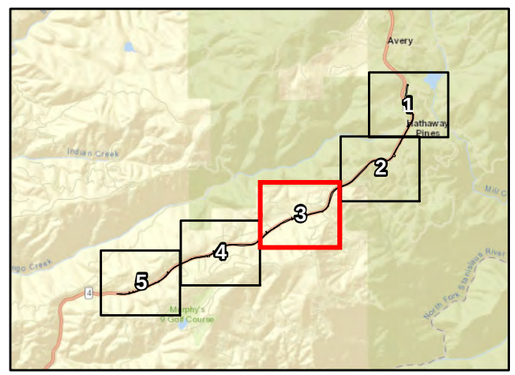

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2017-108 CCWD Ebbetts Pass

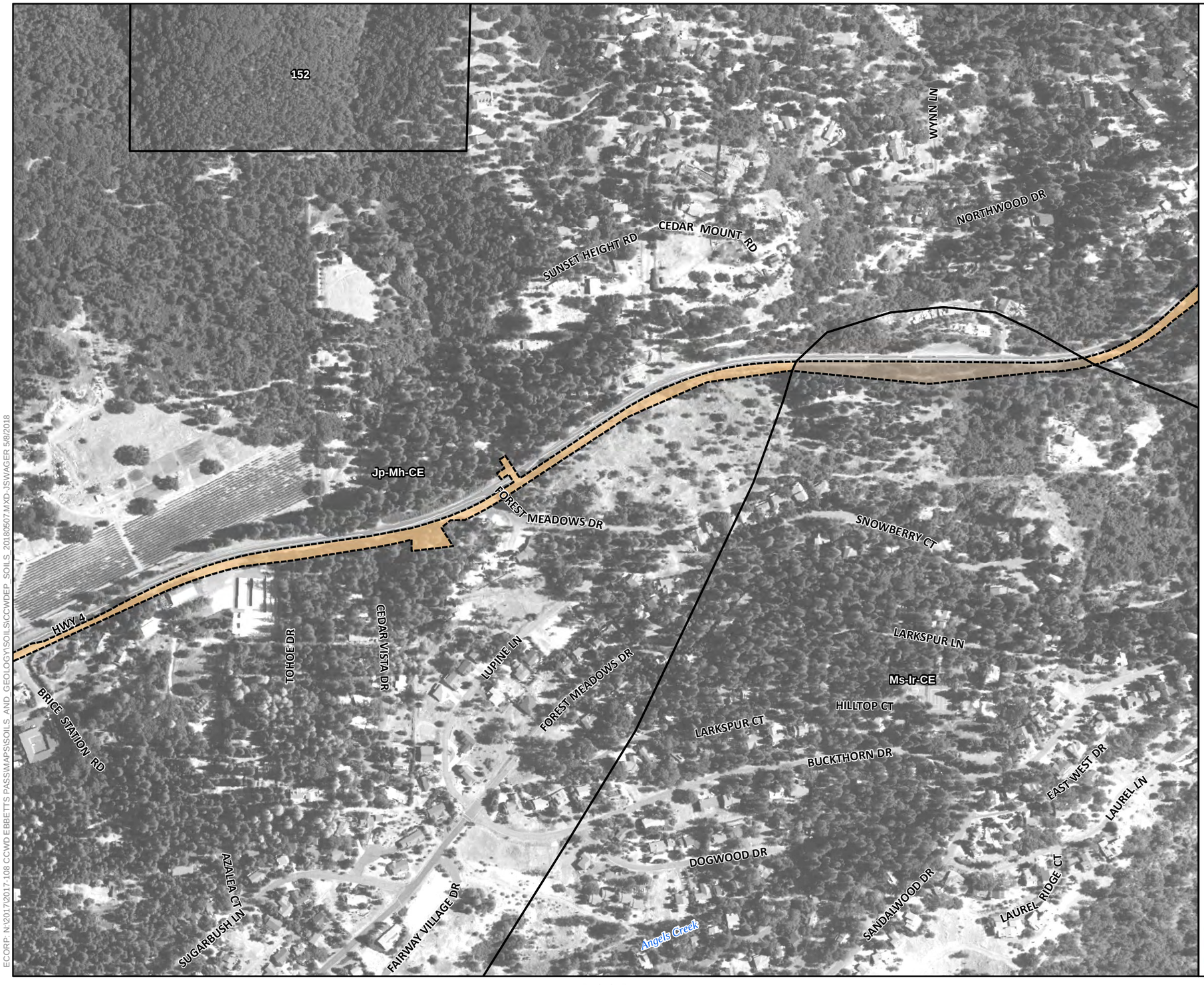
Scale in Feet
0 400

Photo Source: NAIP, 2016
Boundary Source: KASL
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 5/8/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\SOILS_AND_GEOLOGY\SOILS\CCWDEP_SOILS_20180507.MXD JSWAGER 5/8/2018

Figure 3.
Natural Resources Conservation Service Soil Types
(Page 4 of 5)



Map Features

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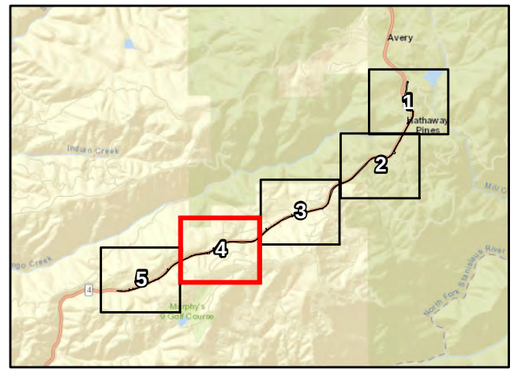

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2017-108 CCWD Ebbetts Pass

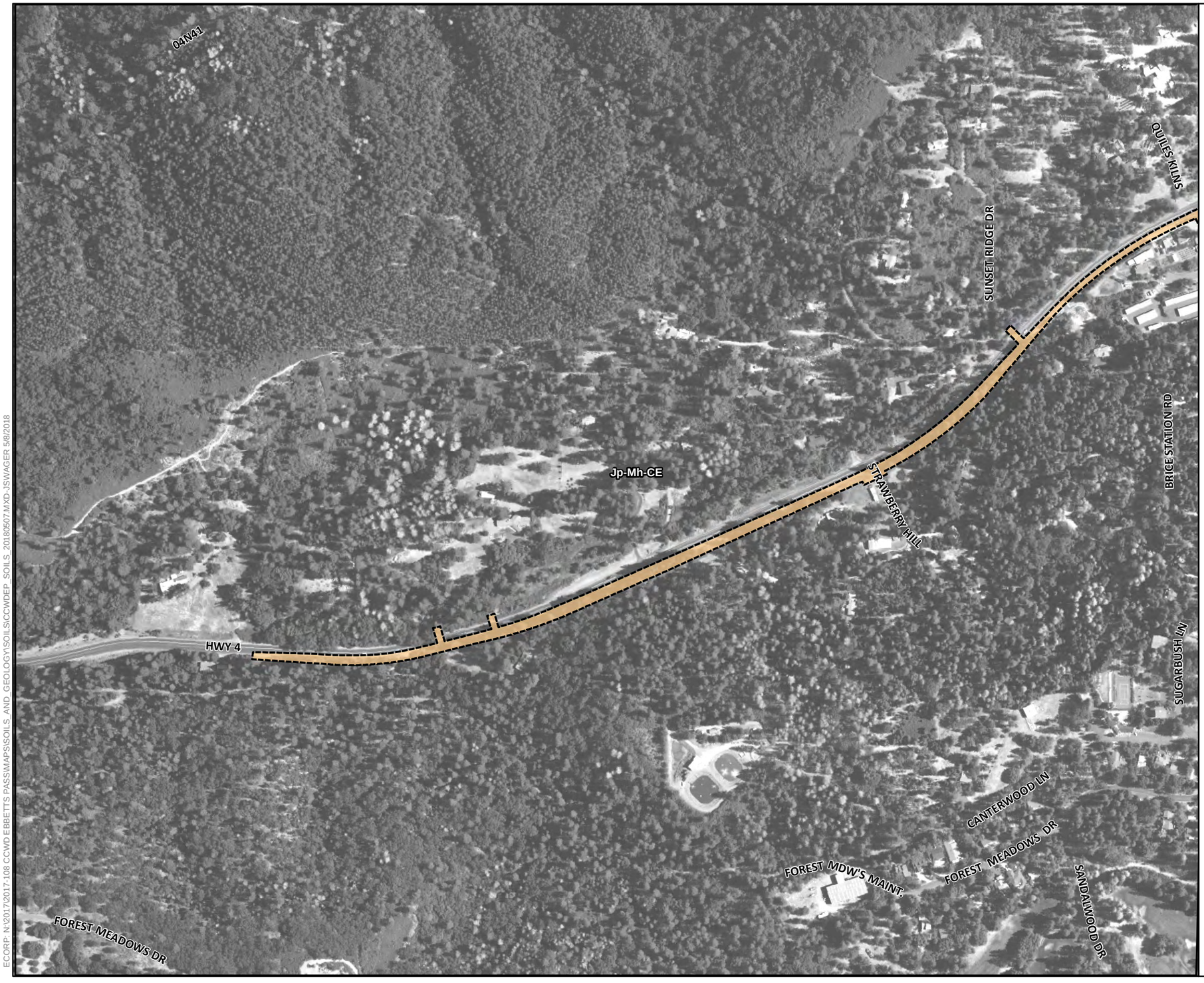
Scale in Feet
0 400

Photo Source: NAIP, 2016
Boundary Source: KASL
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 5/8/2018

ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\SOILS_AND_GEOLOGY\SOILS\CCWDEP_SOILS_20180507.MXD-JSWAGER 5/8/2018

Figure 3.
Natural Resources Conservation Service Soil Types
(Page 5 of 5)



Map Features

- Project Boundary - 25.2 acres

Series Number - Series Name

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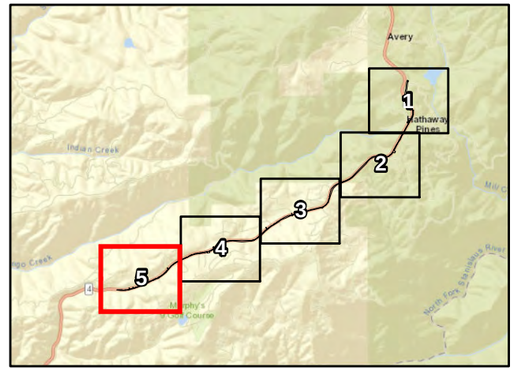

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ECORP: N:\2017\2017-108 CCWD EBBETTS PASS\MAPS\SOILS_AND_GEOLOGY\SOILS\CCWDEP_SOILS_20180507.MXD-JSWAGER 5/8/2018

2017-108 CCWD Ebbetts Pass

Scale in Feet
0 400

Photo Source: NAIP, 2016
Boundary Source: KASL
Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet

Map Date: 5/8/2018

4.4 Wildlife

Wildlife species observed within the Project area during the 2017 site visits included western fence lizard (*Sceloporus occidentalis*), and a variety of common birds such as hairy woodpecker (*Picoides villosus*), western wood-pewee (*Contopus sordidulus*), Steller's jay (*Cyanocitta stelleri*), California scrub-jay (*Aphelocoma californica*), mountain chickadee (*Poecile gambeli*), and American robin (*Turdus migratorius*). Mammals observed on-site included western gray squirrel (*Sciurus griseus*), Douglas' squirrel (*Tamiasciurus douglasii*) and mule deer (*Odocoileus hemionus*).

4.5 Evaluation of Species Identified in the Literature Search

Table 2 lists all of the special-status plant and wildlife species identified in the literature search as potentially occurring within the Project area. Included in this table are the listing status for each species, a brief habitat description, and a determination of the potential to occur in the study area. Following the table is a brief description of each species determined to have potential to occur within the Project area.

Several species and sensitive habitat types came up in the database and literature searches (Attachment A), but are not included in Table 2. These species and habitat types were not included in Table 2 because the species have been formally delisted or are only tracked by the CNDDB and possess no special-status, or because the identified sensitive habitats are not located within the Project area. They are not discussed further in this report.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Plants						
Sanborn's onion *(Allium sanbornii* var. *sanbornii)*	-	-	4.2	Chaparral, cismontane woodland, and lower montane coniferous forests, usually with gravelly, serpentinite soils (853 feet – 4,954 feet).	May - September	Low potential to occur. Marginally suitable habitat present on-site; no documented occurrences in vicinity.
Three-bracted onion *(Allium tribracteatum)*	-	-	1B.2	Volcanic soils in chaparral, lower montane coniferous forests, and upper montane coniferous forests (3,609 feet - 9,843 feet).	April - August	Potential to occur. Suitable habitat present.
Ione manzanita *(Arctostaphylos myrtifolia)*	FT	-	1B.2	Chaparral and cismontane woodlands associated with very acidic, nutrient-poor, coarse soils typical of the Ione Formation (196 feet - 1,903 feet).	November - March	Absent. Outside of elevational range.
Sierra bolandra *(Bolandra californica)*	-	-	4.3	Mesic areas with rocky soils in lower montane coniferous forests, upper montane coniferous forests (3,200 feet – 8,040 feet).	June-July	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Scalloped moonwort *(Botrychium crenulatum)*	-	-	2B.2	Bogs and fens, lower montane coniferous forests, meadows and seeps, freshwater marshes and swamps, and upper montane coniferous forests (4,160 feet - 10,760 feet).	June- September	Absent. Outside of elevational range.
Mingan moonwort *(Botrychium minganense)*	-	-	2B.2	Mesic soils in bogs and fens, lower montane coniferous forests, edges of meadows and seeps, and upper montane coniferous forests (4,770 feet - 7,150 feet).	July - September	Absent. Outside of elevational range.
Western goblin *(Botrychium montanum)*	-	-	2B.1	Mesic soils in lower montane coniferous forests, meadows and seeps, and upper montane coniferous forests (4,805 feet - 7,150 feet).	July - September	Absent. Outside of elevational range.
Pleasant Valley mariposa-lily *(Calochortus clavatus* var. *avius)*	-	-	1B.2	Josephine silt loam and volcanic soils in lower montane coniferous forests (1,000 feet - 5,905 feet).	May- July	Potential to occur. Suitable habitat present.
Davy's sedge *(Carex davyi)*	-	-	1B.3	Subalpine coniferous forests and upper montane coniferous forests (4,920 feet - 10,500 feet).	May - August	Absent. Outside of elevational range.
Fresno ceanothus *(Ceanothus fresnensis)*	-	-	4.3	Cismontane woodland openings and lower montane coniferous forests (2,953 feet – 6,900 feet).	May-July	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.
Red Hills soaproot *(Chlorogalum grandiflorum)*	-	-	1B.2	Serpentinite or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest (804 feet - 5,545 feet).	May - June	Low potential to occur. Marginally suitable habitat present on-site.
Small's southern clarkia *(Clarkia australis)*	-	-	1B.2	Cismontane woodland, lower montane coniferous forest (2,624 feet – 6,808 feet).	May - August	Potential to occur. Suitable habitat present.
Mariposa clarkia *(Clarkia biloba* ssp. *australis)*	-	-	1B.2	Serpentinite soils in chaparral and cismontane woodland (984 feet – 4,790 feet).	April - June	Low potential to occur. Marginally suitable habitat present on-site; no documented occurrences in vicinity.
Sierra clarkia *(Clarkia virgata)*	-	-	4.3	Cismontane woodland and lower montane coniferous forest (1,312 feet – 5,299 feet).	May - August	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Streambank spring beauty *(Claytonia parviflora* ssp. *grandiflora)*	-	-	4.2	Rocky areas within cismontane woodland (820 feet - 3,937 feet).	February - May	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.
Great Basin claytonia *(Claytonia umbellata)*	-	-	2B.3	Subalpine coniferous forest (5,590 feet - 11,485 feet).	May - August	Absent. Outside of elevational range.
Red Hills cryptantha *(Cryptantha spithamaea)*	-	-	1B.3	Serpentinite soils in chaparral and cismontane woodland, sometimes within streambeds or openings (902 feet – 1,509 feet).	April - May	Absent. Outside of elevational range.
Mountain lady's slipper *(Cypripedium montanum)*	-	-	4.2	Broadleaf upland forest, cismontane woodland, lower montane coniferous forest, and North Coast coniferous forest (606 feet – 7,300 feet).	March - August	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.
Yellow-lip pansy monkeyflower *(Diplacus pulchellus)*	-	-	1B.2	Vernally mesic, often disturbed areas with clay soils within lower montane coniferous forest and meadows and seeps (1,968 feet – 6,562 feet).	April - June	Potential to occur. Suitable habitat present.
Jepson's coyote thistle *(Eryngium jepsonii)*	-	-	1B.2	Clay soils in Valley and foothill grassland and vernal pools (10 feet - 984 feet).	April - August	Absent. Outside of elevational range.
Tuolumne button-celery *(Eryngium pinnatisectum)*	-	-	1B.2	Vernal pools and other mesic conditions in cismontane woodland and lower montane coniferous forests (230 feet - 3,002 feet).	May - August	Low potential to occur. Marginally suitable habitat present on-site.
Stanislaus monkeyflower *(Erythranthe marmorata*)	-	-	1B.1	Cismontane woodland and lower montane coniferous forest (328 feet – 2,953 feet).	March - May	Potential to occur. Suitable habitat present.
Tuolumne fawn lily *(Erythronium tuolumnense)*	-	-	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest (1,673 feet – 4,478 feet).	March - June	Potential to occur. Suitable habitat present.
Parry's horkelia *(Horkelia parryi)*	-	-	1B.2	Ione and other soil formations in chaparral and cismontane woodlands (242 feet - 3,510 feet).	April - September	Potential to occur. Suitable habitat present.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Tuolumne iris *(Iris hartwegii* ssp. *columbiana)*	-	-	1B.2	Cismontane woodland and lower montane coniferous forest (1,394 feet – 4,593 feet).	May - June	Potential to occur. Suitable habitat present.
Dubious pea *(Lathyrus sulphureus* var. *argillaceus)*	-	-	3	Cismontane woodland, lower montane coniferous forests, upper montane coniferous forests (490 feet – 3,050 feet).	April - May	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.
Humboldt lily *(Lilium humboldtii* ssp. *humboldtii)*	-	-	4.2	Occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forests (295 feet - 4,199 feet).	May - August	Low potential to occur. Suitable habitat present but no documented occurrences in vicinity.
Stebbins' lomatium (*Lomatium stebbinsii*)	-	-	1B.1	Gravelly, volcanic clay soils in chaparral and lower montane coniferous forest (4,084 feet – 7,792 feet).	March - May	Low potential to occur. Marginally suitable habitat present on-site.
Patterson's navarretia *(Navarretia paradoxiclara)*	-	-	1B.1	Vernally mesic openings with serpentinite soils in meadows and seeps, often in drainages (492 feet - 1,411 feet).	May – July	Absent. Outside of elevational range.
Western waterfan lichen *(Peltigera gowardii)*	-	-	4.2	On rocks in cold water creeks with little or no sediment or disturbance in riparian forests (3,494 feet – 8,596 feet).	N/A	Absent. No suitable habitat present on-site.
Coleman's rein orchid *(Piperia colemanii)*	-	-	4.2	Sandy soils in chaparral and lower montane coniferous forest (3,935 feet – 7,545 feet).	June - August	Low potential to occur. Marginally suitable habitat present on-site; no documented occurrences in vicinity.
Invertebrates						
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	-	-	Elderberry shrubs.	Any season	Absent. No suitable habitat present on-site; outside of elevational range.
Fishes						
Delta smelt (*Hypomesus transpacificus*)	FT	CE	-	Inhabits open waters of bays, tidal rivers, channels, and sloughs; it rarely occurs in water with salinity of more than 10-12 ppt; when not spawning, it tends to concentrate where salt water and freshwater mix (salinity about 2 ppt) and zooplankton populations are dense (USFWS 1996).	Any Season	Absent. No suitable habitat present on-site.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Steelhead (*Oncorhynchus* (=*Salmo*) *mykiss*)	FT	-	SSC	Inhabits both freshwater and marine habitats. Migrates to freshwater streams for spawning. Spawning habitat consists of gravel-bottomed, fast-flowing, well-oxygenated rivers and streams, free of excessive silt.	Any Season	Absent. No suitable habitat present on-site.
Amphibians						
Foothill yellow-legged frog (*Rana boylii*))	-	-	SSC	Uses sunny to partially-shaded shallow streams and creeks with a rocky or cobble substrate. Needs cobble as egg-laying substrate, and larvae (with adaptations for high velocity water) need at least 15 weeks to reach metamorphosis. Occurs from sea level to 6000 feet.	April - September	Absent. No suitable habitat present on-site. Drainages within the Project are relatively narrow, shallow, and ephemeral/intermittent.
California red-legged frog (*Rana draytonii*)	FT	-	SSC	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1-November 1	Absent. No suitable habitat present on-site. Drainages within the Project are relatively narrow, shallow, and ephemeral/intermittent.
Sierra Nevada yellow-legged frog (*Rana sierrae*)	FT	CE	WL	Inhabits lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains. Rarely found further than 1 meter from water. Occurs at high elevations from 984 to over 12,000 feet above mean sea level.	May- August	Absent. No suitable habitat present on-site. Drainages within the Project are relatively narrow, shallow, and ephemeral/intermittent.
Reptiles						
Western pond turtle (*Emys marmorata*)	-	-	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April - October	Absent. No suitable habitat present on-site. Drainages within the Project are relatively narrow, shallow, and ephemeral/intermittent.
Birds						
Western grebe (wintering) *(Aechmophorus occidentalis)*	-	-	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Nests on freshwater lakes and marshes with open water bordered by emergent vegetation.	June-August (breeding)	Absent. No suitable habitat present on-site.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Swainson's hawk (nesting) (*Buteo swainsoni*)	-	CT	BCC	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures.	March-August	Absent. No suitable habitat present on-site.
Osprey (nesting) *(Pandion haliaetus)*	-	-	WL	Nesting habitat requires close proximity to accessible fish, open nest site free of mammalian predators, and extended ice-free season. The nest in large trees, snags, cliffs, transmission/communication towers, artificial nest platforms, channel markers/buoys.	March-September	Low potential to occur. Close proximity to existing development reduces likelihood of nesting within the Project.
Bald eagle (nesting and wintering) (*Haliaeetus leucocephalus)*	DEL	CE	FP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g. rivers, lakes), wetlands, flooded agricultural fields, open grasslands.	February – September (nesting); October-March (wintering)	Absent. No suitable habitat present on-site.
Northern goshawk (nesting) (*Accipiter gentilis*)	-	-	SSC	Nesting occurs in mature to old-growth forests composed primarily of large trees with high canopy closure. In California, nests are built primarily in conifer trees in the Sierra Nevada, Cascade and northwestern coastal Ranges.	April-August	Low potential to occur. Close proximity to existing development reduces likelihood of nesting within the Project.
American peregrine falcon (nesting) *(Falco peregrinus anatum)*	DEL	DEL	BCC, FP	In California, breeds in coastal region, northern California, and Sierra Nevada. Nesting habitat includes cliff ledges and human-made ledges on towers and buildings. Wintering habitat includes areas where there are large concentrations of shorebirds, waterfowl, pigeons or doves.	CA Residents nest in February-June	Absent. No suitable habitat present on-site.
Short-eared owl (nesting) (*Asio flammeus*)	-	-	SSC	Nests in large expanses of prairie, coastal grasslands, heathlands, shrub-steppe, tundra, and agricultural areas.	March-July (breeding); August-March (wintering in Central Valley)	Absent. No suitable habitat present on-site.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Burrowing owl (burrow sites) (*Athene cunicularia*)	-	-	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g. prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.	February-August	Absent. No suitable habitat present on-site.
Flammulated owl (*Otus flammeolus*)	-	-	BCC	In California, breeding range includes Cascades, Sierra Nevada, interior coast ranges, Transverse and Peninsular Ranges. Nests in tree cavities within dry montane conifer or aspen forests, often with oak, dense saplings, or other brushy understory.	May-August	Low potential to occur. Close proximity to existing development reduces likelihood of nesting within the Project.
Great gray owl (nesting) (*Strix nebulosi*)	-	CE	-	Found in the Cascade and Sierra Nevada Ranges south to Fresno County. Nesting occurs in deciduous and coniferous forests adjacent to meadows (in California, at elevations between 750-2250 meters). Nest in broken-topped dead trees, old raptor nests, mistletoe brooms, or human-made platforms.	April-July	Absent. No suitable habitat present on-site.
California spotted owl (*Strix occidentalis occidentalis*)	-	-	BCC, SSC	Found in the southern Cascade Range and northern Sierra Nevada from Pit River, Shasta Co. south to Tehachapi Mountains, Kern Co, in the coastal ranges from Monterey Co. to Santa Barbara Co., in Transverse and Peninsular Ranges south to northern Baja California. At lower elevations, they breed in hardwood forests and coniferous forests at higher elevations. They use forests with greater complexity and structure.	March-September (breeding)	Low potential to occur. Close proximity to existing development reduces likelihood of nesting within the Project.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Western snowy plover (nesting) *(Charadrius nivosus nivosus)*	FT	-	BCC, SSC	Nests on the ground, on open sandy coastal beaches, barrier islands, barrens shores of inland saline lakes, on river bars, and man-made ponds such as wastewater ponds, dredge spoils, and salt evaporation ponds.	March-September	Absent. No suitable habitat present on-site.
Costa's hummingbird (*Calypte costae*)	-	-	BCC	In California, breeds in coastal scrub and chaparral communities from Santa Barbara Co. south into Baja California; from Mexico north into Mojave desert scrub of Eastern Sierra Nevada.	February-June	Absent. No suitable habitat present on-site.
Rufous hummingbird (nesting) *(Selasphorus rufus)*	-	-	BCC	Breeds in extreme northwestern California north into British Columbia and Alaska. Winters in coastal Southern California south into Mexico. Nesting habitat includes secondary succession communities and openings, mature forests, parks and residential area. Does not nest in Sierra Nevada, but migrates through foothills during spring and from lower conifer to alpine zones during fall (Beedy, Pandalfino and Hansen 2013).	April-July	Potential to occur.
Calliope hummingbird *(Selasphorus calliope)*			BCC	In California, breeds in Cascade-Sierra Nevada region (1200-3400 meters); winters in Mexico; nesting habitat includes shrub-sapling and late shrub-sapling seral stage aspen thickets, often near streams, and open montane forests.	April-August	Potential to occur.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Lewis' woodpecker (nesting) (*Melanerpes lewis*)	-	-	BCC	In California, breeds in Siskiyou and Modoc Counties, Warmer Mountains, inner coast ranges from Tehama to San Luis Obispo Counties, San Bernardino Mountains, and Big Pine Mountain (Inyo Co.); nesting habitat includes open ponderosa pine forest, open riparian woodland, logged/burned forest, and oak woodlands. Does not breed on the west side of Sierran crest (Beedy, Pandalfino and Hansen 2013).	April-September (breeding); September-March (winter in Central Valley).	Potential to occur.
White-headed woodpecker *(Picoides albolarvatus)*	-	-	BCC	Requires montane coniferous forests dominated by pines. Found year-round in Ponderosa pine woodland, black oak woodland, mixed coniferous forest, Jeffrey pine woodland, and red fir forests. Uses snags for nesting.	April-August (breeding)	Potential to occur.
Williamson's sapsucker (*Sphyrapicus thyroideus*)	-	-	BCC	In California, breeds in the Cascade-Sierra Nevada region; with disjunct breeding populations in San Gabriel, San Bernardino, and San Jacinto Mountains; Siskiyou, Trinity and Warner Mountains; East Warner Mountains, Sweetwater and Carson Range. Breeding occurs in middle to high elevation conifer and mixed conifer-deciduous forests. Nesting habitat cavities excavated in western larch, Douglas fir, ponderosa pine, montane spruce, and quaking aspen.	May-July	Potential to occur.
Olive-sided flycatcher *(Contopus cooperi)*	-	-	SSC, BCC	Nests in montane and northern coniferous forests, in forest openings, forest edges, semi open forest stands. In California, nests in coastal forests, Cascade and Sierra Nevada region. Winters in Central to South America.	May-August	Potential to occur.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Willow flycatcher (nesting) *(Empidonax traillii)*	-	CE	BCC	In California, breeding range includes Cascade-Sierra Nevada region (*brewsteri* subspecies); *extimus* subspecies found in southern California; nesting habitat includes moist, shrubby riparian willow thickets, often with standing or running water. Winters in Central and South America.	May-June	Absent. No suitable habitat present on-site.
Loggerhead shrike (*Lanius ludovicianus*)	-	-	BCC, SSC	Found throughout California in open county with short vegetation, pastures, old orchards, grasslands, agricultural areas, open woodlands. Not found in heavily forested habitats.	March-July	Absent. No suitable habitat present on-site.
Yellow-billed magpie (nesting) (*Pica nuttallii*)	-	-	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County.; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April-June	Absent. No suitable habitat present on-site.
Oak titmouse (*Baeolophus inornatus*)			BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	March-July	Potential to occur.
Green-tailed towhee *(Pipilo chlorurus)*	-	-	BCC	Breeds at middle to high elevation between 750 and 3,700 meters above sea level. Nesting habitat includes low brush cover, dry shrub-steppe, post disturbance shrubby second growth vegetation.	May-August	Absent. No suitable habitat present on-site.
Rufous-crowned sparrow *(Aimophila ruficeps)*	-	-	BCC	Breeds in moderate to steep, dry, rocky, south- or west-facing slopes vegetated with scattered scrub cover interspersed with patches of grasses and forbs or rock outcrops in grassy shrublands, open woodlands moderate to steep rocky hillsides and canyons (Collins 1999).	March-September	Absent. No suitable habitat present on-site.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Fox sparrow (wintering) (*Passerella iliaca*)	-	-	BCC	"Large-billed" fox sparrow, *megarhyncha* group, breeds in SW Oregon south the central Northern California (Del Norte/Siskiyou Cos.) and Sierra Nevada south to Fresno/Inyo Cos. Several additional subspecies winter throughout California. Wintering habitat includes riparian with thick cover and underbrush, chaparral with thick, tall vegetation.	May-July (breeding), September-April (wintering)	Potential to occur.
Black-chinned sparrow (nesting) (*Spizella atrogularis*)	-	-	BCC	In California, breeds in inner Coast Ranges, Transverse Range, and Peninsular Range, west slope of Sierra Nevada from Kern Co. to Mariposa Co. and mountains of southeastern California. Nesting habitat includes moderately dense tall brush on rugged mountain slopes with rocky outcrops and scattered large trees. Prefers young stands with openings.	April-August	Absent. No suitable habitat present on-site.
Tricolored blackbird (nesting colony) (*Agelaius tricolor*)	-	-	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta Cos south to San Bernardino, Riverside and San Diego Counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen Counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March-August	Absent. No suitable habitat present on-site.

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			
Mammals						
Western red bat (*Lasiurus blossevillii*)	-	-	SSC	Roosts in foliage of trees or shrubs; Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2015).	April-September	Potential to occur.
Spotted bat *(Euderma maculatum)*	-	-	SSC	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Roosts primarily in cracks and crevices in cliffs, but sometimes found in caves or buildings near cliffs.	April-September	Absent. No suitable habitat present on-site.
Townsend's big-eared bat *(Corynorhinus townsendii)*	-	-	SSC	Caves, mines, buildings, rock crevices, trees.	April-September	Low potential to occur. Caves and mines absent from the Project site.
Pallid bat (*Antrozous pallidus*)	-	-	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g. basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG 2005).	April-September	Potential to occur.
Western mastiff bat (*Eumops perotis californicus*)	-	-	SSC	Primarily a cliff-dwelling species, found in similar crevices in large boulders and buildings (WBWG 2015).	April-September	Absent. No suitable habitat present on-site.
California wolverine (*Gulo gulo*)	FC	CT	FP	Found near a water source and occupies a wide variety of high elevation habitats. Historically occurred in the north coast mountains and the Sierra Nevada.	March - May	Absent. No suitable habitat present on-site.

Status Codes[1]:

FT ESA listed, Threatened.
FC Candidate for ESA listing as Threatened or Endangered.
FP CDFW Fully Protected
WL CDFW Watch List

Table 2. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status[1]			Habitat Description	Survey Period	Potential to Occur On-Site
	ESA	CESA/ NPPA	Other			

CE CESA or NPPA listed, Endangered.
CT CESA or NPPA listed, Threatened.
CR CESA or NPPA listed, Rare.
SSC CDFW Species of Special Concern
BCC USFWS Bird of Conservation Concern
1B CRPR /Rare or Endangered in California and elsewhere.
2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 CRPR /Plants About Which More Information is Needed - A Review List.
4 CRPR /Plants of Limited Distribution - A Watch List.
0.1 Threat Rank/Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2 Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3 Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
DEL Formally Delisted (delisted ESA species are monitored for 5 years).

4.5.1 Plants

Thirty-one special-status plant species were identified as having the potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and site reconnaissance, 10 species were determined to be absent from the Project area due to the lack of suitable habitat or because the Project area is outside of the species elevational range. No further discussion of these species is provided in this assessment. Brief descriptions of the remaining 21 species that have the potential to occur within the Project area are presented below. In addition, one special-status plant species not present in the literature review, small-flowered monkeyflower (*Erythranthe inconspicua*), was observed adjacent to the Project alignment, and is also described below.

Sanborn's Onion

Sanborn's onion (*Allium sanbornii* var. *sanbornii*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a bulbiferous, herbaceous perennial that occurs in chaparral, cismontane woodland, and lower montane coniferous forest, usually on gravelly serpentinite soils (CNPS 2017). Sanborn's onion blooms from May through September and is known to occur at elevations ranging from 853 to 4,954 feet above mean sea level (MSL) (CNPS 2107). The current range of this species in California includes Butte, Calaveras, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne, and Yuba counties (CNPS 2017).

While there are no occurrences of Sanborn's onion within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide marginally suitable habitat for this species. Sanborn's onion was not observed during the special-status plant surveys conducted by ECORP in 2017.

Three-Bracted Onion

Three-bracted onion (*Allium tribracteatum*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a bulbiferous, herbaceous perennial that occurs on volcanic soils in chaparral, lower montane coniferous forest and upper montane coniferous forest (CNPS 2017). Three-bracted onion blooms from April through August and is known to occur at

elevations ranging from 3,609 to 9,843 feet above MSL (CNPS 2107). Three-bracted onion is endemic to California; the current range of this species includes Alpine, Amador, Calaveras, El Dorado, and Tuolumne counties (CNPS 2017).

There are six CNDDB documented occurrences of three-bracted onion within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Three-bracted onion was not observed during the special-status plant surveys conducted by ECORP in 2017.

Sierra Bolandra

Sierra bolandra (*Bolandra californica*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous perennial that occurs on mesic, rocky soils in lower montane coniferous forest and upper montane coniferous forest (CNPS 2017). Sierra bolandra blooms from June through July and is known to occur at elevations ranging from 3,195 to 8,040 feet above MSL (CNPS 2107). Sierra bolandra is endemic to California; the current range of this species includes Alpine, Amador, Calaveras, El Dorado, Mariposa, Stanislaus and Tuolumne counties (CNPS 2017).

While there are no documented occurrences of Sierra bolandra within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Sierra bolandra was not observed during the special-status plant surveys conducted by ECORP in 2017.

Pleasant Valley Mariposa-Lily

Pleasant Valley mariposa-lily (*Calochortus clavatus* var. *avius*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a bulbiferous, herbaceous perennial that occurs on Josephine silt loam and volcanic soils in lower montane coniferous forest (CNPS 2017). Pleasant Valley mariposa-lily blooms from May through July and is known to occur at elevations ranging from 1,000 to 5,905 feet above MSL (CNPS 2017). Pleasant Valley mariposa-lily is endemic to California; the current range of this species includes Amador, Calaveras, El Dorado, Mariposa, and Placer counties (CNPS 2017).

There are two CNDDB documented occurrences of Pleasant Valley mariposa-lily within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Pleasant Valley mariposa-lily was not observed during the special-status plant surveys conducted by ECORP in 2017.

Fresno Ceanothus

Fresno ceanothus (*Ceanothus fresnensis*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an evergreen, perennial shrub that occurs in cismontane woodland and lower montane coniferous forest (CNPS 2017). Fresno ceanothus blooms from May through July and is known to occur at elevations ranging from 2,953 to 6,900 feet above MSL (CNPS 2107). Fresno ceanothus is endemic to California; the current range of this species includes Calaveras, El Dorado, Fresno, Madera, Mariposa, Placer, Tulare, and Tuolumne counties (CNPS 2017).

While there are no documented occurrences of Fresno ceanothus within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Fresno ceanothus was not observed during the special-status plant surveys conducted by ECORP in 2017.

Red Hills Soaproot

Red Hills soaproot (*Chlorogalum grandiflorum*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a bulbiferous, perennial herb that occurs on serpentinite, gabbroic, and other soils in chaparral, cismontane woodland and lower montane coniferous forest (CNPS 2017). Red Hills soaproot blooms from May through June and is known to occur at elevations ranging from 804 to 5,545 feet above MSL (CNPS 2107). Red Hills soaproot is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Placer, and Tuolumne counties (CNPS 2017).

There are four CNDDB documented occurrences of Red Hills soaproot within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide marginally suitable habitat for this species. Red Hills soaproot was not observed during the special-status plant surveys conducted by ECORP in 2017.

Small's Southern Clarkia

Small's southern clarkia (*Clarkia australis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in cismontane woodland and lower montane coniferous forest (CNPS 2017). Small's southern clarkia blooms from May through August and is known to occur at elevations ranging from 2,624 to 6,808 feet above MSL (CNPS 2017). Small's southern clarkia is endemic to California; the current range of this species includes Calaveras, Madera, Mariposa, and Tuolumne counties (CNPS 2017).

There are 21 CNDDB documented occurrences of Small's southern clarkia within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Small's southern clarkia was not observed during the special-status plant surveys conducted by ECORP in 2017.

Mariposa Clarkia

Mariposa clarkia (*Clarkia biloba* ssp. *australis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 plant. This species is an herbaceous annual that occurs on serpentinite soils in chaparral and cismontane woodlands (CNPS 2017). Mariposa clarkia blooms from April through July and is known to occur at elevations ranging from 984 to 4,790 feet above MSL. Mariposa clarkia is endemic to California; the current range of this species includes Mariposa and Tuolumne counties (CNPS 2017).

While there are no documented occurrences of Mariposa clarkia within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide marginally suitable habitat for this species. Mariposa clarkia was not observed during the special-status plant surveys conducted by ECORP in 2017.

Sierra Clarkia

Sierra clarkia (*Clarkia virgata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 plant. This species is an herbaceous annual that occurs in cismontane woodlands and lower montane coniferous forest (CNPS 2017). Sierra clarkia blooms from May through August and is known to occur at elevations ranging from 1,312 to 5,299 feet above MSL. Sierra clarkia is endemic to California; the current range of this species includes Amador, Calaveras, El Dorado, Mariposa, Plumas, and Tuolumne counties (CNPS 2017).

While there are no occurrences of Sierra clarkia within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Sierra clarkia was not observed during the special-status plant surveys conducted by ECORP in 2017.

Streambank Spring Beauty

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in rocky areas within cismontane woodlands (CNPS 2017). Streambank spring beauty blooms from February through May and is known to occur at elevations ranging from 820 to 3,937 feet above MSL (CNPS 2017). Streambank spring beauty is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Placer, Tulare, and Tuolumne counties (CNPS 2017).

While there are no documented occurrences of streambank spring beauty within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Streambank spring beauty was not observed during the special-status plant surveys conducted by ECORP in 2017.

Mountain Lady's Slipper

Mountain lady's slipper (*Cypripedium montanum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial, rhizomatous herb that occurs in broadleafed upland forest, cismontane woodland, lower montane coniferous forest, and North Coast coniferous forest (CNPS 2017). Mountain lady's slipper blooms between March and August and is known to occur at elevations ranging from 606 to 7,300 feet above MSL (CNPS 2017). The current range of this species in California includes Del Norte, Glen, Humboldt, Madera, Mendocino, Modoc, Mariposa, Plumas, Shasta, Sierra, Siskiyou, San Mateo, Sonoma, Tehama, Trinity, and Tuolumne counties (CNPS 2017). It is presumed extirpated from Santa Cruz County (CNPS 2017).

While there are no documented occurrences of mountain lady's slipper within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Mountain lady's slipper was not observed during the special-status plant surveys conducted by ECORP in 2017.

Yellow-Lip Pansy Monkeyflower

Yellow-lip pansy monkeyflower (*Diplacus pulchellus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in vernally mesic areas with clay soils within lower montane coniferous forests and meadows and seeps, often in disturbed sites (CNPS 2017). Yellow-lip pansy monkeyflower blooms from April through June and is known to occur at elevations ranging from 1,968 to 6,562 feet above MSL (CNPS 2017). Yellow-lip pansy monkeyflower is endemic to California; its current range includes Calaveras, Mariposa, and Tuolumne counties (CNPS 2017).

There are 34 CNDDB documented occurrences of yellow-lip pansy monkeyflower within ten miles of the Project area (CDFW 2017). This species was observed at two locations just outside the Project alignment; approximately 90 individuals were observed adjacent to the Project alignment between Northwood Drive and Forest Meadows Drive, and approximately 70 individuals were observed adjacent to the Project alignment north of Hunter Dam Road (Figure 4. *Special-Status Plant Locations*). These observations roughly correspond with two previously documented CNDDB occurrences (CNDDB Occurrence #2 and Occurrence #65, respectively; CDFW 2017). The annual forb meadows, annual grasslands, ponderosa pine forests, and California black oak forests within the Project area provide suitable habitat for this species. Yellow-lip pansy monkey flower was not observed within the Project area during the special-status plant surveys conducted by ECORP in 2017.

Tuolumne Button-Celery

Tuolumne button-celery (*Eryngium pinnatisectum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in mesic areas and vernal pools within cismontane woodland and lower montane coniferous forests (CNPS 2017). Tuolumne button-celery blooms from May through August and is known to occur at elevations ranging from 230 to 3,002 feet above MSL (CNPS 2017). Tuolumne button-celery is endemic to California; its current range includes Amador, Calaveras, Sacramento, Sonoma, and Tuolumne counties (CNPS 2017).

There are two CNDDB documented occurrences of Tuolumne button-celery within ten miles of the Project area (CDFW 2017). The seeps, seasonal wetland swale, ditches, ponderosa pine forests, California black oak forests, and annual forb meadows within the Project area provide marginally suitable habitat for this species. Tuolumne button-celery was not observed during the special-status plant surveys conducted by ECORP in 2017.

Small-Flowered Monkeyflower

Small-flowered monkeyflower is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous annual that occurs in mesic sites within chaparral, cismontane woodland and lower montane coniferous forest (CNPS 2017). Small-flowered monkeyflower blooms from May through June and is known to occur at elevations ranging from 900 to 2,493 feet above MSL (CNPS 2017). Small-flowered monkeyflower is endemic to California; its current range includes Amador, Butte, Calaveras, Fresno, Mariposa, and Tuolumne counties (CNPS 2017).

While there are no documented occurrences of small-flowered monkeyflower within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Small-flowered monkeyflower was not identified during the literature review as having potential to occur within the Project area. However, approximately 20 individuals of this species were observed adjacent to the Project alignment between Northwood Drive and Forest Meadows Drive. Small-flowered monkeyflower was not observed within the Project area during the special-status plant surveys conducted by ECORP in 2017.

Stanislaus Monkeyflower

Stanislaus monkeyflower (*Erythranthe marmorata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in cismontane woodland and lower montane coniferous forests (CNPS 2017). Stanislaus monkeyflower blooms from March through May and is known to occur at elevations ranging from 328 to 2,953 feet above MSL (CNPS 2017). Stanislaus monkeyflower is endemic to California; its current range includes Amador, Calaveras, Fresno, Stanislaus, and Tuolumne counties (CNPS 2017).

There are nine occurrences of Stanislaus monkeyflower within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Stanislaus monkeyflower was not observed during the special-status plant surveys conducted by ECORP in 2017.

Tuolumne Fawn Lily

Tuolumne fawn lily (*Erythronium tuolumnense*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial bulbiferous herb that occurs in broadleaf upland forest, chaparral, cismontane woodland, and lower montane coniferous forests (CNPS 2017). Tuolumne fawn lily blooms from March through June and is known to occur at elevations ranging from 1,673 to 4,478 feet above MSL (CNPS 2017). Tuolumne fawn lily is endemic to California; its current range includes Tuolumne County (CNPS 2017).

There are 53 CNDDB documented occurrences of Tuolumne fawn lily within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Tuolumne fawn lily was not observed during the special-status plant surveys conducted by ECORP in 2017.

Parry's Horkelia

Parry's horkelia (*Horkelia parryi)* is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in chaparral and cismontane woodlands, and is associated with soils typical of the Ione Formation (CNPS 2017). Parry's horkelia blooms from April through September and is known to occur at elevations ranging from 242 to 3,510 feet above MSL (CNPS 2017). Parry's horkelia is endemic to California; the current range for this species includes Amador, Calaveras, El Dorado, Mariposa, and Tuolumne counties (CNPS 2017).

Figure 4.
Rare Plant Observations
(Page 1 of 5)

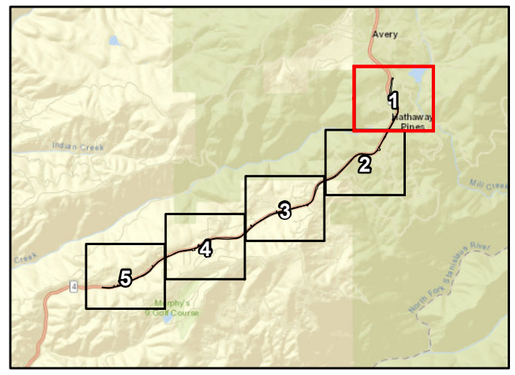
Map Features

Project Boundary - 25.2 acres

Rare Plant Sighting

yellow-lip pansy monkeyflower
(*Diplacus pulchellus*)

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 400

Photo Source: NAIP, 2016

Map Date: 5/8/2018

Figure 4.
Rare Plant Observations
(Page 2 of 5)

Map Features

Project Boundary - 25.2 acres

San Domingo Creek

BLUE JAY WY

SILVER SADDLE CT

STAMPEDE CANYON DR

CAMPFIRE CT

HWY 4

CRESTA VISTA DR

OXBOW CT

SILVER SADDLE DR

BRANDING IRON CT

HORSESHOE DR

LOOKOUT CT

INSPIRATION DR

WAGON WHEEL CT

ARROWHEAD CT

WRANGLER RD

04N94

04N94A

COYOTE CANYON RD

CRESCENT COVE

UTICA DITCH RD

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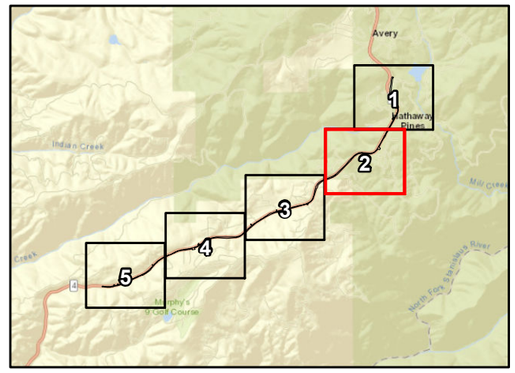

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2017-108 CCWD Ebbetts Pass

Scale in Feet
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Photo Source: NAIP, 2016

Map Date: 5/8/2018

Figure 4.
Rare Plant Observations
(Page 3 of 5)

Map Features

Project Boundary - 25.2 acres

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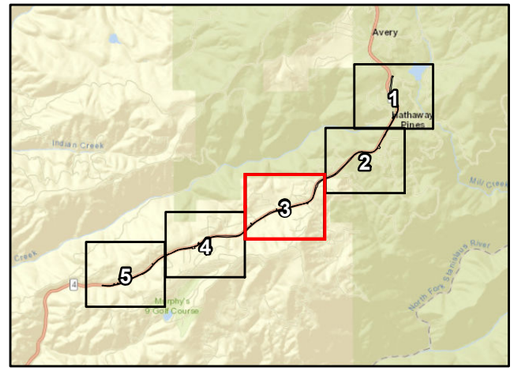

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2017-108 CCWD Ebbetts Pass

Scale in Feet
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Photo Source: NAIP, 2016

Map Date: 5/8/2018

Location: N:\2017\2017-108 CCWD Ebbetts Pass\MAPS\SSS_Survey_and_Mapping\Rare_Plants\CCWDEP_RarePlants_20180507.mxd (MRG/JDS) JSwager 5/8/2018

Figure 4.
Rare Plant Observations
(Page 4 of 5)

Map Features

Project Boundary - 25.2 acres

Rare Plant Sighting

small-flowered monkeyflower (*Mimulus inconspicous*)

yellow-lip pansy monkeyflower (*Diplacus pulchellus*)

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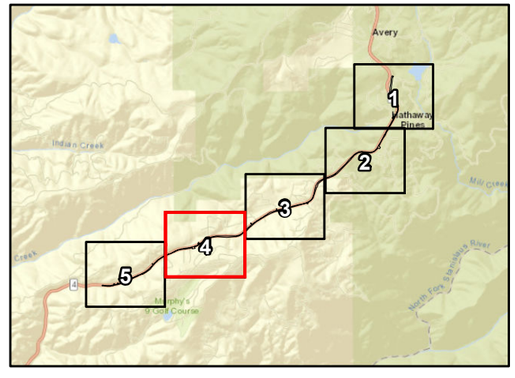

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2017-108 CCWD Ebbetts Pass

Scale in Feet
0 400

Photo Source: NAIP, 2016

Map Date: 5/8/2018

Figure 4.
Rare Plant Observations
(Page 5 of 5)

Map Features

Project Boundary - 25.2 acres

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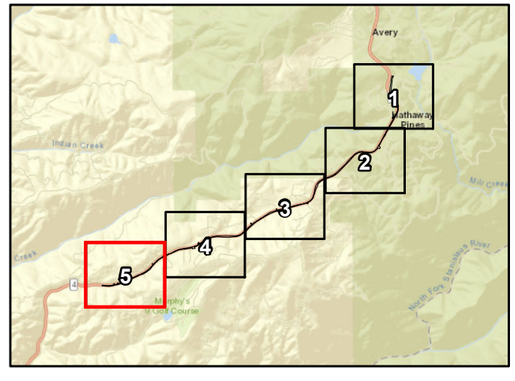

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2017-108 CCWD Ebbetts Pass

Scale in Feet
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Photo Source: NAIP, 2016

Map Date: 5/8/2018

Location: N:\2017\2017-108 CCWD Ebbetts Pass\MAPS\SSS_Survey_and_Mapping\Rare_Plants\CCWDEP_RarePlants_20180507.mxd (MRG/JDS) JSwager 5/8/2018

There are 31 CNDDB documented occurrences of Parry's horkelia within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide marginally suitable habitat for this species. Parry's horkelia was not observed during the special-status plant surveys conducted by ECORP in 2017.

Tuolumne Iris

Tuolumne iris (*Iris hartwegii* ssp. *columbiana)* is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial rhizomatous herb that occurs in cismontane woodlands and lower montane coniferous forest (CNPS 2017). Tuolumne iris blooms from May through June and is known to occur at elevations ranging from 1,394 to 4,593 feet above MSL (CNPS 2017). Tuolumne iris is endemic to California; the current range for this species includes Calaveras and Tuolumne counties (CNPS 2017).

There are seven CNDDB documented occurrences of Tuolumne iris within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Tuolumne iris was not observed during the special-status plant surveys conducted by ECORP in 2017.

Dubious Pea

Dubious pea (*Lathyrus sulphureus* var. *argillaceus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3 species. This species is a perennial herb that occurs in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest (CNPS 2017). Dubious pea blooms from April through May and is known to occur at elevations ranging from 490 to 3,050 feet above MSL (CNPS 2017). Dubious pea is endemic to California; the current range of this species includes Calaveras, El Dorado, Nevada, Placer, Shasta, and Tehama counties (CNPS 2017).

While there are no documented occurrences of Dubious pea within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Dubious pea was not observed during the special-status plant surveys conducted by ECORP in 2017.

Humboldt Lily

Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (CNPS 2017). Humboldt lily blooms from May through August and is known to occur at elevations ranging from 295 to 4,199 feet above MSL (CNPS 2017). Humboldt lily is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Mariposa, Nevada, Placer, Tehama, Tuolumne, and Yuba counties (CNPS 2017).

While there are no documented occurrences of Humboldt lily within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. Humboldt lily was not observed during the special-status plant surveys conducted by ECORP in 2017.

Stebbins' Lomatium

Stebbins' lomatium (*Lomatium stebbinsii)* is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is a perennial herb that occurs in gravelly, volcanic clay soils within chaparral and lower montane coniferous forest (CNPS 2017). Stebbins' lomatium blooms from March through May and is known to occur at elevations ranging from 4,084 to 7,792 feet above MSL (CNPS 2017). Stebbins' lomatium is endemic to California; the current range for this species includes Calaveras and Tuolumne counties (CNPS 2017).

There are 16 CNDDB documented occurrences of Stebbins' lomatium within ten miles of the Project area (CDFW 2017). The ponderosa pine forests and California black oak forests within the Project area provide marginally suitable habitat for this species. This species was not observed during the special-status plant surveys conducted by ECORP in 2017.

Coleman's Rein Orchid

Coleman's rein orchid (*Piperia colemanii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a perennial herb that occurs in chaparral and lower montane coniferous forest, often on sandy soils (CNPS 2017). Coleman's rein orchid blooms from June through August and is known to occur at elevations ranging from 3,935 to 7,545 feet above MSL (CNPS 2017). Coleman's rein orchid is endemic to California; the current range of this species includes Butte, Calaveras, Colusa, El Dorado, Fresno, Madera, Mariposa, Placer, Plumas, Shasta, Siskiyou, Tehama, Tulare, and Tuolumne counties (CNPS 2017).

While there are no documented occurrences of Coleman's rein orchid within ten miles of the Project area (CDFW 2017), the ponderosa pine forests and California black oak forests within the Project area provide suitable habitat for this species. This species was not observed during the special-status plant surveys conducted by ECORP in 2017.

4.5.2 Invertebrates

One special-status invertebrate species, Valley elderberry beetle (*Desmocerus californicus dimorphus*), was identified as having potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and after the reconnaissance visit, the species was determined to be absent from the Project area due to lack of suitable habitat as elderberry shrubs were absent from the Project site. No further discussion of this species is provided in this assessment.

4.5.3 Fish

Two special-status fish species, Delta smelt (*Hypomesus transpacificus*) and steelhead (*Oncorhynchus* (=*Salmo*) *mykiss*), were identified as having potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and after the reconnaissance visit, both species were determined to be absent from the Project area due to the lack of suitable habitat. No further discussion of these species is provided in this assessment.

4.5.4 Amphibians

Three special-status amphibians, foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana draytonii*) and Sierra Nevada yellow-legged frog (*Rana sierrae*), were identified as having

potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and after the reconnaissance visit, all amphibian species were determined to be absent from the Project area due to the lack of suitable habitat. No further discussion of these species is provided in this assessment.

4.5.5 Reptiles

One special-status reptile species, Western pond turtle (*Emys marmorata*), was identified as having potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and after the reconnaissance visit, the species was determined to be absent from the Project area due to the lack of suitable habitat. No further discussion of this species is provided in this assessment.

4.5.6 Birds

Twenty-eight special-status bird species were identified as having potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and after the reconnaissance visit, 16 species were determined to be absent from the Project area due to the lack of suitable habitat. No further discussion of these species is provided in this assessment. Brief descriptions of the remaining 12 species that have the potential to occur within the Project area are presented below.

4.6.6.1 Osprey

Osprey (*Pandion haliaetus*) is not listed pursuant to either the California or federal ESAs; however, the species is fully protected pursuant to § 3511 of the California Fish and Game Code. It is a U.S. Forest Service sensitive species and is considered a CDFW watch list species. This species typically breeds in northern California from Cascade Ranges south to Lake Tahoe and along the coast to Marin County (Zeiner et al. 1990) and is an uncommon breeder along the southern Colorado River and other central and southern California waterbodies. Breeding occurs from March to September. Nesting occurs in tall structures including trees, cliffs, large snags or human made structures usually within 1,312 feet to 1 mile of large, fish-producing waters (Zeiner et al. 1990).

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). While the ponderosa pine forest present within the Project area may provide potential nesting habitat, the Project area is not adjacent to a large waterbody generally associated with osprey nests. Osprey are known to nest around New Melones Lake whose northern extent occurs approximately three miles to the south of the Project area. Osprey has low potential to occur within the Project area.

4.6.6.2 Northern Goshawk

The Northern goshawk (*Accipiter gentilis*) is not listed pursuant to either the California or federal Endangered Species Acts. However, it is a CDFW species of special concern, BLM sensitive species and U.S. Forest Service sensitive species. In the western United States, northern goshawks breed in mountainous habitat from northern Washington south through Oregon and into California, including the Siskiyou Mountains to the north Coast Range, from the Warner Mountains south through the Cascade and Sierra Nevada Mountains to the Greenhorn Mountains, White Mountains, Kern and Ventura Counties (Squires and Reynolds 1997). Breeding habitat in the West includes Douglas fir,

various pine, and aspen forests (Squires and Reynolds 1997). Breeding occurs during March through July, with a peak from April through August.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. Northern goshawk has low potential to occur within the Project area.

4.6.6.3 Flammulated Owl

The flammulated owl (*Otus flammeolus*) is a USFWS bird of conservation concern, but not listed pursuant to the state or federal endangered species acts. This small owl (to 17 cm in height) is a resident of coniferous forests at elevations from 6,000 to 10,000 feet MSL, mainly in ponderosa pine and Jeffrey pine (*P. jeffreyi*) forests of low- to moderate-canopy density (McCallum 1994). Flammulated owls are secondary cavity nesters, using woodpecker holes, or occasionally natural cavities, in ponderosa pine, Douglas-fir (*Pseudotsuga menziesii*), aspen (*Populus tremuloides*), oak (*Quercus* sp.), or snags (Linkhart and McCallum 2013). Wintering occurs in Mexico and Central America, migration north occurs in April. Breeding occurs in May to August.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. Flammulated owl has low potential to occur within the Project area.

4.6.6.4 California Spotted Owl

The California spotted owl (*Strix occidentalis occidentalis*) is a CDFW species of special concern, a USFWS bird of conservation concern, a BLM sensitive species, and a U. S. Forest Service sensitive species. This is a subspecies of spotted owl, which occurs primarily on the west slope of the Sierra Nevada range. A year-round resident in most of its range, breeding range occurs from 1,000 feet to almost 8,000 feet, with some birds migrating to lower elevations in the winter (Verner et al. 1992). This is an owl primarily of dense Ponderosa pine and mixed coniferous forest, with old-growth trees, snags, a complex canopy, and abundant woody debris (Shuford and Gardali 2008). Wintering may occur in blue oak (*Q. douglasii*) gray pine (*P. sabiniana*) foothill riparian forests. California spotted owls do not build their own nest, but rather use naturally-occurring platforms, cliffs, and abandoned common raven (*Corvus corax*), raptor, or squirrel nests. Nesting occurs during March through September.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. California spotted owl has low potential to occur within the Project area.

4.6.6.5 Rufous Hummingbird

The rufous hummingbird (*Selasphorus rufus*) is not listed and protected under either Federal or California ESA's; however, it is considered a species of conservation concern according to the U.S. Fish and Wildlife Service. Rufous hummingbirds breed from coastal southeastern Alaska south British Columbia and Alberta, Canada, Washington, Idaho, Montana, and Oregon (Healy and Calder 2006).

Rufous hummingbirds do not nest in California, but are common in the foothills and lower conifer zones of the west slope of the Sierra Nevada during migration (Beedy et al. 2013).

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The annual forb meadow, annual grassland and understory of the ponderosa pine forest present within the Project area may provide potential foraging habitat for the species. Rufous hummingbird has potential to occur within the Project area.

4.6.6.6 Calliope Hummingbird

The calliope hummingbird (*Selasphorus calliope*) is not listed and protected under either Federal or California ESA's; however, it is considered a species of conservation concern according to the U.S. Fish and Wildlife Service. Calliope hummingbirds breed in North America west of the Rockies from British Columbia and Alberta, Canada south through Mexico. In Northern California, the breeding range includes the interior portions of the Klamath Mountains and the inner Coast Range to northeastern Mendocino and northwestern Glenn Counties, south through the Sierra-Cascade axis to southern Tulare County, and in the Warner Mountains (Small 1994). Nesting habitat includes shrub-sapling seral stage of reforestation, in aspen thickets along streams, and open montane forests (Calder and Calder 1994). Nesting occurs during May through August. Calliope hummingbirds winter from Sinaloa and Durango, Mexico south to Oaxaca (Calder and Calder 1994).

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The annual forb meadow, annual grassland and understory of the ponderosa pine forest present within the Project area may provide potential foraging habitat for the species. Calliope hummingbird has potential to occur within the Project area.

4.6.6.7 Lewis' Woodpecker

The Lewis's woodpecker (*Melanerpes lewis*) is not listed pursuant to either CESA or FESA, but is designated as a bird of conservation concern by the USFWS. Lewis's woodpeckers nest in existing tree cavities, rarely newly excavated, within ponderosa pine forests, open riparian woodland dominated by cottonwood, logged or burned pine forests, oak woodlands, orchards, pinyon pine-juniper woodland, a variety of pine and fir forests, and agricultural farm and ranchland (Vierling et al. 2013). Nesting occurs from April through September.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. Lewis' woodpecker has potential to occur within the Project area.

4.6.6.8 White-Headed Woodpecker

The white-headed woodpecker (*Picoides albolarvatus*) is not listed and protected under either state or federal Endangered Species Acts, but is considered a USFWS bird of conservation concern. White-headed woodpeckers require montane coniferous forests and are found from British Columbia to San Diego County, in southern California (Garrett et al 1996). These woodpeckers nest in tree cavities primarily within large diameter conifers in mixed coniferous forests of ponderosa and sugar pines, white and red fir, Douglas-fir, and black oak (Garrett et al 1996). Breeding occurs during April through August.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. White-headed woodpecker has potential to occur within the Project area.

4.6.6.9 Williamson's Sapsucker

The Williamson's sapsucker (*Sphyrapicus thyroideus*) is not listed and protected under either Federal or California ESA's; however, it is considered a species of conservation concern according to the U.S. Fish and Wildlife Service. In California, Williamson's sapsucker breeding range include Sierra Nevada-Cascade Range from Greenhorn Mountains to the Oregon Border, isolated breeding populations are located in Siskiyou, Trinity and the Warner Mountains (Small 1994). They nest in middle to high elevation conifer and mixed conifer-deciduous forests (Gyug et al. 2012). They nest in tree cavities of western larch, ponderosa pine, Jeffrey pine, Sierra-Cascade lodgepole pine, Douglas-fir, spruce, grand fir, white fir, red fir, trembling aspen, water birch, black cottonwood, and occasionally, utility poles (Gyug et al. 2012). Nesting occurs during May through July.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. Williamson's sapsucker has potential to occur within the Project area.

4.6.6.10 Olive-Sided Flycatcher

The olive-sided flycatcher (*Contopus cooperi*) is not listed pursuant to either the California or federal Endangered Species Acts but is a CDFW species of special concern and a USFWS bird of conservation concern. In the western United States, olive-sided flycatchers breed from Washington south throughout California, except the Central Valley, eastern deserts, and mountains of southern California (Small 1994). This species breeds in late-successional coniferous forests including Ponderosa pine woodlands, black oak woodlands, mixed coniferous forests, and Jeffrey pine forests, usually at mid to high elevations (Shuford et al 2008). They use edges and clearings surrounding dense forests, foraging primarily on bees and wasps. Nesting occurs during May through August.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting and foraging habitat for the species. Olive-sided flycatcher has potential to occur within the Project area.

4.6.6.11 Oak Titmouse

The oak titmouse (*Baeolophus inornatus*) is not listed and protected under either state or federal Endangered Species Acts, but are considered a USFWS bird of conservation concern. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2017). They are found in dry oak or oak-pine woodlands, but may also use scrub oaks or other brush near woodlands (Cicero et al. 2017). Nesting occurs during March through July.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting and foraging habitat for the species. Oak titmouse has potential to occur within the Project area.

4.6.6.12 Fox Sparrow

The fox sparrow (*Passerella iliaca*) is not listed pursuant to either the California or federal Endangered Species Acts, but it is designated as a species of conservation concern by the USFWS. The "large-billed" fox sparrow (*Megarhyncha* Group) nests in western Oregon south into coastal northern California, the Siskiyou and Warner Mountains, Sierra Nevada, and mountains of southern California, and western Nevada. Nesting habitat includes montane chaparral and mixed coniferous forest (Weckstein et al. 2002).

Wintering fox sparrows are typically found in thick riparian, chaparral vegetation in California (Weckstein et al. 2002). "Sooty" fox sparrows (*Unalaschkensis* Group) winter along the entire coastal region; "slate-colored" fox sparrows (*Schistacea* Group) winter from northern interior California to Baja California; and "large-billed" fox sparrows winter from central California south to Baja (Weckstein et al. 2002). Breeding occurs during May through July, and can be found on wintering grounds from September through April.

There are no CNDDB occurrences of this species within five miles of the Project area (CDFW 2017). The ponderosa pine forest present within the Project area may provide potential nesting habitat and foraging habitat for the species. Fox sparrow has potential to occur within the Project area.

4.5.7 Mammals

Six special-status mammal species were identified as having potential to occur within the Project area based on the literature review (Table 3). Upon further analysis and after the reconnaissance visit, three species were considered to have potential to occur on-site. Brief descriptions of these species with the potential to occur within the Project area are presented below.

4.6.7.1 Western Red Bat

The western red bat (*Lasiurus blossevillii*) is not listed pursuant to either the California or federal ESAs; however, it is designated as a species of special concern by CDFW. In addition, the WBWG has classified the western red bat in California as "imperiled or are at high risk of imperilment" (WBWG 2005). The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This bat occurs from Shasta County to the Mexican border, west of the Sierra Nevada/Cascade crest and deserts, and is typically associated with forested and riparian communities. This solitary species roosts in the foliage of large shrubs and trees in communities bordering forests, rivers, cultivated fields, and urban areas. They feed on a variety of insects, usually foraging in or near riparian areas. This species is a year-round resident of California; however, they do migrate seasonally with the extent of these movements being poorly understood (Shump and Shump 1982, Philpott 1996).

There are no occurrences of western red bat within five miles of the Project area (CDFW 2017). Trees within the Project area may provide potential roosting habitat for this species. Western red bat has potential to occur within the Project area.

4.6.7.2 Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant either the California or Federal ESAs; however, it is designated as a species of special concern by CDFW. In addition, the WBWG has classified the Townsend's big-eared bat in California as "imperiled or are at high risk of imperilment" (WBWG 2005). Distribution of this species is strongly correlated with the availability of caves and cave-analogue roosting habitat, including abandoned mines. Townsend's big-eared bats have also been reported to utilize buildings, bridges, rock crevices, and hollow trees as roost sites (WBWG 2005). These bats are highly sensitive to human disturbance at roosting, maternity, and hibernacula sites. This species will roost alone or in groups of 15 to 100 individuals. They feed primarily on moths and prefer to forage along the edge of clumps of native vegetation. Townsend's big-eared bats are year-round residents in California, and even though they hibernate during the winter, will occasionally forage during the winter months (Kunz and Martin 1982, Philpott 1996).

There are two occurrences of Townsend's big-eared bat within five miles of the Project area (CDFW 2017). Trees within the Project area may provide potential roosting habitat for this species, but there are no caves or mines within the Project, which are preferred habitat for this species. Townsend's big-eared bat has low potential to occur within the Project area.

4.6.7.3 Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, it is designated as a CDFW species of special concern as well as a BLM and USFS sensitive species. In addition, the Western Bat Working Group (WBWG) has classified the pallid bat in California as "imperiled or are at high risk of imperilment" (WBWG 2005). The pallid bat is a large buff-colored bat, with large ears and broad wings (Orr 1954). The pallid bat occurs in Oregon and Washington and throughout the southwestern United States, south into Mexico (Hermanson and O'Shea 1983). Pallid bats inhabit low elevation rocky arid deserts and canyonlands, shrub-steppe grasslands, oak woodlands, karst formations, and higher elevation coniferous forests (Philpott 1996, WBWG 2005). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, and trees; and in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG 2005). Pallid bats are primarily insectivores and feed by gleaning prey items from the ground or from vegetation (Bell 1982).

There are no occurrences of pallid bat within five miles of the Project area (CDFW 2017). Trees within the Project area may provide potential roosting habitat for this species. Pallid bat has potential to occur within the Project area.

4.5.8 Wildlife Movement/Corridors

The majority of the Project is located along existing roadways within a low density/rural residential area. Portions of the Project located within undeveloped areas along the roadway likely don't function as wildlife corridors due to vehicular traffic. Installation of the pipeline is not anticipated to impede any wildlife movement.

5.0 RECOMMENDATIONS

5.1 Waters of the U.S.

The field surveys identified 0.185 acre of potential Waters of the U.S. within the Project. A formal wetland delineation has been conducted and the wetlands have yet to be verified by USACE. Based on the Project description, the proposed pipeline will cross the following feature types: seasonal wetland swale, seep, intermittent drainage, ephemeral drainage and ditch. Therefore, it is anticipated that installation of the pipeline will result in fill of potential Waters of the U.S.

If the potential jurisdictional features are verified as Waters of the U.S. by USACE and if disturbance would occur to Waters of the U.S. within the Project, the following mitigation measures are recommended to minimize potential impacts to Waters of the U.S.:

- Authorization to fill wetlands under the Section 404 of the federal CWA (Section 404 Permit) must be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures will be developed as part of the Section 404 Permit to ensure no-net-loss of wetland function and values. To facilitate such authorization, an application for a Section 404 Permit for the Project will be prepared and submitted to USACE, and will include jurisdictional determination, direct, avoided, and preserved acreages of Waters of the U.S. Mitigation for impacts to Waters of the U.S. typically consists of a minimum of a 1:1 ratio for direct impacts; however final mitigation requirements will be developed in consultation with USACE.
- A Water Quality Certification or waiver pursuant to Section 401 of the CWA, as issued by RWQCB, must be obtained for Section 404 permit actions.
- Features that may be subject to CDFW Section 1602 jurisdiction were identified in the Project Area (e.g., intermittent drainages, ephemeral drainages, ditch, seasonal wetland swale). The following measure is recommended to minimize potential impacts to the bed, bank, or channel of rivers, streams, or lakes within the Project Area:
- An SAA pursuant to Section 1602 of the California Fish and Game Code must be obtained for any activity that will impact the bed, bank, or channel of any river, stream or lake. Mitigation measures will be developed during consultation with CDFW as part of the SAA permit process to ensure protections for affected fish and wildlife resources.

5.2 Special-Status Plants

While no special-status plants were observed within the Project alignment, two special-status plant species (yellow-lip pansy monkeyflower and small-flowered monkeyflower) were observed at two locations just outside the Project alignment. Observations of both species occurred adjacent to the Project alignment between Northwood Drive and Forest Meadows Drive and another observation of yellow-lip pansy monkeyflower occurred adjacent to the Project alignment north of Hunter Dam Road. No other special-status plants were found during protocol-level surveys in 2017. Due to the potential presence of special-status plant species, the following measure is recommended:

- Consult with CDFW to determine appropriate buffer between construction activities and rare plant populations identified during protocol-level surveys to ensure impact avoidance.

- Retain a qualified biologist to oversee placement of ESA fencing around rare plant populations within the project area to provide avoidance during construction activities.

5.3 Special-Status Invertebrates

There are no potentially occurring special-status invertebrate species within the Project. Therefore, no measures are recommended.

5.4 Special-Status Fish

There are no potentially occurring special-status fish species within the Project and the Project does not occur within EFH. Therefore, no measures are recommended.

5.5 Special-Status Amphibians

There are no potentially occurring special-status amphibian species within the Project. Therefore, no measures are recommended.

5.6 Special-Status Reptiles

There are no potentially occurring special-status reptile species within the Project. Therefore, no measures are recommended.

5.7 Special-Status Birds and MBTA-Protected Birds (including Raptors)

Suitable nesting habitat for 12 special-status birds is present within the Project. These are:

Osprey, northern goshawk, flammulated owl, California spotted owl, rufous hummingbird, calliope hummingbird, Lewis' woodpecker, white-headed woodpecker, Williamson's sapsucker, olive-sided flycatcher, oak titmouse and fox sparrow. If present, the Project could result in harassment to nesting individuals and may temporarily disrupt foraging activities.

In addition to the above-listed special-status birds, all native birds, including raptors, are protected under the federal MBTA. As such, to ensure that there would be no impacts to protected active nests during construction, the following mitigation measures are recommended:

- Conduct a pre-construction nesting bird survey of suitable habitat along the project corridor within 14 days of the commencement of construction during the nesting season (1 February through 31 August).
- If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a qualified biologist in consultation with CDFW. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. No further measures are necessary once the young are independent of the nest. Pre-construction nesting surveys are not required for construction activity outside the nesting season. The survey may be performed in two or more phases according to the planned construction activity and potential disturbances.

5.8 Special-Status Mammals

Three special-status mammals have potential to occur within the Project: Western red bat, Townsend's big-eared bat, and pallid bat. To ensure that these species are not impacted by the Project, the following measure is recommended:

- Conduct a pre-construction clearance survey for special-status bats within the limits of active construction within 14 days of the start of construction activities. If roosting bats are found, consult with CDFW to implement appropriate measures (e.g., monitoring, roost exclusion). For each phase of construction, the survey will be conducted for the applicable limits of construction activity.

5.9 Oak Trees

Calaveras County has established voluntary oak protection guidelines that are designed to help protect and conserve oak woodlands in the county. The proposed project would not affect oak woodlands, although approximately 131 trees including 8 black oaks will be impacted to accommodate the new pipeline alignment. However, none of the 131 trees that will be impacted are protected by state or local law, policy, or ordinances (Table 3. Tree Impacts).

Table 3. Tree Impacts

Type of Tree (common name)	Number to be removed	Protected
Black Oak	8	No
California Black Walnut	1	No
Foothill Pine	1	No
Incense Cedar	49	No
Ponderosa Pine	62	No
Redbud	1	No
Sugar Pine	6	No
11' Pine	1	No
15" Pine	1	No
8" Cedar	1	No

If tree trimming or removal of native/protected oaks, or work under native/protected oaks is required, appropriate, voluntary best management practices, as discussed in Appendix A-1 of the Voluntary Oak Woodland Management Plan and listed below, shall be implemented.

- Limit unnecessary removal of healthy California native Tan Oak, Canyon Live Oak, and Blue Oak and monitor potentially compromised trees for 3-years after construction.
- Delineate root zone areas of trees to be preserved with high visibility fencing and avoid root compaction by limiting size of heavy equipment used within these areas.
- Within drip zone, monitor excavations to minimize damage to large roots and cut away large roots obstructing work with hand pruning saw; do not rip or pull on large roots with heavy equipment.
- CCWD will coordinate with Caltrans to remove additional trees that may be deemed compromised and pose a safety or hazardous condition to roadway users.

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LIST OF ATTACHMENTS

ATTACHMENT A

Species Searches

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Murphys (3812024) OR Stanislaus (3812023) OR Fort Mountain (3812034) OR Rail Road Flat (3812035) OR Calaveritas (3812025) OR Angels Camp (3812015) OR Columbia (3812014) OR Columbia SE (3812013) OR Twain Harte (3812012) OR Crandall Peak (3812022) OR Boards Crossing (3812032) OR Dorrington (3812033))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter gentilis northern goshawk	ABNKC12060	None	None	G5	S3	SSC
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Allium tribracteatum three-bracted onion	PMLIL022D0	None	None	G2	S2	1B.2
Ammonitella yatesii tight coin (=Yates' snail)	IMGASB0010	None	None	G1	S1	
Antrozous pallidus pallid bat	AMACC10010	None	None	G5	S3	SSC
Aphrastochthonius grubbsi Grubbs' Cave pseudoscorpion	ILARA37010	None	None	G1G2	S1S2	
Banksula martinorum Martins' cave harvestman	ILARA14070	None	None	G1	S1	
Banksula melones Melones Cave harvestman	ILARA14010	None	None	G1	S1	
Banksula tutankhamen King Tut Cave harvestman	ILARA14200	None	None	G1	S1	
Big Tree Forest Big Tree Forest	CTT84250CA	None	None	G3	S3.2	
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Botrychium crenulatum scalloped moonwort	PPOPH010L0	None	None	G4	S3	2B.2
Botrychium minganense Mingan moonwort	PPOPH010R0	None	None	G4G5	S3	2B.2
Botrychium montanum western goblin	PPOPH010K0	None	None	G3	S2	2B.1
Calochortus clavatus var. avius Pleasant Valley mariposa-lily	PMLIL0D095	None	None	G4T2	S2	1B.2
Carex davyi Davy's sedge	PMCYP033H0	None	None	G3	S3	1B.3

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G2	S2	1B.2
Clarkia australis Small's southern clarkia	PDONA05040	None	None	G2	S2	1B.2
Clarkia biloba ssp. australis Mariposa clarkia	PDONA05051	None	None	G4G5T2T3	S2S3	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
Cryptantha spithamaea Red Hills cryptantha	PDBOR0A2M2	None	None	G2	S2	1B.3
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
Diplacus pulchellus yellow-lip pansy monkeyflower	PDSCR1B280	None	None	G2	S2	1B.2
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eryngium pinnatisectum Tuolumne button-celery	PDAPI0Z0P0	None	None	G2	S2	1B.2
Erythranthe marmorata Stanislaus monkeyflower	PDPHR01130	None	None	G2?	S2?	1B.1
Erythronium tuolumnense Tuolumne fawn lily	PMLIL0U0H0	None	None	G2G3	S2S3	1B.2
Euderma maculatum spotted bat	AMACC07010	None	None	G4	S3	SSC
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
Gulo gulo California wolverine	AMAJF03010	Proposed Threatened	Threatened	G4	S1	FP
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Iris hartwegii ssp. columbiana Tuolumne iris	PMIRI090D2	None	None	G4T1	S1	1B.2
Larca laceyi Lacey's Cave pseudoscorpion	ILARA39010	None	None	G1G2	S1	
Lasiurus blossevillii western red bat	AMACC05060	None	None	G5	S3	SSC
Lasiurus cinereus hoary bat	AMACC05030	None	None	G5	S4	
Lathyrus sulphureus var. argillaceus dubious pea	PDFAB25101	None	None	G5T1T2	S1S2	3

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lomatium stebbinsii Stebbins' lomatium	PDAPI1B1V0	None	None	G2	S2	1B.1
Margaritifera falcata western pearlshell	IMBIV27020	None	None	G4G5	S1S2	
Monadenia mormonum buttoni Button's Sierra sideband	IMGASC7071	None	None	G2T1	S1S2	
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Navarretia paradoxiclara Patterson's navarretia	PDPLM0C150	None	None	G2	S2	1B.3
Pandion haliaetus osprey	ABNKC01010	None	None	G5	S4	WL
Peltigera gowardii western waterfan lichen	NLVER00460	None	None	G3G4	S3	4.2
Pseudogarypus orpheus Music Hall Cave pseudoscorpion	ILARA40010	None	None	G1G2	S1	
Punctum hannai Trinity Spot	IMGAS47080	None	None	G1G2	S1S2	
Rana boylii foothill yellow-legged frog	AAABH01050	None	None	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
Strix nebulosa great gray owl	ABNSB12040	None	Endangered	G5	S1	
Stygobromus gradyi Grady's Cave amphipod	ICMAL05460	None	None	G1	S1	
Stygobromus harai Hara's Cave amphipod	ICMAL05470	None	None	G1G2	S1S2	

Record Count: 54

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

25 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812035, 3812034, 3812033, 3812025, 3812024, 3812023, 3812015 3812014 and 3812013;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S4?	G3T4?
Allium tribracteatum	three-bracted onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Arctostaphylos myrtifolia	Ione manzanita	Ericaceae	perennial evergreen shrub	Nov-Mar	1B.2	S1S2	G1G2
Calochortus clavatus var. avius	Pleasant Valley mariposa lily	Liliaceae	perennial bulbiferous herb	May-Jul	1B.2	S2	G4T2
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	May-Aug	1B.3	S3	G3
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S2	G2
Clarkia australis	Small's southern clarkia	Onagraceae	annual herb	May-Aug	1B.2	S2	G2
Clarkia virgata	Sierra clarkia	Onagraceae	annual herb	May-Aug	4.3	S3	G3
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Cryptantha spithamaea	Red Hills cryptantha	Boraginaceae	annual herb	Apr-May	1B.3	S2	G2
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Diplacus pulchellus	yellow-lip pansy monkeyflower	Phrymaceae	annual herb	Apr-Jul	1B.2	S2	G2
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug	1B.2	S2	G2
Erythranthe marmorata	Stanislaus monkeyflower	Phrymaceae	annual herb	Mar-May	1B.1	SX	GXQ
Erythronium tuolumnense	Tuolumne fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jun	1B.2	S2S3	G2G3
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
Iris hartwegii ssp. columbiana	Tuolumne iris	Iridaceae	perennial rhizomatous herb	May-Jun	1B.2	S1	G4T1
	dubious pea	Fabaceae	perennial herb	Apr-May	3	S1S2	G5T1T2

Lathyrus sulphureus var. argillaceus							
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
Lomatium stebbinsii	Stebbins' lomatium	Apiaceae	perennial herb	Mar-May	1B.1	S2	G2
Navarretia paradoxiclara	Patterson's navarretia	Polemoniaceae	annual herb	May-Jun(Jul)	1B.3	S2	G2
Peltigera gowardii	western waterfan lichen	Peltigeraceae	foliose lichen (aquatic)		4.2	S3	G3G4
Piperia colemanii	Coleman's rein orchid	Orchidaceae	perennial herb	Jun-Aug	4.3	S4	G4

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 19 May 2017].

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Plant List

Inventory of Rare and Endangered Plants

27 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812034, 3812033, 3812032, 3812024, 3812023, 3812022, 3812014 3812013 and 3812012;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	4.2	S4?	G3T4?
Allium tribracteatum	three-bracted onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	1B.2	S2	G2
Bolandra californica	Sierra bolandra	Saxifragaceae	perennial herb	Jun-Jul	4.3	S4	G4
Botrychium crenulatum	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S3	G4
Botrychium minganense	Mingan moonwort	Ophioglossaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S3	G4G5
Botrychium montanum	western goblin	Ophioglossaceae	perennial rhizomatous herb	Jul-Sep	2B.1	S2	G3
Calochortus clavatus var. avius	Pleasant Valley mariposa lily	Liliaceae	perennial bulbiferous herb	May-Jul	1B.2	S2	G4T2
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	May-Aug	1B.3	S3	G3
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3	S4	G4
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	1B.2	S2	G2
Clarkia australis	Small's southern clarkia	Onagraceae	annual herb	May-Aug	1B.2	S2	G2
Clarkia biloba ssp. australis	Mariposa clarkia	Onagraceae	annual herb	Apr-Jul	1B.2	S2S3	G4G5T2T3
Clarkia virgata	Sierra clarkia	Onagraceae	annual herb	May-Aug	4.3	S3	G3
Claytonia parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2	S3	G5T3
Claytonia umbellata	Great Basin claytonia	Montiaceae	perennial herb	May-Aug	2B.3	S1	G5?
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	4.2	S4	G4
Diplacus pulchellus	yellow-lip pansy monkeyflower	Phrymaceae	annual herb	Apr-Jul	1B.2	S2	G2
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual / perennial herb	May-Aug	1B.2	S2	G2
Erythranthe marmorata	Stanislaus	Phrymaceae	annual herb	Mar-May	1B.1	SX	GXQ

	monkeyflower						
Erythronium tuolumnense	Tuolumne fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jun	1B.2	S2S3	G2G3
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	1B.2	S2	G2
Iris hartwegii ssp. columbiana	Tuolumne iris	Iridaceae	perennial rhizomatous herb	May-Jun	1B.2	S1	G4T1
Lilium humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	4.2	S3	G4T3
Lomatium stebbinsii	Stebbins' lomatium	Apiaceae	perennial herb	Mar-May	1B.1	S2	G2
Peltigera gowardii	western waterfan lichen	Peltigeraceae	foliose lichen (aquatic)		4.2	S3	G3G4
Piperia colemanii	Coleman's rein orchid	Orchidaceae	perennial herb	Jun-Aug	4.3	S4	G4

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: May 19, 2017
Consultation Code: 08ESMF00-2017-SLI-2096
Event Code: 08ESMF00-2017-E-05434
Project Name: Calaveras County Water District Ebbetts Pass Reach 1 Water Transmission Pipeline

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the

Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2017-SLI-2096

Event Code: 08ESMF00-2017-E-05434

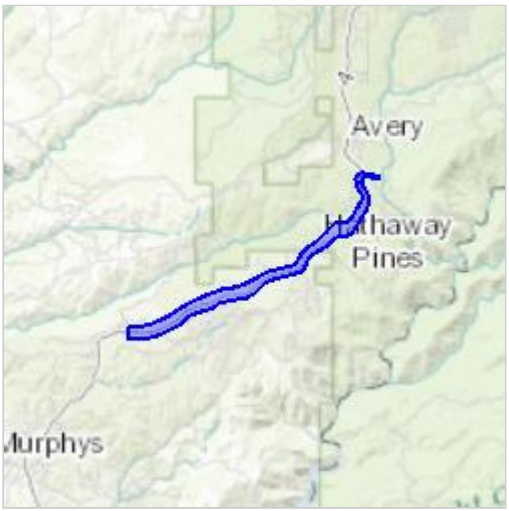
Project Name: Calaveras County Water District Ebbetts Pass Reach 1 Water Transmission Pipeline

Project Type: WATER SUPPLY / DELIVERY

Project Description: Water transmission pipeline.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/38.18131626269809N120.38074840243951W



Counties: Calaveras, CA

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Amphibians

NAME	STATUS
California Red-legged Frog *(Rana draytonii)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened
Sierra Nevada Yellow-legged Frog *(Rana sierrae)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Delta Smelt *(Hypomesus transpacificus)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead *(Oncorhynchus (=Salmo) mykiss)* Population: Northern California DPS There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1007	Threatened

Critical habitats

There are no critical habitats within your project area.

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Calaveras County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
Sierra Nevada Yellow-legged Frog Rana sierrae There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead Oncorhynchus (=Salmo) mykiss There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/1007	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	Year-round
Black-chinned Sparrow Spizella atrogularis https://ecos.fws.gov/ecp/species/9447	Breeding
Burrowing Owl Athene cunicularia https://ecos.fws.gov/ecp/species/9737	Year-round
California Spotted Owl Strix occidentalis occidentalis https://ecos.fws.gov/ecp/species/7266	Year-round
Calliope Hummingbird Stellula calliope https://ecos.fws.gov/ecp/species/9526	Breeding
Costa's Hummingbird Calypte costae https://ecos.fws.gov/ecp/species/9470	Year-round
Flammulated Owl Otus flammeolus https://ecos.fws.gov/ecp/species/7728	Breeding
Fox Sparrow Passerella iliaca	Year-round
Green-tailed Towhee Pipilo chlorurus https://ecos.fws.gov/ecp/species/9444	Breeding
Lewis's Woodpecker Melanerpes lewis https://ecos.fws.gov/ecp/species/9408	Wintering
Loggerhead Shrike Lanius ludovicianus https://ecos.fws.gov/ecp/species/8833	Year-round
Oak Titmouse Baeolophus inornatus https://ecos.fws.gov/ecp/species/9656	Year-round

Olive-sided Flycatcher Contopus cooperi https://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	Wintering
Rufous Hummingbird selasphorus rufus https://ecos.fws.gov/ecp/species/8002	Breeding, Migrating
Rufous-crowned Sparrow Aimophila ruficeps https://ecos.fws.gov/ecp/species/9718	Year-round
Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	Wintering
Snowy Plover Charadrius alexandrinus	Breeding
Swainson's Hawk Buteo swainsoni https://ecos.fws.gov/ecp/species/1098	Breeding
Western Grebe aechmophorus occidentalis https://ecos.fws.gov/ecp/species/6743	Wintering
White Headed Woodpecker Picoides albolarvatus https://ecos.fws.gov/ecp/species/9411	Year-round
Williamson's Sapsucker Sphyrapicus thyroideus https://ecos.fws.gov/ecp/species/8832	Year-round
Willow Flycatcher Empidonax traillii https://ecos.fws.gov/ecp/species/3482	Breeding
Yellow-billed Magpie Pica nuttalli https://ecos.fws.gov/ecp/species/9726	Year-round

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

FRESHWATER POND
PUBFh

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal

waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

ATTACHMENT B

Representative Site Photographs

Photo 1. Annual forb meadow northeast of Forest Meadows Drive, with seeps in background, facing southwest. May 24, 2017.

Photo 2. California black oak forest north of Hunter Dam Road, facing east. May 25, 2017.

Photo 3. Ponderosa pine forest south of Hunter Dam Road, facing north. May 25, 2017.

Photo 4. SR-4 and ponderosa pine forest southwest of Canyon View Drive, facing southwest. May 25, 2017.

Photo 5. Seasonal wetland swale east of Red Apple Drive, facing southwest. May 25, 2017.

Photo 6. Ditch south of Red Apple Drive, facing west. May 25, 2017.

Photo 7. Ephemeral drainage southwest of Stanislaus National Forest office, facing southeast. July 12, 2017.

Photo 8. SR-4 and ditch at southwestern end of Project alignment, facing southwest. July 13, 2017.